

AGRIMENTAL Coaching Manual



Agrimental

Cultivating Well-being

2025-1-FR01-KA220-VET-000357068



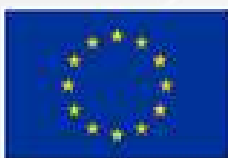
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Overview

The AgriMental Coaching Manual stands out as an essential tool for the provision of education and coaching in the context of sustainable agriculture. Developed by the AgriMental EU project, under the code 2025-1-FR01-KA220-VET-000357068 the present manual recognises the complexity of the issue at hand and acknowledges that sustainable agriculture goes beyond being environmental and economic; it has a profoundly human nature to it. The document highlights the fact that the process of farming comes with numerous pressures such as high stress levels, physical exhaustion, climate unpredictability, lack of social connections, workload, and psychological issues, all of which affect the well-being, decision-making, and safety in the work environment.

Integrating a theoretical background, coaching strategies, insights from behavioural psychology, and practical cases from the field of agriculture, the manual enables trainers, educators, advisors, and coaches to provide assistance to their target audiences. It offers a psychologically orientated perspective on agricultural work, showing that unsafe behaviours and well-being problems are associated not only with technical conditions but also with biases, emotions, fatigue, time constraints, and social norms.

As part of the manual, the AgriMental EU Report provides the strategic and policy-orientated background of the document by recognising the growing mental health concerns experienced in the European agricultural industry. It emphasizes the significance of psychological well-being, resilience, and human sustainability as the key issues that must be addressed in order to ensure the future of agriculture and vocational education. In other words, the document shows that in light of climate change, economic uncertainty, labour shortage, and rural isolation, novel solutions are necessary to support farmers' mental health and work capacity in a way that will ensure long-term sustainability.



Agrimental EU report



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1. Introduction

Nowadays, agriculture continues to be an important sector of the European economy since it contributes to the achievement of food security, environmental sustainability, biodiversity conservation, and socio-economic development of the rural communities (European Commission, 2024). In addition to the economic significance of agriculture, the sector is used as the tool for maintaining the cultural heritage and regional development in Europe. However, agriculture has changed a lot over the past decades because of increased economic, environmental, technological, and regulatory pressures experienced by farmers.

It is known that agricultural work is highly demanding due to physical exertion, economic and climate instability, instability in the markets, administrative pressures, and social isolation (ILO, 2023; WHO, 2022). All these factors increase the vulnerability of farmers to occupational stress and other psychological problems such as psychological distress, burnout, anxiety, and depression. Recently, there were a number of studies conducted in Europe that proved that the psychological well-being of people is the important factor that can influence sustainable agriculture, farmers' decision-making, and productivity (European Commission, 2023).

According to desk research done within the AgriMENTAL project, these issues can be seen in Cyprus, France, Greece, Italy, and Türkiye although the participating countries differ in the size of their agricultural sectors. The biggest agricultural sectors in Europe belong to France and Italy, while Greece, Cyprus, and Türkiye are characterised by an ageing population of farmers, predominance of family farms, and strong dependence of the economy on agriculture. All the participating countries have the male domination in the sector with the increasing number of farmers who are older than 55 years old and lack generational renewal.

While the importance of the psychological well-being of farmers is being acknowledged in European policies, it appears from desk research that specialised mental health services aimed at addressing the needs of farmers are underdeveloped in all the participating countries. Mental health services are integrated into general occupational health care, rural health care, and well-being services. Also, stigma around mental health, lack of mental health services in rural areas, and lack of prevention are the reasons why farmers refuse to get professional help.

In this situation, psychological resilience becomes an important concept in promoting sustainable agriculture. The approaches focused on resilience not only address psychological problems but also develop individuals' capacity to cope with difficult situations (Southwick et al., 2014).



In the agricultural sector, resilience helps people better manage stress, adapt to climatic and economic instability, make decisions, and improve their well-being in the long run (Fraser et al., 2020).

In this context, AgriMENTAL project aims to improve the psychological well-being of European farmers by means of developing an evidence-based coaching model that takes into account peculiarities of agricultural work. The aim of this European Desk Research Report is to identify common trends, challenges, existing support structures, good practices, and gaps in mental health provision in five participating countries (Cyprus, France, Greece, Italy, and Türkiye). Unlike country reports, this document takes a European approach to the issue under consideration. The information obtained is expected to be useful for developing AgriMENTAL coaching model, educational materials, and vocational training programmes.

2. European Agricultural Workforce and Mental Health

2.1 Agricultural Workforce Across Participating Countries

Despite the fact that some European countries have different agricultural economies (they differ significantly in terms of their workforce, economic development, production patterns, and geography), there are still a number of typical characteristics of European agriculture that have a great impact on the psychological well-being of farmers.

For instance, among the studied countries, France has the biggest agricultural labour force of 1.26 million people who work in agriculture (both employed workers and independent farmers). Italy has 1.43 million agricultural workers. In Greece, 492 thousand people are included in the agricultural labour force, which constitutes 12% of the total employment rate. Cyprus, though it is a small country, has a 10,000–12,000 agricultural labour force, which constitutes 2-3% of total employment. Though Türkiye is not a part of the EU, it still has one of the biggest labour forces, which constitutes several millions of people and depends heavily on agriculture for employment and food production

At the same time, all of the countries have a very similar demographic situation. First of all, agriculture is mainly a sphere of activity for males since only 62-75% of the total agricultural labour force are men. The participation rate of women is quite different depending on the type of agriculture, but, generally speaking, it is much lower in comparison to male workers, especially in terms of being the farm owner or manager. This fact can be explained by the organisational traditions of the agricultural production in Southern Europe.

The second typical feature of European agriculture is the ageing of farmers. For instance, Greece has one of the most aged agricultural populations (62-65% of farmers are above 55 years old). In France, the majority of farm owners are above 50 years old, while in Italy and Cyprus, this situation is also relevant since generational renewal of farmers is not active and young people prefer to engage in other professions.

Table 1. Comparative Overview of the Agricultural Workforce

Country	Agricultural workforce	Share of national employment	Predominant characteristics
France	~1.26 million	~4–5%	Large professional agricultural sector
Italy	~1.43 million	~5%	Mixed salaried and family farming
Greece	~492,000	~11.8%	Ageing workforce, family farms
Cyprus	~10,000–12,000	~2–3%	Small-scale rural agriculture
Türkiye	Several million	~14–15%	Family farming and seasonal labour

2.2 Mental Health Challenges Among European Farmers

From the desk research, it can be argued that there exists a variety of interconnected factors influencing farmers' psychological state. More specifically, five main stressors appear in the studied countries, which include:

- Financial instability and fluctuations in income from farm activity;
- Climate change and natural disasters;
- Heavy workload and working overtime;
- Bureaucracy;
- Social isolation due to the rural environment.

Of all mentioned factors, financial issues can be considered the key one and the most common cause of stress. Factors like increased production costs, changes in prices for goods, inflation, increasing costs for energy resources and uncertainty about the subsidies make a constant economic burden on farm owners. The problems connected with finances are usually correlated with debts and investment risks.

Climate change can be called the second key source of psychological pressure for farmers. Prolonged droughts, flooding, heat waves, fires and unpredictable seasonal changes take place in Cyprus, Greece, Italy, France and Türkiye. Apart from the low level of agricultural output, these climate features also increase stress due to the uncertain future.

Heavy workload and long working hours become another reason why farmers experience stress. Work in the field lasts longer than regular working hours and is mostly concentrated on the planting and harvesting periods. Moreover, family-owned farms in Southern Europe do not separate work from personal life, causing emotional exhaustion.

Bureaucratic complexity and regulations play an important role in the lives of farmers. Compliance with different rules concerning the environment, working process, subsidies and other aspects becomes necessary for farm owners. Following the Common Agricultural Policy (CAP) becomes one of the essential problems for farmers. Lastly, social isolation is a defining feature of the life of farmers. Many farmers run their businesses as sole proprietors or family businesses located in rural areas where the access to medical services and psychological help is limited. It causes additional stigma connected with mental problems.

2.3 Mental Health Support Systems Across Europe

Despite the existence of healthcare systems providing mental health assistance to all people in all countries involved in the research, a literature review suggests that there is no country with a national programme for the mental health of farmers at the moment. Although various generic health care and wellness programmes are always provided as part of the general health care system, as occupational health programmes, in the context of rural development, or in the framework of the European Union programmes, there is no country with a special national programme for the mental health of farmers.

The mentioned EU projects, such as the EU-OSHA campaign, CAP, rural development projects, and the projects related to occupational well-being, have a certain indirect impact on the well-being and safety of farmers. Nonetheless, it is necessary to note that they never include any explicit steps aimed at addressing the psychological problems of farmers.

To summarise, it should be said that there is a visible contradiction between the increasing recognition of the mental health of farmers as an issue of public health and the availability of mental health programmes for this group of people.



3. Existing Mental Health Policies, Support Systems and Coaching Models

3.1 European Policy Framework Supporting Farmers' Mental Wellbeing

According to desk analysis, there is a rising awareness about the importance of mental well-being of farmers as a significant element of the policy agenda in Europe. Nonetheless, it is essential to mention that currently, there are relatively small numbers of initiatives that address mental health problems of farmers directly.

The issue of mental health in Europe is mainly related to EU-wide initiatives and policies like The European Commission's Comprehensive Approach to Mental Health, CAP 2023-2027; the EU Strategic Framework on Health and Safety at Work; and actions of EU-OSHA. They highlight the importance of improvement of working conditions of all workers, including agricultural workers (European Commission, 2023; European Commission, 2024; EU-OSHA, 2023). Although these documents recognise the significance of mental health issues of farmers, they mainly discuss the problem of physical threats, alongside sustainability and rural development aspects.

Conducting national analysis in Cyprus, France, Greece, Italy, and Türkiye confirms the aforementioned statement. Every country has a number of legislative measures concerning public health and occupational health that are used to deal with different aspects of the well-being of farmers. However, none of the countries have developed any specific initiatives regarding the mental health of farmers. Mental health programmes for farmers, if any, are only parts of other initiatives dealing with rural health, occupational safety, community mental health, or agricultural advisories.

3.2 Existing Support Systems

Several types of support for farmers are identified through comparative analysis.

The first type of assistance for farmers is healthcare services. When facing mental health problems, farmers usually contact their general practitioner, community health centre, psychologist or psychiatrist within the healthcare system of the country where they live. Nonetheless, such services do not necessarily have specialised knowledge in the field of psychosocial matters relevant to agriculture.

Another type of assistance can be provided by occupational safety and health services, which are mainly concerned with accident and workplace safety. Though nowadays psychosocial risks have become one of the considerations in the legislation on occupational health, the problem of preventing mental health issues of farmers still receives less attention than other occupational health issues.

Agriculture advisory services, farmers' unions, cooperatives, and producer organisations can also be mentioned among informal sources of support for farmers. While these organizations help farmers financially and train them, there are very few of them providing advice concerning psychological matters.

It is worth noting that EU-funded programmes have contributed greatly to making farmers' well-being visible. Many projects under Erasmus+, Horizon Europe, CAP Network, and EU-OSHA contribute to the creation of occupational health and the sustainable development of the agricultural sector. At the same time, these projects operate as temporary ones and usually do not integrate into national support systems.

3.3 Existing Coaching Models

One of the objectives of the desk study was to find coaching methods that could provide an understanding base for developing the AgriMENTAL methodology. As indicated by the comparative review, there are many different coaching and mentoring models in agriculture and related fields; however, few of them specifically tackle psychological resilience.

The existing coaching models across participating countries can be generally grouped into four broad categories:

Technical and Agricultural Coaching

In this case, the emphasis is made on improving the performance of farmers in terms of productivity, sustainable farming, digitalisation, environmental management, and business planning. This kind of coaching is usually provided through agricultural extension services, vocational training institutions, cooperatives, or consulting organizations.

Business and Entrepreneurial Coaching

Several projects help farmers acquire business, entrepreneurship, innovation, succession planning, and diversification skills. Though these initiatives can contribute to stress reduction by means of creating resilient businesses, psychological well-being is not often considered an issue.

Well-being and Health Promotion Programs

There is a small number of initiatives incorporating stress management, work-life balance, occupational well-being, or community assistance programmes. These programmes are usually developed for general occupational groups but not farmers.

Peer Learning and Mentoring Schemes

Some countries have developed mentoring schemes that encourage exchange of knowledge between experienced and young farmers. Such mentoring networks help create social capital, mitigate professional isolation, and enhance collaboration in solving problems. Still, coaching methodologies orientated at developing emotional resilience are quite rare.

From the overall review of desk study results, it appears that coaching in agriculture still focuses primarily on technical skills and business achievements, while emotional well-being is less considered.

3.4 Comparative SWOT Synthesis

SWOT analysis in all countries revealed an accurate picture of the strengths and weaknesses of the existing support system.

Strengths

In Europe, there are highly developed systems of agricultural extension, comprising such elements as trained advisers for agriculture, vocational education institutions and solid rural communities. The financing of agriculture has become increasingly orientated towards innovation, sustainability, and lifelong learning, thus providing good conditions for the integration of well-being into education for agriculture.

Weaknesses

One of the key weaknesses revealed in all participating countries is the lack of specialised mental health services for farmers. Such services are scattered, reactive rather than proactive and still difficult to access in rural areas owing to the stigma, lack of specialists and lack of cooperation between the agricultural and healthcare sectors.

Opportunities

Rising policymakers' awareness about the problems of farmers' mental health, along with digitalisation, virtual coaching, collaboration in Europe, and the creation of vocational education programmes, provides a lot of opportunities for innovations in building up resilience. Digital learning technologies make it possible to reach farmers living far from urbanised areas.

Threats

Some of the threats that could harm the welfare of European farmers include climate change, economic instability, agricultural market instability, labour shortages, the ageing of the farmer population, and regulation of the agricultural sector. Such factors can increase the risk of psychological problems for farmers if they are not addressed.

3.5 Research Gaps and Rationale for AgriMENTAL

Analysis of the comparative approaches shows that currently, Europe does not have an all-inclusive coaching framework which focuses specifically on improving the psychological resilience of the farmers. In most of the studies examined above, the focus is placed either on acquiring technical skills, learning farm management techniques or expanding businesses, while the issue of the emotional well-being of farmers is relatively ignored.

Another weakness highlighted by this comparison is the lack of preventive coaching incorporated in vocational education and training programmes aimed at forming professionals in the field of agriculture. While the mentioned countries do have services addressing mental health issues generally, there are no particular programs focusing on the needs of farmers considering their working conditions and the nature of the job itself.

The described findings serve as a convincing basis for the AgriMENTAL programme. This program brings together various coaching approaches and techniques associated with resilience building, stress management and emotional regulation within a single educational approach.



4. Comparative Analysis of the European Field Research

4.1 Overview of the European Field Research

Field survey served as the second step of needs assessment for AgriMENTAL project and was carried out in five participating countries including Cyprus, France, Greece, Italy, and Türkiye. The main aim of this stage was the confirmation of literature review results through analysis of farmers' opinions regarding occupational stress, psychological well-being, resilience, support, and training needs.

In total, 107 questionnaires were received from participating countries. Participants were experienced agricultural professionals practicing under various conditions.

Table 4.1
Distribution of Participants

Country	Valid responses (n)	Percentage of sample
Cyprus	20	18.70%
France	22	20.60%
Greece	20	18.70%
Italy	25	23.40%
Türkiye	20	18.70%
Total	107	100%



4.2 Demographic Characteristics

The demographic structure corresponds to the structural features of agriculture in Europe determined in the desk research.

In all countries that took part in the survey, the majority of respondents were experienced farmers. In France, the ratio between males and females was quite even since 50.0% of respondents were female, 45.5% – male, and 4.5% did not report about their gender. Most of the respondents (54.5%) were self-employed farmers. The biggest group was formed by farmers aged 31-45 (59.1%) and then came the farmers aged 46-60 years (36.4%).

In Türkiye, the average age of respondents was higher than in other countries, since 80% of respondents were above 46 years old.

Table 4.2
Selected Demographic Indicators

Indicator	France	Türkiye	European interpretation
Female respondents	50.00%	n/r	Participation of women remains
Male respondents	45.50%	n/r	Agriculture remains predominantly male
Self-employed farmers	54.50%	Majority	Family farming dominates
Respondents aged ≥46 years	36.4% (46–60 only)	80.00%	Ageing agricultural workforce

These findings are consistent with Eurostat data indicating that European agriculture continues to rely on an ageing workforce, with relatively limited generational renewal (Eurostat, 2024).

4.3 Occupational Stress

Occupational stress is the common problem among all the five case studies in different countries. There is much difference in the farming practices in various countries, but the same stress factors were found.

Table 4.3
Main Occupational Stressors

Occupational stressor	Countries identifying
Financial uncertainty	5/5 (100%)
Rising production costs	5/5 (100%)
Climate variability	5/5 (100%)
Administrative burden	5/5 (100%)
Long working hours	5/5 (100%)
Labour shortages	5/5 (100%)

The primary concern for occupational exposure arises from financial instability. In relation to financial instability among the surveying farmers, it is the product of volatile markets, high inflation rates, increasing costs of production, and uncertainty about income in the future.

Another concern that was found is the matter of climate change. This factor is the second most mentioned concern in relation to occupational stress. Factors contributing to occupational stress in this regard are droughts, weather instability, floods, and severe weather conditions.

Moreover, administrative burden is another factor leading to increased stress. Increased administrative burden, subsidies, and regulations lead to decreased productivity and stress. It must be added that there was a high level of consistency with regard to the five countries examined.

4.4 Psychological Wellbeing

The findings suggest a strong relationship between psychological well-being and economic stability, resilience, and optimism concerning the prospects of the sector.

A key finding of the quantitative analysis in the context of Türkiye is the fact that 65% of people feel concerned about the future of the agricultural sector, while 10% disagree with this opinion.

In the case of the Italian sample, climate change, bureaucracy, and market instability were identified as the main causes of stress among survey respondents.

For Cypriots, the most influential factors related to their psychological well-being included lack of financial stability and access to specialists.

One of the findings of the French sample is the need to have the right work-life balance.
The same approach was adopted by Greek participants.

Table 4.4
Mental Wellbeing Findings

Finding	Countries reporting
Financial stress affects wellbeing	All
Climate anxiety	All
Future uncertainty	All
Insufficient specialised services	All
Psychological resilience considered important	All

4.5 Statistical Analysis of Existing Support Systems

The comparative analysis demonstrates considerable consistency regarding the availability of mental health support across the participating countries.

Indicator	Cyprus	France	Greece	Italy	Türkiye	Total (%)
General mental health services available	✓	✓	✓	✓	✓	100%
Farmer-specific mental health programme	✗	Partial	✗	Partial	✗	20%
Agricultural advisory services	✓	✓	✓	✓	✓	100%
Mental health integrated into agricultural advisory services	Limited	Moderate	Limited	Limited	Limited	0% fully integrated
Farmers rely primarily on informal support	✓	✓	✓	✓	✓	100%

From the comparison, it is evident that all the nations involved in the study (n = 5; 100%) offer general healthcare and mental healthcare services in their national healthcare systems. However, only one nation (20%) has a proper national structure providing for farmers' psychological well-being, while another nation (Italy) has started several initiatives without establishing a national structure. The rest of the nations do not have any programmes providing for farmers' psychological well-being along with their general healthcare services.

All the five nations (100%) stated that farmers depend on their families and other farmers for psychological assistance instead of seeking professional help.

4.6 Statistical Summary of the European Findings

In France, 50.0% of respondents were women and 45.5% men, while self-employed farmers comprised 54.5% respondents. The dominant age group was people in the age group of 31-45 years, which included 59.1% respondents. On the other hand, in Turkey, 80% respondents were.

Table 4.6
European Comparative Indicators

Indicator	Result
Participating countries	5
Total respondents	107
Countries reporting financial stress	5/5 (100%)
Countries reporting climate-related stress	5/5 (100%)
Countries reporting bureaucracy as a stressor	5/5 (100%)
Countries reporting insufficient mental health services	5/5 (100%)
Countries recommending resilience coaching	5/5 (100%)
Countries recommending stress management training	5/5 (100%)
Countries identifying peer support as important	5/5 (100%)
Countries reporting positive attitudes toward coaching	5/5 (100%)

Based on the data obtained from the five participating countries, the level of coherence is particularly high. All five countries (100%) found the same key factors that cause psychological strain among agricultural workers, including lack of income stability, changes in the climate, administrative complications, and increased costs of production. At the same time, all the participating countries found deficiencies in the delivery of the corresponding mental health care and were clearly supportive of resilience coaching and prevention education.

This proves that the presence of such similarities in the results is based on an even more general situation – the psychological problems of the farmers do not affect just single countries but all European nations. Therefore, the creation of the AgriMENTAL coaching programme is based on the similar needs of all participating countries, making an international education approach justified.



5. Discussion

5.1 Overall Conclusions

The European research of AgriMENTAL project aims to provide a comprehensive assessment of mental health problems, resilience needs, and possible sources of help specific to farmers in Cyprus, France, Greece, Italy, and Türkiye. Based on the findings received from the desk research and field study, the AgriMENTAL project creates the basis for the evaluation of the current state of psychosocial elements of modern farming and prioritisation of the related areas.

It is evident from the desk research that farming still remains one of the most stressful occupations in Europe, influenced by a number of factors, like insecurity, climate change, increased costs of production, lack of manpower, bureaucracy, and aging. The size and nature of the agricultural sectors in the selected countries might be different; however, the mentioned structural difficulties appear to be the main determiners of the mental well-being of farmers. In addition, there seems to be a lack of mental health services specific to agricultural workers in most European countries, which implies the use of the general healthcare system by the farmers.

The field research confirms the results mentioned above. 107 farmers have taken part in the European survey, providing useful information regarding their working conditions, well-being, coping skills, and educational needs. It was found out that the comparative analysis shows a very high level of similarities between the five countries under consideration. Such occupational stressors as financial insecurity, climate variability, bureaucracy, long working hours, and increased costs of production are mentioned by all (100%) of the respondents from all five countries, which means that these problems are common European issues rather than individual country concerns.

Generally, farmers do not use any formal sources of help, including psychological services, and rely only on informal support, consisting of family, other farmers, and the local agricultural community. However, it should be noted that the participants show positive attitudes towards resilience coaching, mental health awareness campaigns, coping skill training, and peer support, which may be used by vocational education and training institutions.

5.2 Key European Findings

Summary of findings:

- The Europe-wide study included a total of 107 farmers from five different nations.
- Financial instability was found to be the main cause of work-related stress by all the participating countries (100%).
- Environmental issues were mentioned by all respondents (100%) as the factor that leads to psychological stress.
- Administrative and bureaucratic pressures were mentioned by all the participants (100%) as an additional stressor.
- The absence of professional mental health counselling for farmers was recognised by all respondents (100%).
- All respondents supported the use of resilience coaching and stress management programmes (100%).
- Family and social support were found to be the most used coping mechanisms in all of the countries under discussion.
- In Türkiye, 65% of the respondents had fears regarding the future of agricultural business, and 80% of all the participants were 46 years or older.

5.3 Implications for the AgriMENTAL Project

Findings obtained through this study give strong reasons for creating an AgriMENTAL coaching methodology along with accompanying teaching materials. Current models of agricultural education and advice put much stress on developing farmers' technical, environmental, and business skills but do not focus much on their psychological strength, emotional well-being, stress management and prevention of mental issues.

In order to fill this gap, the AgriMENTAL project creates an innovative coaching methodology specific to agriculture. According to the project, it is important to use a preventative model of mental well-being which involves emotions regulation, adaptive coping strategies, resilience, work-life balance, and peer support. Therefore, using this method as part of vocational education and training will improve personal well-being and help with sustainable agriculture in Europe.

Finally, the transnational aspect of the research shows that one common coaching methodology is able to solve European problems and be adapted to each country. Consistency in findings observed in several countries makes the AgriMENTAL methodology applicable all over Europe.

5.4 Recommendations

All the following recommendations have been generated based on the integration of results from literature review and fieldwork:

For European/National Policymakers

- Include aspects of mental wellbeing in agricultural policy and rural development policy.
- Provide greater financial resources for the delivery of specialised mental health services to farmers.
- Start the introduction of preventive mental health measures funded by the European Union.
- Promote collaboration between organisations that work in agriculture, health, and education sectors.

For Agricultural Organizations

- Take account of resilience and well-being in advisory/extension services.
- Create peer support and mentorship programmes.
- Conduct campaigns that help reduce stigma related to mental health.
- Provide greater access to coaching and psychological services for farmers.

For Providers of Vocational Education and Training

- Teach resilience coaching and mental health literacy.
- Design training programmes focused on stress management, emotional regulation, and work-life balance.
- Utilise teaching strategies such as experiential learning, reflective practice, and peer learning.

For Farmers

- Understand the importance of mental wellbeing for professional sustainability.
- Participate in resilience coaching and lifelong learning.
- Create informal support systems and seek professional help where needed.
- Have a proactive approach to psychological wellbeing in parallel with technical farming skills.

5.5 Final Remarks

The AgriMENTAL European research shows that mental well-being is a crucial component for sustainable and resilient farmers' communities, not a secondary issue in the agricultural context. The similarity of findings recorded in Cyprus, France, Greece, Italy, and Türkiye proves that the psychological difficulties faced by farmers are not a problem related to particular countries, but require joint actions from the side of Europe.

The combination of data obtained from the desk and field research provides a strong scientific foundation for the creation of unique coaching approaches to build up the resilience of farmers, improve their psychological well-being and occupational sustainability. As a result, the AgriMENTAL coaching approach makes an important contribution into the European vocational education and training based on evidence-based findings.



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Chapter 1: Psychology of work safety in agriculture



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Overview

Work safety in agriculture is often discussed in physical terms: machinery, chemicals, weather exposure, repetitive labour, animal handling, uneven terrain, and long working hours. Yet agricultural safety is not only a technical or physical issue. It is also a psychological issue. Behind many unsafe acts and many avoidable incidents are patterns of attention, judgement, emotion, habit, exhaustion, and stress. For this reason, a psychologically informed understanding of agricultural safety is essential for any trainer, coach, advisor, or educator working with farmers and agricultural workers.

This chapter examines the psychology of work safety in agriculture with a particular focus on three interconnected areas: cognitive biases in risk perception, safety behaviour in daily agricultural practice, and the effects of stress and fatigue on safe performance. These topics are highly relevant because agricultural work often requires fast decisions under uncertain conditions. A farmer may need to decide whether to continue working during exhaustion, whether to repair equipment quickly without proper precautions, whether to skip personal protective equipment for a “short task”, or whether to keep working under time pressure because of weather forecasts, market pressures, or harvest deadlines. In each of these situations, safety is influenced not only by knowledge of rules but also by psychological processes.

Agricultural workers often operate in settings where risks are normalised. A task that is objectively dangerous may come to feel ordinary simply because it is repeated every day. Familiarity may reduce fear, but it can also reduce caution. Similarly, experience can be a protective factor, yet it can also lead to overconfidence. Workers may feel that because they have “always done it this way”, the method must be safe enough. This type of thinking reflects cognitive biases that distort risk perception and weaken preventative behaviour. In such contexts, accidents do not occur only because hazards exist; they occur because the human mind interprets those hazards in incomplete, rushed, or overly optimistic ways.

Another major issue is stress. Farmers and agricultural workers are exposed to chronic stressors that differ from those of many other sectors. These include financial uncertainty, dependence on weather, seasonal workload peaks, labour shortages, market instability, family responsibilities, social isolation, and limited separation between home and work life. Stress affects concentration, working memory, emotional regulation, and judgement. A stressed worker may become more irritable, less attentive, more impulsive, and less willing to pause for careful safety checks. Stress therefore does not only affect wellbeing in a general sense; it directly affects safety performance.



Overview

Fatigue is equally critical. Agricultural work is physically demanding and often organised around seasonal urgency rather than ideal recovery cycles. During planting, harvesting, calving, irrigation emergencies, or climate-related disruptions, workers may extend working hours well beyond healthy limits. Fatigue impairs vigilance, slows reaction time, reduces situational awareness, and increases decision errors. Research in occupational psychology has repeatedly shown that fatigue undermines safe performance in ways comparable to other serious performance impairments (Dawson & Reid, 1997; Hockey, 2013; Williamson et al., 2011). In agriculture, where workers frequently use vehicles, power tools, chemicals, and heavy equipment, even a brief lapse in attention can have serious consequences.

This chapter connects these psychological dimensions to the broader goals of human sustainability in agriculture. Human sustainability means creating agricultural systems that are not only productive and environmentally viable but also psychologically safe, humane, and sustainable for the people who work within them. It is not enough to promote output, efficiency, or innovation if the human beings at the centre of the system are chronically stressed, mentally overloaded, fatigued, or accustomed to unsafe norms. Sustainable agriculture requires sustainable human functioning.

For coaches and trainers, this means that safety education must go beyond technical instructions. It must include reflection on beliefs, habits, emotions, group norms, and decision-making patterns. The role of the coach is not merely to tell people what is safe; it is to help them understand why unsafe choices become normal, how stress and fatigue change the mind, and how safer routines can be built in realistic agricultural contexts. This chapter therefore combines theory and practice. It introduces key psychological concepts, explains how they apply to agricultural work, identifies major psychological challenges in the field, and offers coaching strategies, tools, and exercises that can support safer and healthier working environments.

In short, the chapter argues that agricultural safety is deeply shaped by the way people perceive risk, regulate stress, manage fatigue, and interpret daily work demands. Improving safety therefore requires psychological awareness alongside technical competence. When agricultural workers become more aware of how they think, react, and behave under pressure, they are better able to protect themselves, support each other, and contribute to a safer and more sustainable agricultural sector.

1.1 Learning Objectives



After reading this chapter, participants will be able to:

- explain the relationship between psychological wellbeing and work safety in agriculture;
- define key concepts such as risk perception, cognitive bias, stress, fatigue, and safety behaviour;
- identify common cognitive biases that affect agricultural decision-making and hazard recognition;
- analyse how stress, time pressure, and emotional strain influence safety-related choices at work;
- explain the effects of fatigue on attention, reaction time, judgement, and accident risk;
- recognise psychological and behavioural warning signs that indicate elevated safety risk;
- apply practical coaching strategies to strengthen safety awareness and safer behavioural habits;
- use reflective tools and structured coaching questions to support farmers and agricultural workers in building healthier and safer work routines.

1.2 Scientific Theory

Understanding work safety as a psychological issue

Work safety is often treated as a matter of regulations, equipment, and compliance. These elements are essential, but they are not sufficient. In every occupational setting, and especially in agriculture, safe or unsafe outcomes emerge through the interaction of human behaviour, environmental conditions, and organizational routines. Human factors research has shown that accidents rarely result from a single dramatic mistake. More often, they arise from a chain of small decisions, assumptions, interruptions, and adaptations that gradually create unsafe conditions (Reason, 1990; Dekker, 2014).

Agriculture illustrates this clearly. A worker may skip gloves for a short chemical-related task because the job seems quick. Another may drive machinery while tired because the harvest cannot wait. Another may postpone maintenance because downtime feels more costly than immediate risk. These choices do not necessarily come from ignorance. They often come from normal psychological tendencies: the desire to save time, the tendency to underestimate familiar risks, or the belief that one can manage “just this once.” Therefore, to understand agricultural safety properly, one must examine not only what hazards exist, but how people perceive, interpret, and respond to them.

From a psychological perspective, safety behaviour refers to the actions individuals take to avoid harm and follow protective procedures. Such behaviour is influenced by motivation, beliefs, habits, perceived norms, emotional states, and mental workload. A worker may know the correct procedure but still not follow it if they feel rushed, distracted, emotionally burdened, physically exhausted, or socially pressured. Safety, then, is partly a behavioural and cognitive achievement. It depends on the capacity to notice risk, prioritise caution, regulate emotion, resist shortcuts, and remain attentive under pressure.

This insight is particularly important in agriculture because agricultural work is frequently decentralized and self-managed. Unlike some industrial settings, farms often lack constant supervision, formalized routines, or real-time oversight. Many safety decisions are made individually, in the field, during long workdays, and under changing conditions. That makes psychological self-regulation especially important.

1.2 Scientific Theory

Cognitive biases that distort safety judgement

Cognitive biases are predictable patterns of distorted judgement. They are not signs of low intelligence. They are normal features of human thinking, especially under uncertainty, repetition, or pressure. However, in high-risk work environments, these biases can have serious safety consequences.

- **Optimism bias**

Optimism bias is the tendency to believe that negative events are less likely to happen to oneself than to others. In agriculture, this may appear in statements such as: “I know accidents happen, but I am careful,” or “That happens to inexperienced people, not to me.” This mindset reduces the felt urgency of precautionary behaviour. A worker may acknowledge general risk while denying personal vulnerability.

Optimism bias is especially dangerous when combined with long experience. Experienced workers often possess valuable tacit knowledge, but they may also feel protected by familiarity.

- **Overconfidence bias**

Overconfidence bias involves overestimating one’s skill, control, or judgement. A farmer who has repaired equipment many times may believe they can safely bypass lockout precautions. A worker who has driven a tractor for years may underestimate the effects of fatigue or distraction. Overconfidence reduces the likelihood that a person will pause, double-check, seek help, or use formal procedures.

In agricultural settings, overconfidence often develops not because people are reckless by nature, but because they have successfully managed risks many times before. Past success may create the false impression that a risky method is acceptable. Yet the absence of previous accidents does not prove that the behaviour is safe; it may simply mean that serious consequences have not occurred yet.

- **Normalization of deviance**

Normalisation of deviance refers to a process in which unsafe practices gradually become accepted as normal because they do not immediately produce negative outcomes. When workers repeatedly violate a safety standard without immediate harm, the violation begins to feel reasonable. Over time, the group adjusts its definition of what is acceptable.

1.2 Scientific Theory

In agriculture, examples include riding on machinery in non-designated ways, failing to use hearing or respiratory protection, entering confined spaces without proper checks, or working excessive hours during busy seasons. Such behaviours may begin as temporary deviations but eventually become standard practice. This is particularly common in environments where productivity pressure is high and formal monitoring is limited.

- **Availability heuristic**

The availability heuristic is the tendency to judge the likelihood of an event based on how easily examples come to mind. If a worker cannot remember a recent accident, they may conclude the risk is low. If they recently heard of an injury, they may briefly become more cautious. This means that recent memory, not objective probability, often drives safety judgement.

For trainers, this suggests the importance of using concrete stories, near-miss examples, and reflective discussion. When risks are made mentally vivid, they are more likely to influence behaviour.

- **Confirmation bias**

Confirmation bias is the tendency to seek or interpret information in ways that support existing beliefs. A worker who believes a practice is safe may notice only the times it worked well and ignore warning signs or counterexamples. For instance, someone who routinely sprays chemicals without full protection may focus on the absence of immediate symptoms rather than on long-term exposure risks.

Confirmation bias is difficult to challenge because people often defend familiar routines emotionally as well as cognitively. Coaching must therefore create a non-defensive space in which beliefs can be examined rather than attacked.

- **Attentional narrowing and tunnelling**

Under pressure, people often focus narrowly on the most immediate task and miss wider hazards. This is sometimes called attentional tunnelling. During urgent agricultural periods, such as harvest or animal emergencies, workers may become so focused on task completion that they fail to monitor bodily fatigue, weather changes, equipment status, or surrounding hazards.

This is not laziness; it is a cognitive consequence of pressure. The brain simplifies the environment to protect performance, but in doing so it may reduce situational awareness. Safety interventions must therefore include techniques for interrupting tunnelled attention and restoring broader risk scanning.

1.2 Scientific Theory

Decision-making under pressure: fast thinking and slow thinking

Kahneman's dual-process model is particularly useful for understanding safety-related decisions in agriculture (Kahneman, 2011). According to this model, human thinking operates through two broad modes. System 1 is fast, automatic, intuitive, and effortless. System 2 is slower, more analytical, more deliberate, and more effortful.

In routine agricultural work, many decisions are made through System 1. This is often necessary and efficient. Workers cannot analytically re-evaluate every familiar action. However, System 1 is more vulnerable to bias, habit, emotional influence, and contextual shortcuts. When people are tired, rushed, stressed, or highly familiar with a task, they rely even more heavily on automatic thinking. As a result, they may act before fully assessing a changed condition or hidden hazard.

System 2 thinking is more protective in safety-critical moments because it supports checking, planning, comparing alternatives, and resisting impulsive shortcuts. But it requires cognitive energy. Stress, sleep loss, multitasking, and emotional overload reduce people's ability to engage in reflective, deliberate thinking. Therefore, one aim of safety coaching is not to eliminate automatic behaviour, which would be unrealistic, but to identify moments when workers must deliberately shift from automatic mode to reflective mode. For example: before machinery maintenance, before chemical handling, before working at height, before driving when tired, and before continuing after a near miss.

Stress and coping in agricultural work

Stress occurs when individuals perceive that the demands placed upon them exceed their coping resources. Lazarus and Folkman (1984) emphasised that stress is not only about external pressure; it also involves appraisal, meaning how the person interprets the situation. Two farmers may face similar workload conditions but experience them differently depending on perceived control, support, financial security, health, and emotional resilience.

Agriculture includes many chronic stressors: economic uncertainty, debt, unstable input costs, weather unpredictability, market dependence, administrative burdens, family succession concerns, labour shortages, and isolation. Unlike short bursts of challenge, chronic stress can become a background condition. When stress is prolonged, cognitive performance suffers. Attention becomes fragmented, patience declines, memory becomes less reliable, and emotional thresholds become lower. The individual may become more reactive, pessimistic, or mentally preoccupied. These effects increase safety risk because safe work requires attention, calm judgement, and self-monitoring.

1.2 Scientific Theory

Stress also alters behavioural priorities. Under high stress, immediate demands often overshadow preventative action. The worker may think, "I do not have time to check this properly," or "I cannot stop now." In this way, stress creates a cognitive economy in which short-term completion takes priority over long-term safety. This is one reason why knowledge-based safety messages often fail unless they also address the emotional and practical realities of work pressure.

Moreover, stress and safety interact bidirectionally. Stress increases the likelihood of unsafe behaviour, and unsafe events or near-misses increase stress. After an incident, a worker may become fearful, ashamed, distracted, or hypervigilant. Unless these reactions are processed supportively, they may themselves impair future performance.

Fatigue, sleep loss, and safety impairment

Fatigue is not simply "feeling tired". It is a multidimensional state involving reduced physical energy, lower mental alertness, slower information processing, and impaired self-regulation. In occupational settings, fatigue can result from long hours, insufficient sleep, repetitive work, high heat, emotional strain, and cumulative workload. Agriculture includes many of these factors simultaneously.

One of the most important findings in fatigue research is that people are often poor judges of how impaired they are. They may acknowledge tiredness but still believe they are functioning adequately. Dawson and Reid (1997) demonstrated that sleep deprivation can impair performance substantially, even when individuals continue trying to perform normally. Williamson et al. (2011) further highlighted the strong link between fatigue and safety-related performance problems, including vigilance failures, slower response times, lapses in attention, and decision errors.

In agriculture, fatigue affects safety in several ways. First, it reduces reaction time. This matters when driving tractors, operating machinery, responding to animal movement, or handling tools. Second, fatigue narrows attention. The worker becomes less able to scan the environment and more likely to miss peripheral hazards. Third, fatigue weakens executive control, meaning the ability to stop oneself, reconsider, and choose the safer option. This increases the use of shortcuts and impulsive decisions. Fourth, fatigue affects mood. Irritability, frustration, and emotional dullness can interfere with communication and cooperation.

1.2 Scientific Theory

The physical demands of agricultural work intensify these problems. A mentally tired person may still be required to engage in physically demanding and technically risky tasks. Seasonal peaks are especially important. During harvest, calving, disease outbreaks, irrigation issues, or weather windows, workers may feel that rest is impossible. Yet these are precisely the conditions in which fatigue management becomes most necessary.

A further issue is cumulative fatigue. A worker may cope reasonably with one long day, but several demanding days in sequence without proper recovery create a growing impairment that may not be fully noticed. Coaches and trainers should therefore speak not only about single-day tiredness but also about sleep debt, recovery practices, pacing, and planning during peak periods.

Safety climate, norms, and social influence

Individual psychology matters, but behaviour does not develop in isolation. It is shaped by social norms and safety climate. Safety climate refers to shared perceptions about how much safety is valued, discussed, and reinforced within a workplace or group (Zohar, 1980). In farms, cooperatives, family businesses, and agricultural teams, people observe what others actually do, not only what rules say.

If the informal norm is that “real workers do not complain”, “busy periods require sacrifice”, or “protective equipment slows us down”, then even knowledgeable workers may conform to unsafe practices. Conversely, when leaders and peers consistently model safe behaviour, discuss near-misses without blame, and legitimise rest and protective action, safety behaviour becomes more likely.

Neal and Griffin (2006) showed that safety climate is closely related to safety motivation and safety behaviour. This means that coaching in agriculture should not focus only on the individual worker’s choices but also on group expectations, family dynamics, communication patterns, and local definitions of competence. In some farming cultures, competence is associated with endurance and speed rather than caution and reflection. A psychologically informed coach helps reframe competence to include safe judgement, planning, and sustainable self-management.

1.2 Scientific Theory

Human sustainability and the safety-wellbeing connection

The concept of human sustainability is especially valuable for agricultural contexts because it brings together productivity, safety, health, and psychological wellbeing. A system is not humanly sustainable when it depends on chronic fatigue, suppressed stress, normalized risk, and silent suffering. It may appear productive in the short term, but it erodes human capacity over time.

Psychological wellbeing supports safety because people function more effectively when they are rested, emotionally regulated, cognitively clear, and socially supported. At the same time, safety supports psychological wellbeing because predictable, well-managed work environments reduce chronic anxiety and overload. These two dimensions reinforce each other.

Therefore, the psychology of work safety in agriculture should not be treated as a narrow topic about accident prevention alone. It is part of a broader shift toward healthier agricultural systems in which human beings are not expected to absorb unlimited stress, fatigue, and risk. Coaches, trainers, and educators can contribute to this shift by helping workers understand the mind's vulnerabilities and by normalizing safer, more reflective, and more sustainable practices.



1.3 Psychological Challenges in Agriculture

The culture of endurance and silent overexertion

One of the major psychological challenges in agriculture is the cultural expectation of endurance. In many agricultural communities, hard work, persistence, and toughness are deeply valued. These values can be positive and meaningful, but they may also create a barrier to self-protection. Workers may feel that admitting exhaustion, stress, uncertainty, or fear is a sign of weakness. As a result, they continue working beyond safe limits, delay rest, and hide cognitive or emotional strain.

This culture of endurance can make risk harder to manage because it normalises overexertion. A worker may feel proud of working through pain, skipping meals, working through heat, or continuing late into the night. Yet these behaviours increase physical and mental fatigue, which in turn increases accident risk. The challenge for coaches is to respect the dignity of agricultural labour while helping workers understand that sustainable strength includes recovery, planning, and self-protection.

Routine and complacency

Agricultural work often involves tasks that are repeated daily or seasonally over many years. Repetition builds skill, but it can also create complacency. When a person performs the same task many times without incident, the task begins to feel fully manageable, even if objective hazards remain unchanged. This leads to reduced vigilance. Safety checks are shortened, protective equipment is omitted “just this once”, and hazards are no longer actively noticed.

Complacency is psychologically difficult to detect because it does not feel like carelessness from the inside. The worker often feels efficient, experienced, and practical. However, the mind gradually stops processing familiar signals with the same level of alertness. In agriculture, where conditions can change quickly due to weather, machinery wear, animal behaviour, or terrain, complacency can be particularly dangerous.

1.3 Psychological Challenges in Agriculture

Time pressure and seasonal urgency

Agriculture is shaped by seasons, weather windows, biological cycles, and market timing. Many tasks cannot simply be postponed without consequences. This creates periods of intense time pressure. Time pressure changes cognition. People focus on immediate output, simplify decisions, and become more willing to accept risk in order to maintain progress.

Psychologically, time pressure reduces the space for reflective thinking. It creates a “must keep going” mentality. Workers may become irritated by interruptions, skip preparatory steps, or use the fastest rather than the safest method. They may also underestimate how much the pressure itself is influencing their judgement. In coaching contexts, it is essential to discuss how urgency affects attention and decision-making, because many unsafe acts do not occur in calm conditions; they occur when people feel they have no time to pause.

Chronic stress and emotional overload

Agricultural stress is often cumulative rather than isolated. Workers may carry ongoing worries about finances, weather losses, input prices, debt, labour shortages, family matters, health concerns, or farm succession. Because farming often involves close overlap between personal and professional life, stressors are not easily contained. A difficult day at work is often also a difficult day at home.

Emotional overload reduces mental availability for safety. A worker who is mentally preoccupied may fail to notice hazards, forget steps, or act mechanically. Chronic stress may also produce irritability or conflict, which can weaken teamwork and communication. In settings where work is coordinated among family members or small teams, tense communication can itself become a safety issue. Important warnings may be ignored, misunderstandings may increase, and mutual support may decline.

Another difficulty is that many workers do not label their condition as stress. They may describe themselves as tired, frustrated, burdened, or distracted without recognising the cumulative psychological impact. Coaches, therefore, need language that is accessible and non-stigmatising. Talking about concentration, tension, mental overload, or “working with too much on your mind” may be more acceptable than abstract mental health terminology in some contexts.

1.3 Psychological Challenges in Agriculture

Fatigue as a normalized condition

In many sectors, severe fatigue is recognised as an exceptional problem. In agriculture, it is often treated as normal, especially during peak periods. Workers may expect to feel exhausted and may consider this an unavoidable part of the profession. This normalisation is psychologically risky because it reduces protective action. When fatigue is seen as ordinary, people stop asking whether it is safe to continue. Yet fatigue affects not only the body but also the mind. A fatigued worker may become slower, more forgetful, less coordinated, less patient, and less able to judge their own impairment accurately. Because these changes often happen gradually, the person may adapt psychologically to feeling reduced. They keep functioning, but with a narrower safety margin.

Fatigue is also socially contagious in the sense that when everyone around is working beyond limits, excessive work becomes the norm. Workers may feel guilty for stopping, even when they know rest is needed. Coaches must therefore address fatigue as a shared workplace issue, not only as an individual weakness.

Working alone and reduced feedback

Many agricultural tasks are performed alone or with limited oversight. Solitary work increases autonomy, but it also reduces immediate feedback and social correction. When people work alone, unsafe habits may go unchallenged. There may be no colleague to say, "You look too tired to continue" or "That approach is not safe." Near-misses may remain private, and learning opportunities may be lost. Working alone also increases cognitive load. The individual must manage task demands, monitor the environment, regulate pace, and assess risk without shared attention. Under stress or fatigue, this can be especially difficult. Isolation may further reduce help-seeking behaviour. Workers may feel they must manage everything themselves, which reinforces silent risk-taking.

1.3 Psychological Challenges in Agriculture

Family dynamics and blurred roles

Agriculture often takes place within family systems. This gives farming strong social meaning, but it also introduces role complexity. Family expectations, generational hierarchies, communication patterns, and emotional histories can all affect safety behaviour. A younger worker may hesitate to question an older relative's unsafe method. A parent may push beyond limits to protect family income. A family conflict may spill into the work environment and reduce concentration.

Because of these blurred roles, safety is not only technical but relational. Coaching in agricultural settings may need to address communication, role clarity, mutual respect, and intergenerational dialogue. Trainers should be aware that unsafe behaviour is sometimes maintained not only by ignorance but also by loyalty, habit, identity, or family power structures.

Masculinity norms and help-seeking barriers

In some agricultural communities, traditional masculinity norms influence safety and wellbeing. These norms may value stoicism, independence, physical endurance, and emotional restraint. While such values can support perseverance, they may also discourage help-seeking, stress disclosure, and self-protective behaviour. A worker may continue risky or exhausting work because stopping feels inconsistent with their identity.

This is not limited to men, but gendered norms often shape how safety and vulnerability are discussed. Coaches must approach this sensitively. The goal is not to criticise local culture, but to expand the meaning of competence and responsibility. A responsible worker is not one who ignores limits; it is one who protects long-term capacity, recognises warning signs, and acts before harm occurs.

1.3 Psychological Challenges in Agriculture

Near-misses that do not become learning moments

A further psychological challenge is the way near-misses are interpreted. In some cases, a near-miss increases caution. In others, it reinforces false confidence. The person thinks, “It was close, but I managed it,” rather than, “This was a warning.” If near-misses are not reflected on constructively, they can contribute to normalisation of deviance. The worker concludes that the risky method is still acceptable.

Learning from near-misses requires a psychological climate of openness rather than blame. If workers fear shame or criticism, they may hide these events or minimise them. Coaches and trainers must therefore model a learning-orientated approach in which incidents and near-misses are analysed for patterns, pressures, and preventive improvements.

The hidden psychological cost of “coping”

Many agricultural workers cope impressively under difficult conditions. However, coping can sometimes mean functioning while depleted. The worker remains productive, but at increasing personal cost: poorer sleep, chronic tension, irritability, emotional withdrawal, reduced patience, and impaired focus. Because the work still gets done, the underlying strain remains hidden.

This hidden cost matters for safety. The issue is not only whether a worker can keep going but also in what condition they are continuing. A psychologically informed approach to work safety asks not just, “Was the task completed?” but also, “What mental state made that task risky?” This shift from outcome-only thinking to process awareness is central to sustainable safety culture in agriculture.

1.4 Coaching Strategies and Practical Solutions

The role of the coach or trainer

The coach or trainer in agricultural safety is not merely a transmitter of rules. Their role is to help participants reflect on how they actually behave under real working conditions. This includes exploring habits, beliefs, pressures, emotional states, and social norms. Technical training alone often fails because unsafe behaviour is rarely caused by lack of information alone. More commonly, it is caused by the gap between what people know and what they do under stress, fatigue, familiarity, or urgency.

A good coach creates a respectful environment in which agricultural workers do not feel judged or lectured. Farmers and agricultural workers often possess deep practical knowledge. Therefore, coaching should not position them as passive recipients of expert knowledge. Instead, it should build on their experience while inviting analysis of patterns that may have become invisible through routine. The coach helps participants name what is usually taken for granted: “When do you take shortcuts?” “When do you stop noticing risk?” “What happens to your thinking when you are tired or worried?”

Building awareness of cognitive biases

A practical starting point is bias awareness. Many workers are unfamiliar with the concept of cognitive bias, but they easily recognise examples once these are discussed in plain language. Trainers can introduce bias not as a defect, but as a normal feature of human thinking. This reduces defensiveness. Participants should understand that everyone is vulnerable to distorted judgement, especially when experienced, tired, rushed, or stressed.

Useful coaching methods include scenario analysis, visual prompts, and reflective questions. A coach might present a common situation, such as repairing machinery quickly during a busy period, and ask participants what thoughts typically appear. Responses such as “It will only take a minute,” “I know this machine,” or “I do not want to lose time” can then be linked to optimism bias, overconfidence, or normalization of deviance.

The goal is not abstract theory alone. The goal is recognition in real situations. Participants should leave able to pause and ask themselves: Am I assuming I can manage because I usually do? Am I downplaying risk because I have done this many times? Am I rushing because of pressure rather than because it is safe?

1.4 Coaching Strategies and Practical Solutions

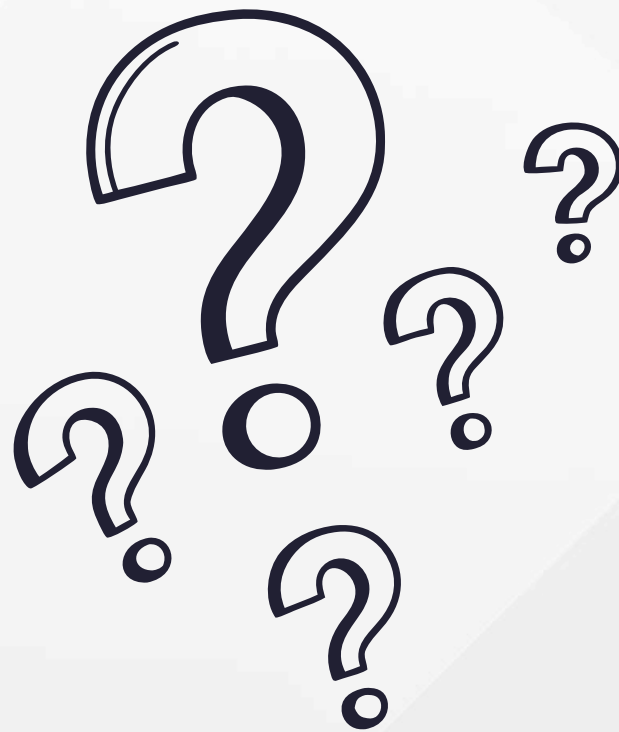
Strengthening the pause before action

One of the most effective behaviour-change techniques in safety coaching is teaching workers to create a deliberate pause before high-risk action. Since many unsafe choices are automatic, even a brief interruption can improve judgement. This pause can be framed as a micro-routine rather than a complicated procedure.

Examples of pause questions include:

- What has changed since the last time I did this task?
- Am I fully alert enough to do this safely?
- Am I trying to save time in a way that increases risk?
- Do I have the right equipment and protection?
- Would I advise another worker to do it exactly this way?

These questions are especially useful before machinery maintenance, chemical application, driving, lifting, animal handling, and working at height. The coach can help participants identify which tasks in their own work most require this mental shift from automatic to reflective mode.



1.4 Coaching Strategies and Practical Solutions

Stress-informed coaching

Because stress strongly affects safety behaviour, coaches should not treat stress as a separate wellbeing topic unrelated to work safety. Instead, stress should be discussed as a safety variable. Participants often understand this connection when it is explained concretely: stress reduces patience, narrows attention, increases forgetfulness, and pushes people toward shortcuts.

Stress-informed coaching begins with identification of stressors. A trainer can invite participants to map their most demanding periods, their main sources of pressure, and the times when they feel mentally overloaded. This discussion should be practical and non-pathologising. The aim is not diagnosis but functional awareness.

Next, participants should explore their personal stress signals. These may include rushing, skipping meals, irritability, poor sleep, headaches, muscle tension, forgetfulness, excessive checking, emotional withdrawal, or loss of motivation. Many workers do not notice stress early; they only recognise it after mistakes or conflict occur. Coaches can therefore teach early-warning awareness.

Practical stress-management tools for agricultural contexts include the following:

- structured work planning during high-demand periods;
- prioritisation of tasks when everything feels urgent;
- brief breathing routines before risky tasks;
- intentional hydration, nutrition, and short rest pauses;
- peer check-ins during peak work periods;
- realistic workload discussion within families or teams.

The coach should emphasise that stress management is not about becoming passive or less productive. It is about protecting judgement and sustaining performance over time.

1.4 Coaching Strategies and Practical Solutions

Fatigue management as a safety strategy

Fatigue management is essential in agriculture, particularly because exhaustion is often normalised. Coaches need to challenge the belief that feeling extremely tired is merely proof of commitment. Instead, fatigue must be reframed as a predictable safety hazard.

A useful starting point is education about performance effects. Participants should understand that fatigue affects reaction time, attention, memory, and risk perception even when motivation remains high. A worker may want to perform safely and still be cognitively impaired.

Coaches can help participants identify fatigue-critical situations, such as:

- driving after long workdays;
- using machinery late in the evening;
- repetitive tasks in high heat;
- multiple consecutive days of short sleep;
- decision-making after emotionally difficult events.

Practical fatigue management strategies include:

- pre-planning work-rest cycles during harvest or peak periods;
- rotating demanding tasks where possible;
- scheduling the highest-risk tasks at times of greater alertness;
- using checklists when tired to compensate for reduced working memory;
- agreeing on stop rules for certain tasks after a defined hour or fatigue level;
- encouraging workers to notice signs such as slowed thinking, clumsiness, zoning out, irritability, or repeated small mistakes.

Importantly, coaches should address the social side of fatigue. Workers may know they are too tired but continue because of perceived expectations. Discussing “permission to pause” within teams or families can therefore be a powerful intervention.



1.4 Coaching Strategies and Practical Solutions

Behaviour change through implementation routines

Many safety programmes fail because they remain at the level of general advice. Behaviour change is more likely when advice is translated into specific routines. Coaches should help participants develop implementation intentions: concrete plans linking a situation with a safe action.

Examples include:

- “Before I start the tractor in the evening, I will do a two-minute alertness check.”
- “When I notice myself saying ‘it will only take a minute,’ I will stop and reassess.”
- “After three consecutive hours in the field, I will take a short recovery pause.”
- “If I have slept poorly for two nights, I will avoid non-essential high-risk tasks.”
- “When a near-miss happens, I will record what led to it before continuing.”

Such routines reduce reliance on motivation alone. They transform safety into a behavioural structure. Coaches can encourage participants to test one or two routines rather than trying to change everything at once.

Communication strategies for safer working environments

Communication is central to safety, especially in family farms and small teams. Coaches should help participants develop communication habits that support safe behaviour without blame or humiliation. People are more likely to respond well to safety reminders when these are respectful, specific, and normalised.

Helpful communication practices include:

- using observational language rather than accusation;
- discussing near-misses as shared learning opportunities;
- checking in on fatigue and overload directly;
- clarifying roles before complex or risky tasks;
- inviting younger or less experienced workers to speak up

For example, instead of saying, “You are always careless,” a safer coaching model would encourage statements such as, “I noticed this task is being done very quickly today.” Is there anything increasing pressure right now?” This keeps the conversation open and reduces defensiveness.

1.4 Coaching Strategies and Practical Solutions

Learning from near-misses and small errors

A psychologically mature safety culture does not wait for serious accidents before learning. Coaches should encourage systematic reflection on near-misses, small errors, and uncomfortable moments. These often provide the best insight into hidden pressures and routines.

A useful debrief structure includes four questions:

1. What happened?
2. What conditions made it more likely?
3. What was I thinking or feeling at the time?
4. What small change could reduce the chance of repetition?

This structure is valuable because it avoids blame and focuses on process. Over time, it helps workers see patterns, such as fatigue at certain hours, stress before deadlines, or repeated shortcuts in specific tasks.

Reframing safety as competence and professionalism

In some agricultural settings, safety is mistakenly associated with slowness, fearfulness, or lack of practical skill. Coaches must actively challenge this perception. Safe behaviour should be reframed as a sign of professionalism, good judgement, and long-term responsibility.

This reframing is particularly important for experienced workers. The coach should validate expertise while showing that true expertise includes adaptation, anticipation, and sustainable self-management. A highly competent worker is not one who can survive unsafe conditions indefinitely; it is one who can recognise risk early, protect attention, manage energy, and prevent harm.

This message can be strengthened by linking safety to continuity: protecting one's body, mind, family role, and long-term capacity to work. In agriculture, where identity and livelihood are deeply connected, this broader framing is often more motivating than rule-based language alone.

1.5 Good Practices / Case Studies

Embedding safety within human sustainability

Finally, coaches should connect all these strategies to the wider idea of human sustainability in agriculture. Safer work is not separate from wellbeing. It is one expression of a broader commitment to keeping agricultural work physically and psychologically sustainable. A system that relies on chronic overload, hidden stress, and normalised risk is not sustainable, even if productivity remains high in the short term.

Learning from near-misses and small errors

A psychologically mature safety culture does not wait for serious accidents before learning. Coaches should encourage systematic reflection on near-misses, small errors, and uncomfortable moments. These often provide the best insight into hidden pressures and routines.

A useful debrief structure includes four questions:

1. What happened?
2. What conditions made it more likely?
3. What was I thinking or feeling at the time?
4. What small change could reduce the chance of repetition?

This structure is valuable because it avoids blame and focuses on process. Over time, it helps workers see patterns, such as fatigue at certain hours, stress before deadlines, or repeated shortcuts in specific tasks.



1.5 Good Practices / Case Studies

Reframing safety as competence and professionalism

In some agricultural settings, safety is mistakenly associated with slowness, fearfulness, or lack of practical skill. Coaches must actively challenge this perception. Safe behaviour should be reframed as a sign of professionalism, good judgement, and long-term responsibility.

This reframing is particularly important for experienced workers. The coach should validate expertise while showing that true expertise includes adaptation, anticipation, and sustainable self-management. A highly competent worker is not one who can survive unsafe conditions indefinitely; it is one who can recognise risk early, protect attention, manage energy, and prevent harm.

This message can be strengthened by linking safety to continuity: protecting one's body, mind, family role, and long-term capacity to work. In agriculture, where identity and livelihood are deeply connected, this broader framing is often more motivating than rule-based language alone.

Embedding safety within human sustainability

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1.5 Good Practices / Case Studies



Case Study 1. Practice-based example from western Türkiye: harvest pressure and fatigue awareness

Context: In a fruit-producing area in western Türkiye, workers experienced intense workload concentration during the harvest season. Long days, strong output pressure, and unpredictable weather led to frequent reports of exhaustion by the end of the day.

Problem: Although workers were highly experienced, minor errors increased during peak periods. These included forgetting small procedural steps, reduced attention while handling equipment, and irritability in team communication. Fatigue was seen as normal and unavoidable, and workers rarely discussed whether they were still fit for higher-risk tasks late in the day.

Intervention: A trainer introduced short fatigue-awareness sessions linked directly to work safety rather than to abstract health promotion. Workers were invited to identify their own fatigue signals and map the times of day when concentration was lowest. The trainer also introduced a simple “pause-check” before machinery use in the late afternoon and encouraged team leaders to normalise short recovery breaks.

Results / lessons learned: Participants reported that linking fatigue to judgement and reaction time made the issue more concrete and acceptable. Rather than seeing rest as weakness, workers began to describe it as a way of protecting concentration. The case suggests that fatigue management becomes more effective when discussed in operational and safety terms that fit the realities of agricultural work.

1.5 Good Practices / Case Studies



Case Study 2. Illustrative family-farm case: normalization of unsafe routine

Context: On a family-operated farm, one maintenance task involving equipment cleaning had been performed informally for years without serious incident. Because the task was familiar, family members saw it as low risk.

Problem: A younger member of the family noticed that the task was sometimes performed while the equipment was not fully secured but hesitated to speak because the method had long been accepted by older relatives. The absence of previous accidents had created normalisation of deviance.

Intervention: During a coaching session focused on risk perception, the trainer used a neutral incident-analysis method. Rather than criticising the family routine directly, the trainer asked participants to describe the task step by step and identify where a small change in timing, fatigue, or distraction could turn it into an injury event. This shifted the conversation from tradition to process.

Results / lessons learned: The discussion allowed the family to revise the routine without loss of face. The key lesson was that long-term familiarity with a task can reduce critical attention and that structured reflection can help families update routines respectfully. Coaches working with farms should remember that change is more likely when people do not feel personally attacked.

1.5 Good Practices / Case Studies



Case Study 3. Group coaching example: stress, communication, and near-miss learning

Context: In a small agricultural team, a near-miss occurred during a period of heavy workload and heat stress. No one was injured, but the event created tension among team members, with each person blaming timing, communication, or bad luck.

Problem: The team discussed the incident emotionally rather than analytically. No one wanted to admit stress or overload, and the group risked interpreting the event as an isolated accident instead of a warning sign.

Intervention: A coach facilitated a short non-blaming debrief using four questions: what happened, what conditions made it more likely, what each person was experiencing at the time, and what small change could prevent repetition. This approach normalised discussion of fatigue, heat, rushed communication, and divided attention.

Results / lessons learned: The near-miss became a learning moment rather than a source of unresolved blame. The team agreed on clearer communication signals and a brief regrouping pause during periods of overload. This case shows that psychological safety in discussion is essential for improving physical safety in practice.

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Chapter 2: Social psychology model for team effectiveness in agriculture



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Overview

Teamwork is essential in agriculture. Family members, employees, and cooperative members usually work together to get things done. Even on farms that are far apart, most tasks still require people to collaborate. Social psychology, which looks at how people interact in groups, can help teams become more effective in these situations.

Strong teams in agriculture offer social support, help people share knowledge, and make it easier to split up tasks. These advantages help lower stress and reduce isolation for farmers (Rudolphi et al., 2024; Younker & Radunovich, 2021). When farmers feel included and supported by their community, their mental well-being also improves (Riethmuller et al., 2024; Rudolphi et al., 2024).

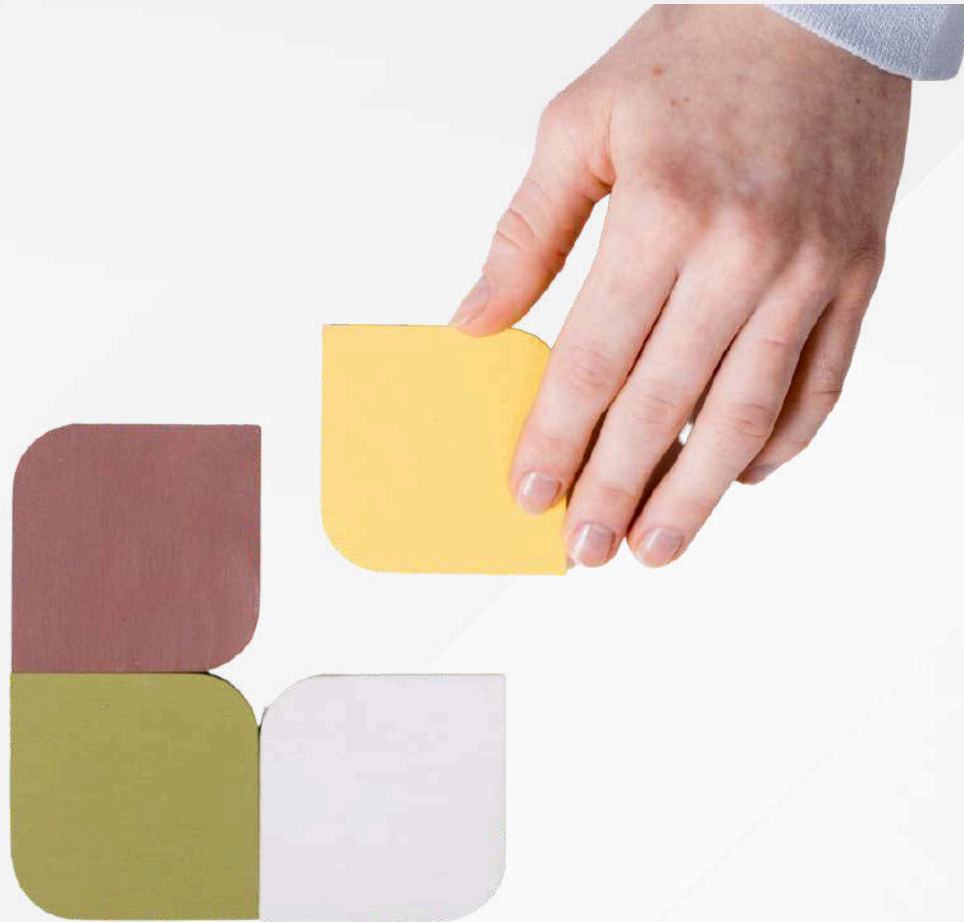
Long-term research backs this up. For instance, a year-long study found that social support and a feeling of belonging help reduce stress and anxiety for farmers (Riethmuller et al., 2024). This shows that how teams are set up and how people interact affects both farm work and mental health. By using ideas from social and positive psychology, coaches and trainers can help farmers build strong, cooperative teams. These approaches can improve communication, make work safer, and support sustainable farming.

Leadership has a big impact on how teams work together. Approaches that focus on inclusion, support, and participation are linked to happier workers and safer workplaces. Servant leadership, which prioritizes team members' well-being and growth, is associated with higher productivity and engagement (Wang et al., 2021; Younker & Radunovich, 2021). Studies from China show that servant leadership helps build a stronger organizational culture and leads to better results (Wang et al., 2025). Research on agricultural cooperatives also shows that charismatic leadership improves member satisfaction and performance (Bilgin & Işıleyen, 2016).

These findings show that both psychological well-being and long-run sustainability in agriculture depend on effective teamwork.



2.1 Learning Objectives



After reading this chapter, participants will be able to:

- Understand key social psychological concepts relevant to agricultural teamwork, including cohesion, group development, and social support
- Identify psychological and social factors that influence team performance in farming context
- Recognise signs of stress, conflict, and dysfunction within agricultural teams
- Apply positive psychology principles, including resilience and optimism, to improve team wellbeing
- Use coaching techniques to enhance communication, trust, and collaboration among farmers
- Adapt leadership styles to improve team functioning and safety in agricultural environments

2.2 Scientific Background / Theory

Social psychology helps us understand how people behave in groups and how these interactions impact their performance and health. In agriculture, work is often done in small, close-knit teams of family, seasonal workers, or cooperatives. These teams often face unpredictable situations, heavy workloads, and tight deadlines, making social processes very important. Social psychology focuses on social support, including emotional support, information sharing, and practical tools. Research shows that social support lowers stress and helps people cope better (Rudolphi et al., 2024; Younker & Radunovich, 2021). On farms, this might involve sharing tasks during busy seasons, exchanging farming tips, or offering emotional support during tough times.

Long-term studies confirm the importance of these factors. Farmers who feel more supported and connected report less anxiety and psychological distress over time (Riethmuller et al., 2024). This shows that social interaction plays a key role in both performance and mental health in agriculture.

Tuckman's model of group development describes five stages: forming, storming, norming, performing, and adjourning (University of Florida IFAS, 2020). In agriculture, these stages show up in both permanent and seasonal teams. During the forming stage, people learn their roles and what is expected, which often happens when new workers join for planting or harvest. The storming stage can lead to disagreements over roles or ways of working, and if unresolved, these conflicts can cause ongoing stress. The norming stage is about setting shared rules, building trust, and establishing routines. During the performing stage, teams work smoothly and handle unexpected events such as weather changes or equipment issues. If teams do not move through these stages, they may struggle with communication and productivity. Group norms are also important because they set standards for behaviour, safety, and decision-making. Positive norms support teamwork and safety, while negative norms can lead to risky behaviours.

Team cohesion refers to the degree of relationship and commitment among group members. It includes both task cohesion, related to joint goals, and social cohesion, related to interpersonal relationships (Marcos et al., 2010).

2.2 Scientific Background / Theory

Studies show that team cohesion is closely linked to better performance. Teams with strong cohesion coordinate, communicate, and adapt more effectively (Marcos et al., 2010). This matters in agriculture, where working conditions often change. Trust is a key part of cohesion, as it helps team members rely on one another and reduces the need for constant oversight. When trust is low, teams may face miscommunication, repeated tasks, or people avoiding responsibility. Another key factor is collective efficacy, the group's shared belief in the group's ability to achieve goals. High collective efficacy boosts motivation and persistence, especially in tough situations. On farms, this can affect decisions such as adopting new technologies or addressing environmental challenges.

Leadership has a big impact on how teams work and what they achieve. Servant leadership, which focuses on the well-being and growth of team members, has proven effective in agriculture. Research shows that servant leaders help reduce stress and boost motivation among farm workers (Wang et al., 2025).

Charismatic leaders, who inspire with vision and emotional connection, also improve team performance. In agricultural cooperatives, charismatic leadership is associated with higher satisfaction and better outcomes (Bilgin & Işileyen, 2016). Situational leadership is about being flexible. Leaders change their style based on the situation—using a more direct approach in emergencies and a more participative style for planning and ongoing work (Agriculture Institute, 2023).

Positive psychology looks at strengths, resilience, and well-being. Psychological capital includes hope, resilience, optimism, and self-confidence. Studies show that these qualities help people adapt to environmental and economic obstacles (Chipfupa et al., 2021). Farmers with more psychological capital are more likely to try new approaches and handle stress better. Working in agriculture can also support well-being. Research on social farming finds that spending time in nature gives people a sense of purpose and psychological benefits (Frontiers in Psychology, 2025).

2.3 Psychological Challenges in Agriculture

Agriculture is inherently stressful. Farmers face uncontrollable stressors such as volatile weather, market variability, pests, machinery risks, and time pressure (Younker & Radunovich, 2021; Rudolphi et al., 2024). Farm work is characterised by long, irregular hours and physically demanding labour, often under strict seasonal deadlines such as planting or harvesting periods (Younker & Radunovich, 2021). These conditions cause chronic fatigue and increase the risk of burnout.

Rural isolation further intensifies these challenges. Many farmers work alone or within very small teams, often with limited access to services, infrastructure, and social networks (Rudolphi et al., 2024; Younker & Radunovich, 2021). Longitudinal research shows that social and community-related stressors, including distance from resources and reduced social interaction, substantially affect anxiety and stress levels in farmers over time (Riethmuller et al., 2024). In situations where unexpected crises occur, such as equipment failure or family emergencies, the absence of strong support systems can increase feelings of vulnerability and overwhelm.

Financial and environmental uncertainty represent additional major stressors. Agricultural production is highly dependent on external factors, such as weather variability and market conditions, which contribute to ongoing instability and a perceived lack of control (Younker & Radunovich, 2021). Climate-related risks, including droughts and floods, further increase psychological pressure. Research indicates that farmers frequently experience anxiety related to potential crop loss and economic insecurity (Riethmuller et al., 2024). Empirical studies also show that a significant proportion of farmers meet screening criteria for anxiety and depression (Rudolphi et al., 2024). Gender-related differences have been observed, with female farmers reporting higher levels of depressive symptoms, often associated with workload and role-related pressures (Rudolphi et al., 2024).

Team dynamics bring in extra social and organisational challenges. Poor communication, unclear roles, and ineffective leadership can lead to conflict and diminished efficiency. In small agricultural teams, disagreements related to workload distribution, financial decisions, or safety practices may escalate quickly if not managed effectively. Leadership styles that are overly authoritarian may reduce trust and discourage open communication, while scarce leadership may lead to ambiguity and a lack of coordination (Rudolphi et al., 2024; Agriculture Institute, 2023). Low levels of trust and unclear norms also increase the risk of accidents, particularly in tasks that require coordination, such as machinery operation.

2.3 Psychological Challenges in Agriculture

Seasonal labour structures can increase the complexity of team dynamics. The assimilation of temporary workers into established teams may create tensions, particularly when expectations, communication styles, or work practices differ. In addition, generational and cultural differences increasingly influence agricultural teams. Younger workers may prioritise work-life balance and mental health awareness, while older workers may emphasise productivity and traditional practices. These differences might lead to misunderstandings if not dealt with through effective communication and leadership.

Agricultural teams face a mix of physical, psychological, and social challenges, including fatigue, stress, financial uncertainty, interpersonal conflict, and isolation. Those challenges are interconnected and can reinforce each other. Evidence indicates that strong social support and effective team relationships can diminish these risks. Farmers with higher levels of peer support and social connectedness report better mental health outcomes and greater resilience (Riethmuller et al., 2024; Rudolphi et al., 2024).

Coaches and trainers contribute to improving team functioning and psychological well-being in agriculture using structured, evidence-based approaches. Interventions that integrate social support, communication, and leadership development are associated with improved psychological health outcomes in farming populations (Younker & Radunovich, 2021).

Building social support is a central strategy. Empirical evidence indicates that social support reduces stress and is associated with better mental health outcomes among farmers (Rudolphi et al., 2024). Group-based interactions, including peer discussions and shared problem-solving, help reduce isolation and increase coping capacity (Younker & Radunovich, 2021). Supporting regular interaction among farmers through formal and informal group settings, such as cooperatives or peer meetings, helps reduce isolation and strengthen social networks. Research shows that social support works as a protective factor against stress and mental health difficulties in farming populations (Younker & Radunovich, 2021; Rudolphi et al., 2024). Coaches can facilitate structured group discussions where participants share experiences, challenges, and coping strategies. Reflection exercises, such as asking participants how they managed stress during a specific season, can support collective learning and diminish feelings of isolation.

2.4 Coaching Strategies and Practical Solutions

Motivational and strengths-based coaching approaches support behavioural change and engagement. Actions that support self-efficacy and psychological resources are associated with improved adaptation and resilience inside agricultural contexts (Chipfupa et al., 2021). Applying motivational and strengths-based coaching techniques supports engagement and behaviour change. These approaches encourage individuals to identify personal and team goals while developing existing strengths. Looking back on past successes enhances confidence and optimism. Servant leadership principles are particularly relevant, as leaders who prioritise the needs and development of team members improve motivation and reduce stress (Wang et al., 2025). Coaches should model active listening, empathy, and validation, reinforcing supportive communication patterns within teams.

Effective communication is associated with improved coordination and reduced risk in team-based work environments. Group-based learning and participatory approaches increase engagement and promote knowledge transfer among farmers (Younker & Radunovich, 2021). Structured communication practices, including regular briefings, task clarification, and evaluation sessions, improve understanding and reduce errors. For example, short daily meetings can help teams agree on priorities and identify risks. Interactive and participatory methods, such as group discussions and joint problem-solving, further strengthen engagement and knowledge exchange (Younker & Radunovich, 2021). Practical tools such as safety checklists, clear signalling systems in noisy environments, and structured feedback routines can support consistent communication practices.

Leadership development is another relevant factor. Empirical research shows that leadership styles characterised by support, inclusion, and responsiveness to workers' needs are associated with improved performance and organisational outcomes in agricultural settings (Wang et al., 2025). Leadership training should focus on adaptability, communication, and emotional awareness. Servant leadership has been associated with improved work performance, organisational culture, and employee wellbeing in agricultural contexts (Wang et al., 2025).

2.4 Coaching Strategies and Practical Solutions

Situational leadership approaches emphasise flexibility, requiring leaders to adjust their style depending on the context, using directive approaches in urgent situations and participative approaches during planning and routine operations (Agriculture Institute, 2023). Coaches can also introduce basic conflict resolution techniques, such as structured dialogue and mediated discussions, to prevent escalation and restore cooperation.

Stress management interventions are associated with improvements in both mental health and work performance. Systematic review evidence indicates that interventions addressing stress, coping, and workload improve psychological outcomes among farmers (Younker & Radunovich, 2021). Managing stress and promoting wellbeing should be integrated into coaching interventions. Practical strategies include workload planning, ensuring adequate rest, and introducing simple stress-reduction techniques such as breathing exercises or short breaks during work. Coaches can also encourage balanced task distribution and rotation of demanding duties to prevent fatigue and burnout.

Goal-setting and structured problem-solving approaches support behavioural change and performance improvement. Interventions that enhance self-efficacy and adaptive capacity are linked to improved responses to environmental and economic challenges (Chipfupa et al., 2021). Coaches can guide teams in defining clear, achievable objectives using structured approaches, such as SMART goals. Breaking larger goals into smaller tasks increases clarity and accountability. Monitoring progress and recognising achievements can reinforce motivation and team cohesion.

Participatory and group-based learning approaches are consistently associated with improved engagement and knowledge application in agricultural contexts (Younker & Radunovich, 2021). These approaches support farmers in developing context-specific solutions and increase the likelihood of sustained behavioural change. In practice, this may involve presenting a real farm challenge and facilitating small-group discussions to generate solutions. Coaches should act as facilitators rather than instructors, supporting farmers in developing context-specific solutions based on their experience.



2.5 Good Practices / Case Studies

1. **Participatory learning models** are widely recognised as effective approaches for improving both agricultural practices and social dynamics within farming communities. Among these, Farmer Field Schools (FFS) are among the most extensively documented methods. FFS programmes are based on experiential learning, group observation, and collective decision-making, where farmers meet regularly in field settings to analyse crop conditions and test solutions. Research shows that participatory approaches such as FFS significantly improve knowledge acquisition, problem-solving capacity, and collaboration among participants (Davis et al., 2012). These programmes encourage horizontal learning, where farmers learn from each other rather than relying solely on top-down instruction. This process strengthens trust, communication, and shared responsibility within groups. In addition to agronomic outcomes, FFS participation has been associated with increased confidence, improved decision-making, and stronger social cohesion (van den Berg & Jiggins, 2007). These findings are directly relevant to the development of effective agricultural teams, as they demonstrate how structured group interaction enhances both technical and interpersonal competencies.
2. **Peer support** has been identified as a critical protective factor in rural and agricultural mental health. Farmers often rely on informal networks rather than formal services, particularly in contexts where access to professional support is limited. Evidence indicates that peer-based interventions improve coping strategies, reduce stigma, and increase willingness to seek help (Rudolphi et al., 2024). Systematic reviews show that community-based mental health programmes, including peer mentoring and group discussions, contribute to reduced psychological distress and improved wellbeing among farmers (Younker & Radunovich, 202). These interventions are particularly effective when they are embedded within existing social structures, such as cooperatives or local associations. Social capital theory further supports these findings. Strong social networks enhance resilience by facilitating access to resources, information, and emotional support (Pretty, 2003). In agricultural contexts, this translates into better coordination, shared problem-solving, and increased adaptive capacity.



2.5 Good Practices / Case Studies

3. **Leadership development programmes** are increasingly recognised as essential for improving team effectiveness in agriculture. Research demonstrates that leadership styles characterised by inclusion, communication, and support contribute to improved organisational outcomes and worker wellbeing (Wang et al., 2025). Servant leadership, in particular, has been associated with increased engagement, trust, and performance. Leaders who prioritise the needs of team members create environments where individuals feel valued and supported, which enhances motivation and cooperation. These findings are consistent with broader leadership research, which shows that supportive leadership improves job satisfaction and reduces stress (Eva et al., 2019). Training programmes that focus on communication skills, emotional intelligence, and participatory decision-making have been shown to improve team functioning. These competencies are particularly relevant in agriculture, where teams are often small, interdependent, and exposed to high levels of uncertainty.
4. **Safety interventions** that incorporate group learning and discussion have demonstrated positive outcomes in agricultural settings. Research indicates that participatory safety programmes improve awareness, encourage safer behaviours, and reduce risk exposure (Younker & Radunovich, 2021). Behavioural change theories, such as Social Cognitive Theory, highlight the importance of observational learning and peer influence in shaping behaviour (Bandura, 1986). In agricultural teams, this means that safe practices are more likely to be adopted when they are modelled and reinforced within the group. Group-based approaches also facilitate shared responsibility for safety, reducing reliance on individual compliance and promoting collective accountability.
5. **Psychological capital**, which includes self-efficacy, optimism, hope, and resilience, plays a significant role in farmers' ability to cope with challenges. Empirical evidence shows that higher levels of psychological capital are associated with greater adaptability to environmental and economic stressors (Chipfupa et al., 2021). Interventions that focus on building these psychological resources can improve both individual wellbeing and team performance. For example, goal-setting, positive feedback, and strengths-based reflection can increase confidence and motivation. Resilience is also supported by social and environmental factors. Research on social farming indicates that engagement with nature and community-based activities enhances wellbeing and provides a sense of purpose (Di Iacovo & O'Connor, 2009).

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Chapter 3: Counteracting the psychological impact of climate change on agricultural economies



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Overview

This chapter focuses on the psychological impact of climate change on farmers and agricultural workers and on how coaching approaches can support them in managing these challenges. It examines how environmental, economic, and social pressures—intensified by climate change—affect mental health, and it provides practical strategies to strengthen resilience and wellbeing in agricultural contexts.

Agriculture is uniquely exposed to climate variability. Increasingly frequent and intense extreme weather events—such as droughts, floods, and heatwaves—directly affect production, income stability, and long-term planning. For farmers, these disruptions are not only technical or economic issues; they are deeply personal. Farming is often tied to identity, family heritage, and a strong connection to land. When climate change undermines productivity or damages the farm environment, it can lead to feelings of uncertainty, loss of control, frustration, and distress. Research shows that these conditions are associated with higher levels of stress, anxiety, and depression among farmers.

In the European context, these pressures are compounded by structural and social factors. Farmers often face long working hours, financial insecurity, administrative burdens, and social isolation in rural areas. At the same time, access to mental health services in agricultural communities remains uneven, and stigma around seeking help can prevent early intervention. As highlighted by European policy insights, mental health problems affect a significant proportion of the population, and farmers are considered a particularly vulnerable group due to the cumulative nature of occupational and environmental stressors.

Understanding and addressing these challenges is essential not only for individual wellbeing but also for the sustainability of agricultural systems. Mental health influences decision-making, risk management, productivity, and the ability to adapt to changing conditions. Farmers experiencing high levels of stress or burnout may struggle to implement sustainable practices, engage with innovation, or plan for the future. Conversely, supporting psychological wellbeing enhances adaptive capacity—the ability to respond effectively to climate variability and uncertainty—and contributes to more resilient and sustainable farming systems.

This chapter connects psychological wellbeing with sustainability by emphasising that resilience is not only technical or economic but also human. Climate change adaptation requires farmers to continuously adjust practices, make complex decisions, and cope with uncertainty. Coaching approaches can play a key role in this process by helping farmers identify stressors, mobilise resources, develop coping strategies, and regain a sense of control. By integrating mental health support into agricultural training and advisory services, it is possible to strengthen both individual wellbeing and the long-term sustainability of rural communities.

3.1 Learning Objectives



After reading this chapter, participants will be able to:

1. Explain how climate change affects the psychological wellbeing of farmers and agricultural workers.

Participants will be able to describe the main pathways through which climate-related pressures influence mental health in agriculture. This includes understanding how droughts, floods, heatwaves, erratic seasons, production losses, and uncertainty about the future can generate chronic stress, anxiety, emotional exhaustion, and reduced wellbeing. They will also be able to explain that these impacts are not caused only by isolated extreme events, but also by cumulative exposure to instability, financial strain, and repeated disruption over time.

2. Identify the main psychosocial risk factors linked to climate change in agricultural contexts.

Participants will be able to recognise the specific stressors that make farmers and farm workers psychologically vulnerable. These include loss of control, uncertainty, debt pressure, long working hours, social isolation, responsibility toward family and farm continuity, and the emotional burden of seeing land, crops, or livestock affected by climate-related events. They will also understand that, in Europe, these risks are often intensified by structural pressures such as administrative burden, limited local services, and the uneven availability of mental health support in rural areas.

3.1 Learning Objectives

3. Recognise early signs of climate-related psychological distress in farmers and agricultural workers.

Participants will be able to observe and interpret possible early warning signs of distress, such as persistent worry, irritability, sleep difficulties, emotional withdrawal, hopelessness, reduced concentration, fatigue, and difficulty making decisions. They will also learn to distinguish between normal reactions to difficult circumstances and signs that indicate a need for further support, referral, or more structured intervention. This objective is especially important because early detection is repeatedly highlighted in European policy and practice as a key element of effective support for farming communities.

4. Apply coaching strategies that help farmers externalise stress, identify resources, and regain a sense of control.

Participants will be able to use practical coaching tools to support farmers in reflecting on their own situation and moving from distress toward action. This includes guiding conversations that help farmers map stressors, identify what is and is not within their control, recognise available personal, social, and institutional resources, and define realistic next steps. They will also understand the value of using visual, concrete, and farm-based tools, because these methods make emotional pressure easier to discuss in a way that feels relevant and acceptable in agricultural settings.

5. Strengthen adaptive coping, resilience, and help-seeking behaviours in agricultural communities.

Participants will be able to promote coping strategies that support long-term wellbeing under climate variability. This includes encouraging problem-oriented coping, peer support, family and community connection, the use of advisory and rural support services, and small but meaningful actions that reduce feelings of helplessness. They will also understand that resilience in agriculture should not be framed only as individual toughness, but as a combination of psychological resources, supportive relationships, and access to trusted systems of assistance.

6. Connect mental health support with the broader goal of sustainable and resilient agriculture.

Participants will be able to explain why psychological wellbeing is a core part of agricultural sustainability. They will understand that farmers who are overwhelmed, isolated, or exhausted may find it harder to adapt, innovate, plan ahead, or maintain safe and sustainable working practices. In contrast, when wellbeing is supported, farmers are better positioned to make decisions, respond to climate risks, engage in adaptation measures, and contribute to the long-term resilience of rural communities and food systems. This objective reflects the growing European recognition that mental health support is not separate from agricultural policy, but an important condition for the future sustainability of farming.



3.2 Scientific Background / Theory

Before climate change enters the picture, agriculture already stands out as one of the most psychologically demanding professions in Europe. Long working hours, financial unpredictability, and rural isolation create a fragile baseline that makes farmers especially vulnerable to additional pressure. Climate change does not create these vulnerabilities from scratch — it amplifies them, increasing both the frequency and intensity of stressors farmers already face.

Table 1 — Work-related stress and mental health indicators across selected EU countries

Country / Scope	Indicator	Value
EU average	Work more than 10 hours per day	45%
Finland	Work-related stress	55%
England & Wales	Anxiety or depression	31%
Ireland	Burnout	~25%

Climate shocks as an economic and psychological trigger

The pathway from extreme weather to mental distress runs primarily through farm viability. When droughts, floods, or heatwaves disrupt production, the consequences are immediate and concrete: income lost, debts accumulated, futures uncertain.

Impact	% of farmers affected
Experienced reduced productivity	87%
Reported decreased crop or livestock yields	83.80%
Experienced financial losses	73.70%
Experienced complete loss of production	~30%

3.2 Scientific Background / Theory

These economic shocks translate directly into psychological strain. In the same survey populations, nearly all farmers who experienced extreme weather events also reported significant emotional consequences:

Table 3 — Psychological impact reported by farmers after climate-related events

Psychological response	% of farmers
Anxiety linked to extreme weather	92%
Symptoms of depression	60%
Worry about losing crops or livestock	78%
Concerned about recovery costs	68%
Fear of not earning enough to continue farming	43%

These figures are exceptionally high — they suggest that climate-related distress is not a fringe phenomenon but a widespread feature of contemporary farming life.

The stress pathway: from disruption to distress

The connection between a weather event and a mental health outcome is not direct. It unfolds through a chain of interconnected effects, where each step reinforces the next. Understanding this chain is essential for designing effective support.

Figure 1 —The climate stress pathway in agriculture

Step	Stage	Examples
1	Environmental disruption	Drought, flooding, heatwaves, pest shifts
2	Production loss	Yield drops, livestock losses, crop failure
3	Financial strain	Debt, income loss, uncertain recovery
4	Psychological stress	Worry, anxiety, fatigue, loss of control
5	Mental health outcomes	Depression, burnout, severe distress

3.2 Scientific Background / Theory

Research consistently shows that the psychological impact is often driven less by the weather event itself than by what it implies for the future: debt to repay, a farm that may not survive, and a family tradition at risk of ending.

Chronic exposure: why repetition matters

A single bad harvest is a crisis. Repeated crises across multiple seasons become something structurally different: a state of chronic stress, with no adequate recovery time between shocks. This is the reality for a growing number of European farmers as climate variability intensifies.

Chronic stress is particularly damaging because it degrades the very capacities needed to cope: decision-making becomes impaired, physical health deteriorates, and psychological resilience erodes over time.

Table 4 — Depression and anxiety prevalence in climate-affected farming populations

Population	Depression	Anxiety
General climate-affected farmers	26.40%	25.60%
High-risk exposure areas	49.70%	—
Severe exposure contexts	up to 84%	up to 96%

While some of these studies are drawn from outside Europe, the mechanisms they document are increasingly relevant in a European context where climate variability is intensifying year by year.

Loss of control: the psychological mechanism at the centre

Across all the research on farmer mental health, one psychological mechanism recurs with particular consistency: the erosion of perceived control. Farmers are decision-makers by profession. They must continually plan investments, select crops, time operations, and think years into the future. But climate change undermines the predictability of the variables on which those decisions depend.

"Farmers remain responsible for outcomes they can no longer fully control — this structural imbalance is among the strongest drivers of anxiety in agricultural populations."

3.2 Scientific Background / Theory

The most severe outcomes

Mental health challenges in agriculture can reach critical levels, particularly when financial pressure, isolation, and lack of support combine. European suicide data make this plain:

Table 5 — Suicide risk in farming populations, selected European data

Country	Finding
France	43.2% higher suicide risk than the general population
France (older farmers)	Risk more than double that of the general population
France (overall)	One farmer dies by suicide every two days
Ireland	20% of farmers reported suicidal thoughts within a two-week period
Slovenia	Suicide rate of 57 per 100,000 agricultural workers

These are not statistical abstractions — they represent the most extreme consequence of a mental health crisis that is widespread, poorly identified, and undertreated.

Despite these high levels of distress, the gap between need and help-seeking is stark. Although 92% of farmers in climate-affected populations report anxiety, only around 24% seek any form of support. Stigma, cultural norms of self-reliance, limited rural service availability, and simple time constraints all contribute to this gap. Mental health issues, therefore, frequently go unidentified and untreated, increasing the risk of escalation — and underscoring the importance of proactive, embedded support approaches rather than waiting for farmers to present to services.

Core concepts for practice

Five concepts from the research literature are especially relevant for practitioners working with farmers on climate-related stress:

3.2 Scientific Background / Theory

Concept	Definition
Chronic stress	Sustained exposure to repeated pressures without adequate recovery – distinct from acute crisis.
Perceived control	The extent to which individuals feel able to influence outcomes – a central driver of anxiety.
Uncertainty tolerance	Capacity to function when future conditions are unpredictable – strongly linked to wellbeing.
Adaptive capacity	Ability to adjust strategies and behaviours in response to changing conditions.
Psychological resilience	The capacity to maintain or regain wellbeing under sustained stress – not a fixed trait but something that can be developed through support and skills.

The mechanisms described in Chapter 3 — chronic stress, loss of control, and financial strain — do not remain abstract. This chapter examines how those pressures show up in practice: in the decisions farmers make, in how they experience their working day, and in the behaviours and coping strategies they adopt. The focus here is on lived experience, not on theory.

Constant pressure and mental overload

For most farmers, stress is not a reaction to a single event. It is a background condition — a state of continuous pressure that accumulates across the working day and rarely fully releases itself.

A typical day under pressure

A farmer wakes to a weather alert and adjusts the day's plan before breakfast. By mid-morning, an irrigation system has failed. By afternoon, an administrative deadline has been missed. By evening, the list of urgent tasks is longer than it was at dawn — and tomorrow will start the same way.

3.3 Psychological Challenges in Agriculture

This is not exceptional. It is the ordinary experience of a growing share of European farmers. Nearly half work more than ten hours a day, and the cognitive load extends well beyond physical tasks: monitoring forecasts, recalculating financial projections, managing risk. When extreme weather occurs, it does not replace existing demands — it adds to them.

Over time, this sustained overload produces recognisable consequences: difficulty switching off mentally outside working hours, reduced concentration, and a persistent sense of always being behind. These are not personality traits — they are predictable responses to structural conditions.

Decision-making under growing uncertainty

Farmers have always managed uncertainty. What is changing is the degree of unpredictability and its consequences. Climate variability is disrupting the seasonal patterns, local knowledge, and accumulated experience that farmers have historically relied on to guide their decisions.

When experience stops working

A farmer who has planted in mid-April for thirty years now faces a dilemma: last year, mid-April brought frost. The year before, delaying until May meant the crop was hit by the June drought. There is no longer a 'safe' option — only a range of risks.

Indicator	Value
Cannot predict what to plant due to weather unpredictability	52%
Changed plans multiple times in one season	~60%
Report reduced confidence in their own expertise	~45%
Indicator	Value

3.3 Psychological Challenges in Agriculture

This creates a specific psychological burden: not the stress of making a bad decision, but the exhaustion of being unable to reach any decision at all. Farmers describe remaining in a state of continuous evaluation — reviewing options, revising plans, waiting for information that never resolves the uncertainty. This kind of cognitive limbo is draining in ways that hard physical work is not.

Persistent worry about the future

A major source of distress is not what is happening now, but what might happen next season, or in five years. Climate uncertainty makes long-term farm planning feel increasingly precarious — and for many farmers, the farm is not simply a business. It is a family legacy, an intergenerational project, a source of personal meaning.

Table 2 — Sources of future-oriented worry among farmers

Source of worry	% of farmers
Losing crops or livestock due to extreme weather	78%
Income insufficient to continue farming	66%
Uncertainty about farm succession	43%

This forward-looking anxiety is qualitatively different from concern about a specific event. Farmers describe it as a "constant worry in the background" — present during routine tasks, interfering with sleep, making long-term investment feel futile. It is not resolved by a good harvest, because the next season immediately reopens the same uncertainties.

3.3 Psychological Challenges in Agriculture

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Financial strain and its emotional weight

Financial pressure is among the most tangible and immediate challenges, and it carries emotional consequences that extend beyond the practical. When income is uncertain, the relationship between farming and personal identity becomes strained: the farmer who cannot sustain the farm is not only facing economic difficulty — they may feel they have failed the land, their family, or themselves.

Table 3 — Financial impacts reported after climate-related events

Financial impact	% of farmers
Reduced crop or livestock yields	84%
Direct financial losses	74%
Complete production loss in certain situations	~30%

3.3 Psychological Challenges in Agriculture

In practice, financial strain translates into specific daily concerns: whether debts can be repaid, whether to invest in a new system that may not pay off, or whether to tell the family how bad the situation is. Shame and reluctance to discuss financial difficulties are frequently reported, particularly among older farmers and in farming communities where self-reliance is a strong cultural norm.

"I didn't tell my wife for six months. I thought I could fix it myself. By the time I said something, I was barely sleeping." — farmer interview, France.

Fatigue, exhaustion, and the absence of recovery

Long hours, physical demands, and sustained stress combine to produce a specific form of exhaustion that differs from ordinary tiredness. It accumulates across days and seasons, and what distinguishes it from normal fatigue is that recovery never quite happens.

Source of worry	% of farmers
Time frame	Experience
During acute events	Extended working days, interrupted sleep, no predictable endpoint to the working period.
Between events	Incomplete recovery, background vigilance, return to pressure before rest is adequate.
Over seasons	Cumulative depletion: reduced motivation, declining concentration, difficulty sustaining effort.
Long-term	Burnout risk rises sharply when recovery is repeatedly blocked. Around 1 in 4 Irish farmers report burnout.

Table 4 — How exhaustion builds across time horizons

This pattern is relevant for coaching and support: farmers who appear disengaged or fatalistic are often exhausted, not indifferent. Distinguishing between the two is essential for effective intervention.

3.3 Psychological Challenges in Agriculture

Rural isolation and the absence of peer support

Agriculture is one of the most isolated professions in Europe. Many farmers work alone or in small family units, at a physical distance from peers and services. When difficulties arise, there is often no natural space to share them — no colleagues to consult, no informal feedback, no simple conversation that normalises the experience.

Indicator	Value
Farmers reporting anxiety linked to extreme weather	92%
Farmers who seek any form of support	24%
Gap between distress and help-seeking	68 percentage points

Table 5 — The distress-to-support gap

Isolation compounds other difficulties in specific ways. Problems feel larger without perspective from others. Stigma around mental health — still strong in many rural farming communities — is harder to overcome without peer models of help-seeking. And practical barriers are real: rural mental health services are often sparse, and a farmer who works dawn to dusk has little time to seek support even when they want to.

Cultural expectations of self-reliance play a significant role here. Many farmers describe their reluctance to seek help not primarily as stigma, but as a deeply held belief that managing difficulties alone is simply what farming requires. This belief is reinforced by generations of tradition and, in many communities, by the absence of any visible alternative.

3.3 Psychological Challenges in Agriculture

When pressures converge: recognising critical situations

The challenges described above rarely occur in isolation. A farmer facing financial loss is also likely to be overworked, uncertain about the future, isolated from support, and physically exhausted. When multiple pressures coincide — and when they persist without relief — the risk of escalation into severe psychological distress increases significantly.

These situations do not arise suddenly. They develop through a gradual accumulation of unresolved pressures — financial, physical, social — that erode a person's capacity to cope. Recognising the early signs of this accumulation, before it reaches crisis point, is one of the most important skills a practitioner working with farmers can develop.

For coaches and trainers, this means attending not only to what farmers say, but to what they avoid saying: downplaying serious difficulties, expressing hopelessness about the future, withdrawing from conversations they previously engaged with, or describing themselves as a burden to their family. These are signals, not just moods.

How challenges reinforce each other

Understanding these challenges as interconnected — rather than as separate problems — is essential. A farmer experiencing financial loss typically faces increased workload, reduced sleep, heightened uncertainty about decisions, and less access to peer support all at once. Each of these amplifies the others. Together, they create conditions where stress becomes embedded in daily life rather than remaining a response to specific events.

This interconnectedness is also the reason why single-issue interventions often fall short. Addressing financial stress alone does not resolve the isolation. Improving sleep does not reduce the underlying uncertainty. Effective support needs to engage with the full picture — which is what the following sections address.

3.4 Coaching Strategies and Practical Solutions

Building on the psychological challenges described in the previous sections, coaching approaches in agriculture must respond to a very specific reality: farmers are often under continuous pressure, have limited time, and are unlikely to seek formal mental health support. For this reason, effective coaching strategies need to be practical, non-intrusive, and closely connected to everyday farm management.

Rather than focusing on abstract well-being concepts, coaching in this context works best when it is anchored in concrete situations — such as decision-making, workload management, or responses to climate events — and when it helps farmers regain a sense of clarity and direction.

The role of coaching in supporting farmers

Coaching provides an important entry point for addressing psychological strain in agriculture because it avoids many of the barriers associated with formal mental health support. As highlighted in Chapter 4, although a large proportion of farmers report anxiety and distress, only a small percentage actively seek help. This gap suggests that support must be embedded in formats that feel relevant and acceptable within the farming context.

In practice, coaching offers a space where farmers can reflect on their situation without feeling judged or labelled. It allows them to articulate difficulties that are often experienced but rarely expressed, such as uncertainty about the future, pressure linked to financial decisions, or fatigue caused by continuous workload. Importantly, coaching does not aim to fix these problems directly but to help farmers structure their thinking and identify possible ways forward.

This approach is particularly suited to agriculture because it aligns with farmers' preference for practical problem-solving. By focusing on concrete situations and actionable steps, coaching becomes a tool that supports both wellbeing and farm management.

3.4 Coaching Strategies and Practical Solutions

Communication approaches: engaging farmers effectively

The effectiveness of coaching depends largely on how conversations are initiated and conducted. In agricultural settings, direct questions about emotional wellbeing may be perceived as intrusive or irrelevant. Farmers are more likely to engage when discussions start from their daily realities.

For example, beginning a conversation with questions about the season, recent challenges, or workload creates a natural entry point. From there, it becomes possible to explore the psychological dimension indirectly, without framing it as a mental health issue. This approach respects the farmer's frame of reference and avoids triggering the resistance that clinical language often provokes.

Language plays a critical role. Communication should remain concrete and grounded, avoiding technical or clinical terminology. Instead of focusing on emotions in isolation, it is more effective to link them to specific situations, such as uncertainty about planting decisions or the impact of extreme weather on income. This keeps the conversation in familiar territory while still opening space for reflection.

Equally important is the ability to listen without immediately proposing solutions. Farmers often face complex situations where no immediate solution exists, and premature advice may reduce trust. Allowing space for reflection helps individuals clarify their own priorities and recognise aspects of their situation that can be addressed. Over time, this approach contributes to building trust, which is essential in contexts where self-reliance is highly valued and external support may be approached with caution.

Core communication principles for coaches working with farmers

Start from the farm, not from wellbeing. Use the season, the workload, and recent events as entry points. Avoid clinical framing. Link emotional content to concrete situations. Listen before advising. Build trust through consistency and relevance.

3.4 Coaching Strategies and Practical Solutions

Structuring complexity and externalising stress

One of the main difficulties farmers face is the accumulation of multiple pressures that are experienced simultaneously. These may include financial concerns, workload, uncertainty about weather conditions, and long-term planning. When these elements are not clearly structured, they tend to merge into a general feeling of being overwhelmed.

A key role of coaching is therefore to help externalise and organise this complexity. This involves making implicit concerns visible and separating different types of challenges. For instance, distinguishing between immediate operational issues and longer-term strategic concerns can already reduce mental overload. The simple act of naming and listing pressures separately can shift the experience from diffuse anxiety to a structured set of identifiable problems — a shift that is both practically and psychologically significant.

Externalisation also helps shift the perception of stress from being an internal weakness to being a response to external conditions. This is particularly important in agriculture, where many stressors — such as climate variability — are outside the farmer's control. By making this distinction explicit, coaching can reduce self-blame and support a more constructive approach to problem-solving. Simple visual tools or mapping exercises are especially effective in this process, as they allow farmers to see their situation in a structured way rather than holding everything mentally.

3.4 Coaching Strategies and Practical Solutions

Technique	Purpose	When most useful
Named problem list	Separates diffuse anxiety into discrete, identifiable issues	When farmer describes feeling overwhelmed without specific focus
Urgency vs. importance matrix	Distinguishes between what is pressing and what is actually significant	When multiple demands are competing for attention
Control mapping	Identifies what can and cannot be influenced	When helplessness or self-blame is prominent
Visual farm mapping	Anchors reflection in familiar, concrete space	When abstract discussion feels inaccessible or uncomfortable

Table 2 — Externalisation techniques: what they do and when to use them

Externalisation also helps shift the perception of stress from being an internal weakness to being a response to external conditions. This is particularly important in agriculture, where many stressors — such as climate variability — are outside the farmer's control. By making this distinction explicit, coaching can reduce self-blame and support a more constructive approach to problem-solving. Simple visual tools or mapping exercises are especially effective in this process, as they allow farmers to see their situation in a structured way rather than holding everything mentally.

Supporting stress management through practical strategies

Stress management in agriculture cannot rely on approaches that require significant time or major lifestyle changes. Instead, it must be integrated into existing routines and focus on small, realistic adjustments that farmers can actually implement without disrupting their work.

One of the most effective strategies is helping farmers clarify what they can and cannot control. As discussed in Chapter 3, uncertainty is a major driver of stress. By distinguishing between controllable and uncontrollable factors, farmers can redirect their attention toward areas where action is possible. This shift does not eliminate uncertainty, but it reduces the feeling of helplessness that often makes uncertainty so distressing.

3.4 Coaching Strategies and Practical Solutions

Another important approach is breaking down complex problems into manageable elements. Large challenges — such as financial instability or climate risk — often feel overwhelming because they are perceived as a whole. Coaching can help identify smaller components and define immediate priorities, making action more feasible and reducing the paralysis that comes from facing problems that seem too large to address.

Attention should also be given to recovery and energy management. Although farmers may have limited flexibility in their schedules, even small adjustments — such as recognising moments of fatigue, creating short breaks during peak periods, or delegating specific tasks — can contribute to maintaining functioning over time. The goal is not to eliminate workload but to prevent the continuous depletion that eventually leads to exhaustion and reduced capacity.

Strategy	Core principle	Practical example
Control clarification	Redirect attention from uncontrollable to controllable factors	Map weather risks vs. preparedness actions the farmer can take
Problem decomposition	Break large challenges into smaller, actionable elements	Divide financial pressure into: immediate costs, medium-term income, and long-term resilience
Energy awareness	Recognise fatigue signals before depletion becomes critical	Identify one predictable recovery moment per week, even brief
Priority triage	Focus on what matters most, not everything at once	Ask: what is the one thing that, if addressed, would reduce the most pressure?

Table 3 — Practical stress management strategies for agricultural coaching

3.4 Coaching Strategies and Practical Solutions

Enhancing decision-making and leadership capacity

Farmers operate as decision-makers in environments characterised by high uncertainty. This role has become more demanding as climate variability increases and traditional seasonal patterns become less reliable. The erosion of confidence described in Chapter 4 — where repeated disruptions lead farmers to question their own expertise — is one of the most important challenges for coaching to address.

Coaching can support decision-making by helping farmers clarify their priorities and reduce cognitive overload. Rather than attempting to optimise every decision, the focus shifts toward identifying what is most important in a given moment. This may involve distinguishing between urgent and non-urgent issues or between short-term survival and long-term strategy — a distinction that is easy to lose when everything feels equally pressing.

Another important aspect is rebuilding confidence in decision-making. Coaching can help reframe the experience of uncertainty by emphasising that it is a structural condition of contemporary farming rather than a personal failure. A farmer who made a reasonable decision with the information available at the time has not failed — they have operated under genuine uncertainty, as all farmers now must.

Encouraging a sufficiently good approach to decision-making can also be beneficial. In highly unpredictable environments, waiting for perfect information is not possible. Supporting farmers in making informed but timely decisions helps reduce paralysis and maintains momentum. The goal is not certainty but the confidence to act under uncertainty — a capacity that can be developed through structured reflection and coaching support.

Leadership in farming: what coaching can strengthen

Capacity to set priorities under pressure. Confidence to act on imperfect information. Ability to distinguish between what is urgent and what is important. Skill in delegating when workload exceeds individual capacity. Resilience in the face of repeated disruption



3.4 Coaching Strategies and Practical Solutions

Facilitating behaviour change and adaptation

Farmers are already adapting to changing conditions, but these adaptations often occur under pressure and without structured support. Coaching can play a role in making this process more deliberate and sustainable, transforming reactive adjustments into intentional strategies.

Rather than promoting large or immediate changes, coaching should encourage gradual adjustments that are aligned with both the farm's operational capacity and the farmer's current wellbeing. Attempting too much at once — particularly during periods of high stress — risks reinforcing the sense of failure if changes do not produce immediate results. A more effective approach involves testing small modifications, evaluating their impact, and building incrementally on what works.

An important element is linking adaptation to personal meaning. Changes are more likely to be sustained when they are perceived not only as economically necessary but also as contributing to reduced stress, improved stability, or greater alignment with the farmer's values and long-term goals. For example, a change that simplifies workload or increases operational predictability may have psychological benefits in addition to technical ones — and naming those benefits explicitly strengthens motivation to maintain the change.

By reinforcing the connection between action and outcome, coaching supports a sense of agency, which is essential in contexts where many factors remain uncontrollable. The repeated experience of taking a small action and observing a meaningful result — however modest — gradually rebuilds the sense of efficacy that chronic stress tends to erode.

3.4 Coaching Strategies and Practical Solutions

Practical activity: Climate Stress Map of the Farm

The Climate Stress Map of the Farm is a structured activity designed to translate the principles described in this chapter into practice. It provides a concrete and accessible way for farmers to visualise their situation, organise their thoughts, and identify actionable steps — without requiring clinical language or a formal therapeutic setting.

Step	Focus	Description
1	Draw the farm	Participants draw a simple representation of their farm, including key areas such as fields, buildings, water sources, and operational zones. This anchors the exercise in a familiar and concrete context, reducing the distance between the coaching process and daily reality.
2	Identify stress zones	Participants mark areas or activities associated with stress. These may include zones affected by drought or flooding, areas requiring intensive labour, or parts of the farm linked to recurring operational problems. This step makes stress visible and specific rather than diffuse.
3	Map available resources	For each stress point identified, participants identify associated resources: technical solutions, personal skills, support from others, access to external services, or financial buffers. The objective is to shift attention from problems alone to the combination of challenges and available resources.
4	Define priority strategies	Participants select one or two priority areas and define realistic strategies to reduce or manage the associated stress. These strategies are intentionally limited in scope, focusing on actions that can be implemented in the short term with available resources.
5	Share and discuss (group format)	When conducted in groups, the activity facilitates exchange between farmers. Participants can recognise shared challenges and discover alternative approaches used by peers. This reduces isolation and normalises experiences that are often carried in silence.

Figure 1 — Climate Stress Map: step-by-step guide for coaches

3.4 Coaching Strategies and Practical Solutions

The activity is effective across different formats: it can be used in one-to-one coaching sessions as a structured reflection tool, in group training as a facilitated discussion exercise, or independently by farmers as a way of organising their thinking between sessions. Its strength lies in combining visual concreteness with structured analysis — making it accessible to people who may be sceptical of abstract coaching approaches.

Key considerations for implementation

Across all the coaching approaches described in this chapter, effectiveness depends on alignment with the realities of agricultural work. Interventions must remain simple, time-efficient, and directly relevant to farmers' concerns. Support that feels disconnected from daily farming life is unlikely to be engaged with, regardless of its theoretical quality.

Rather than aiming for comprehensive change, the focus should be on incremental progress — supporting farmers in identifying small but meaningful adjustments that are feasible within their current situation. Over time, these adjustments can contribute to improved wellbeing and increased capacity to cope with ongoing challenges, even as the structural conditions of farming continue to change. Coaching in this context is therefore not a separate or parallel activity but a supportive layer integrated into agricultural practice. Its value lies not in solving the problems that climate change poses — which go beyond any individual intervention — but in helping farmers navigate that complexity while maintaining a sense of direction, agency, and control over what remains within their reach.

3.4 Coaching Strategies and Practical Solutions

Section	Coaching focus	Key technique or tool
5.1	Role of coaching in agriculture	Low-threshold, practical entry point; avoids clinical framing
5.2	Communication with farmers	Farm-first conversations; grounded language; reflective listening
5.3	Structuring complexity	Externalisation; control mapping; visual tools
5.4	Stress management	Control clarification; problem decomposition; energy awareness
5.5	Decision-making and leadership	Priority setting; confidence rebuilding; sufficiently-good decisions
5.6	Behaviour change and adaptation	Gradual change; meaning-linking; agency reinforcement
5.7	Practical activity	Climate Stress Map of the Farm (individual and group format)

3.5 Good Practices / Case Studies

This section presents examples of initiatives and practices that illustrate how mental health challenges in agriculture can be addressed in concrete ways. While not all of these are formal coaching programmes, they reflect real responses developed within agricultural systems, particularly in France, where farmer wellbeing has become an important policy and social concern. These cases show that effective support often emerges when psychological, social, and economic dimensions are considered together and when interventions are embedded in the everyday environment of farmers.

Case Study 1: France – MSA Farmer Support and Suicide Prevention Initiative

In France, concerns about farmers' mental health have intensified over the past decade, particularly due to the high incidence of suicide within the agricultural sector. The issue has been widely recognised at the national level, with data indicating that farmers face a significantly higher suicide risk than the general population and that cases often occur in contexts of accumulated pressure rather than isolated crises. This situation has prompted a structured response from public institutions, most notably the Mutualité Sociale Agricole (MSA), which is responsible for social protection in the agricultural sector.

The context in which the MSA operates is characterised by multiple, overlapping stressors affecting farmers. These include financial instability linked to market fluctuations and climate impacts, increasing administrative complexity, long working hours, and social isolation. A key problem identified by the MSA was that many farmers experiencing distress were not accessing available support services. This was often due to stigma, reluctance to speak about personal difficulties, or the perception that existing services were not adapted to the realities of agricultural life.



3.5 Good Practices / Case Studies

In response, the MSA developed a multi-layered intervention model designed to detect and address distress at an early stage. Rather than relying solely on formal healthcare pathways, the approach mobilised a wide network of local actors, including agricultural advisors, veterinarians, cooperatives, and social workers. These actors were trained to recognise warning signs—such as changes in behaviour, withdrawal, or signs of fatigue—and to initiate conversations with farmers in a non-intrusive way. In parallel, a dedicated helpline was established, providing confidential access to support, and local coordination units were created to respond to complex situations by combining social, financial, and psychological assistance.

The experience of the MSA highlights several important lessons. First, early identification of distress is more effective when it is carried out by trusted actors who already have regular contact with farmers. Second, farmers are more likely to engage with support when it is framed in practical terms, rather than as a mental health intervention. Finally, integrated approaches that address both economic and personal challenges are essential, as psychological distress in agriculture is rarely disconnected from financial or structural difficulties. This case illustrates the importance of embedding support within existing agricultural systems, making it accessible without requiring farmers to actively seek specialised services.



3.5 Good Practices / Case Studies

Case Study 2: France – Peer Support and Local Farmer Networks

In many rural areas of France, farming is carried out in relatively isolated conditions, often within small family units or individual holdings. While this structure allows for autonomy, it can also limit opportunities for exchange and mutual support. Over time, this isolation has been identified as a significant factor contributing to psychological strain, particularly when combined with high workload and economic pressure.

One of the key challenges observed in this context is that farmers tend to manage difficulties individually, even when facing similar problems to others in their region. This can lead to a perception of being alone with one's challenges, reinforcing stress and making it more difficult to identify solutions. In addition, cultural norms within agricultural communities often emphasise resilience and self-reliance, which can further discourage open discussion of difficulties.



To address this issue, various local initiatives have been developed to create spaces for peer exchange. These initiatives are often supported by agricultural chambers, cooperatives, or local associations, and typically take the form of small group meetings where farmers come together to discuss practical aspects of their work. Rather than focusing explicitly on mental health, these meetings are structured around shared concerns such as climate challenges, workload management, or adaptation strategies.

Within this framework, farmers are encouraged to share their experiences, describe what has worked or not worked in their situation, and exchange practical advice.

3.5 Good Practices / Case Studies

Case Study 3: Climate Stress and Adaptation Practices in European Agriculture

Across Europe, farmers are increasingly confronted with the effects of climate variability, including prolonged droughts, intense rainfall, and shifting seasonal patterns. These changes have direct consequences on agricultural production, but they also affect how farmers perceive risk and make decisions. The context is one of growing uncertainty, where traditional knowledge and experience are no longer always sufficient to predict outcomes.

The main challenge identified in this context is that adaptation often takes place under pressure. Farmers are required to adjust their practices in response to immediate conditions while also trying to anticipate future changes. This dual pressure can lead to stress, particularly when adaptation measures involve financial investment or changes in long-established practices.

Studies show that farmers are actively adopting a range of strategies to cope with these conditions. These include diversifying crops or income sources, modifying water management practices, and adjusting planting or harvesting schedules. In many cases, these changes are supported by advisory services or extension programmes, which provide technical guidance and facilitate knowledge exchange between farmers.

The results indicate that adaptation is more effective when it is accompanied by support structures. Farmers who have access to advisory services or peer networks are better able to evaluate options and implement changes. Importantly, these farmers also report a greater sense of control over their situation, which is closely linked to improved psychological wellbeing.

This case highlights that adaptation is not only a technical process, but also a psychological one. The ability to make informed decisions, test new approaches, and adjust over time contributes not only to farm resilience but also to the farmer's sense of competence and stability. It reinforces the idea that supporting adaptation requires attention to both practical and emotional dimensions.

3.5 Good Practices / Case Studies

Case Study 4: Coaching-Oriented Practices by Agricultural Advisors

In many European countries, including France, agricultural advisors play a central role in supporting farmers. They provide technical advice, assist with administrative processes, and often maintain long-term relationships with farmers. Because of this proximity, they are frequently among the first to notice signs of stress or difficulty.

However, advisors are not typically trained to address psychological issues, and many report feeling uncertain about how to respond when farmers express distress. At the same time, farmers may feel more comfortable discussing difficulties with advisors than with formal support services due to the existing relationship of trust.

In response to this situation, some initiatives have focused on equipping advisors with basic communication and coaching skills. These include techniques such as active listening, asking open-ended questions, and helping farmers structure their thoughts and priorities. The objective is not to transform advisors into mental health professionals but to enable them to act as a first point of support and to facilitate constructive conversations.

In practice, this approach allows advisors to engage with farmers in a way that goes beyond technical issues, without shifting into a clinical framework. For example, instead of focusing solely on a production problem, an advisor may explore how the situation is affecting the farmer's workload or decision-making and help identify small, manageable steps.

The experience from these initiatives suggests that even limited coaching skills can have a significant impact. Farmers are more likely to open up in conversations that feel familiar and relevant, and early discussions can help prevent situations from escalating. This case demonstrates the value of integrating coaching approaches into existing roles within the agricultural system, rather than creating entirely new structures.

Across these case studies, a consistent pattern emerges. Effective support for farmers' mental health is most successful when it is embedded in existing relationships, grounded in practical concerns, and delivered in a way that respects the culture and constraints of agricultural work. These experiences provide a strong foundation for the development of coaching approaches that are both realistic and impactful.

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Chapter 4: Stress and psychological resilience for farmers



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Overview

This chapter explores stress and psychological resilience among farmers and agricultural workers. Besides, it deals with identifying the occupational stressors, developing stress relief techniques (such as mindfulness training), and increasing mental health awareness among the agricultural workers.

It is known that farming is one of the highest-risk jobs because of the occupational stressors involved in farming. Recent studies show that farmers face stressors that involve lack of money, unpredictable weather (climate change-induced disasters like drought and flood), overloading work, regulatory restrictions, and isolation (Iwinski et al., 2026). As a result, weather disasters caused by climate changes can be linked to mental health issues that include anxiety and depression (Blake et al., 2025). Besides, dangerous working conditions, long-lasting hard work, and the tradition of passing down the land from generation to generation make farmers suffer from psychological issues.

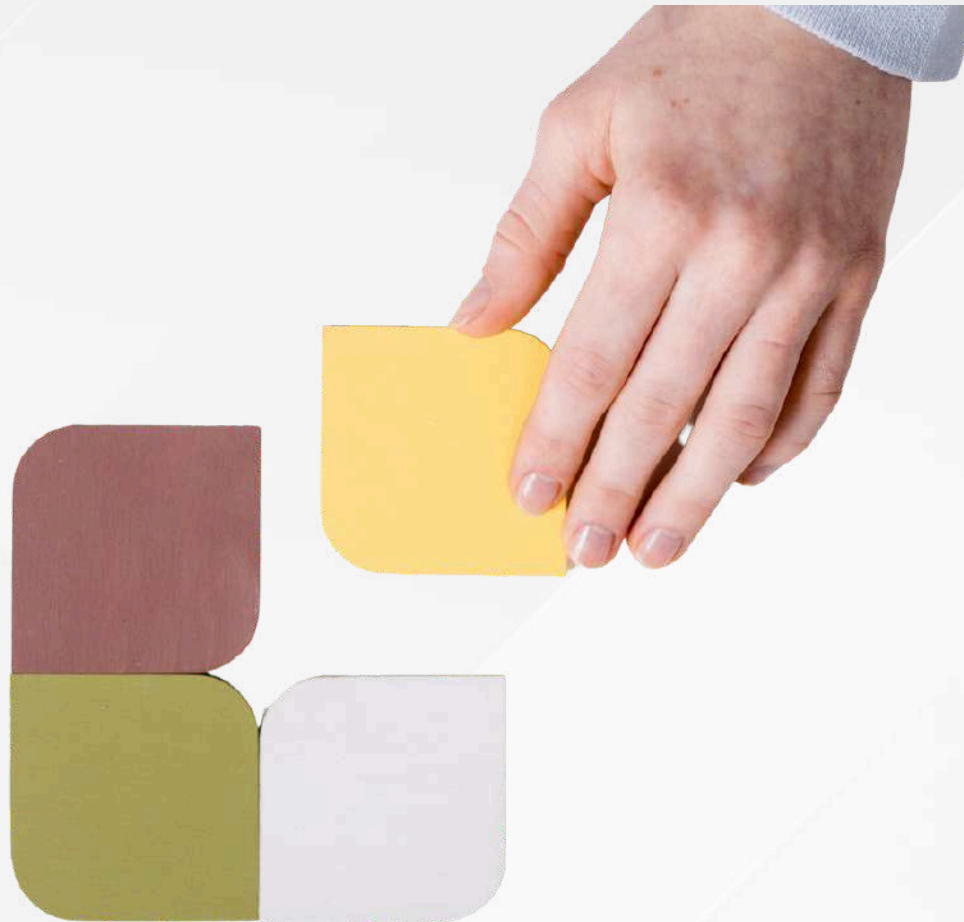
Those occupational stressors have a negative effect on farmers' health, leading to severe mental disorders such as anxiety and depression (Scheyett, 2025; Iwinski et al., 2026). However, some cultural factors of farming societies such as autonomy, self-reliance, and the stigma around mental health problems may contribute to exacerbating those issues. As a result, farmers' mental health deserves special attention; therefore, mental health promotion is a crucial problem.

Speaking about psychological resilience, it is important to emphasise its significance. As defined in contemporary literature, psychological resilience refers to an ability to deal with stressors and adverse events (Iwinski et al., 2026). Nowadays, contemporary literature proves that psychological resilience serves as a protection against stress and reduces risks of developing mental disorders (Iwinski et al., 2026).

Positive social environment, good stress management, and positive attitudes promote psychological resilience (Nye, 2024). Thus, there is a need for increasing farmers' psychological resilience. One of the best ways of managing stress for people who work in risky occupations is mindfulness training. According to Kabat-Zinn (2023), mindfulness involves breathing, being aware of the present moment, and changing cognition. Mindfulness training has been shown to be helpful for managing stress, improving emotional regulation, and promoting overall mental health. However, research on this topic in agriculture is still limited, which means more studies are needed.

Promoting mental health awareness and reducing the stigma around mental health issues in farming communities are closely related, given the importance of both. First, it is crucial to talk about mental health. Secondly, it is important to provide accessible help for people suffering from mental problems.

4.1 Learning Objectives



After reading this chapter, participants will be able to:

- Appreciate various stress triggers within the agricultural setting, taking into account environmental, financial, and socio-economic stresses associated with farming and farming employees.
- Understand what constitutes signs or markers of stress in terms of fatigue, anxiety, exhaustion, and cognitive impairment.
- Understand the concept of psychological resilience and why it is essential in the context of maintaining mental health and developing appropriate coping mechanisms in risky agricultural environments.
- Practise stress reduction methods that will help one cope with and manage stress by improving their emotions.
- Work to promote mental wellness programmes among farm workers and help reduce stigma in the use of mental support services.
- Encourage healthy and sustainable practices within workplaces, both for individual and institutional gain.

4.2 Scientific Background / Theory

Agricultural work has recently attracted the attention of researchers who study psychological stress. The reason is that psychological stress is widespread among farmers and manifests itself in complexity, arising from the interplay of environmental, economic, and social factors. To understand why the issue requires immediate attention, one should consider that psychological stress is described as a phenomenon whereby an individual perceives that his or her coping resources are inadequate in light of current demands (American Psychological Association, 2023). In agriculture, the problem is that the imbalance tends to be protracted because stressors persist over extended periods and relate to production, weather, and market conditions. Consequently, empirical data show that farmers face a unique set of stressors that differentiates them from workers in other occupations (Fraser et al., 2022).

Literature Review

The transactional model of stress is one of the theoretical perspectives employed in analysing psychological problems among farmers. Transactional stress theory posits that stress results from dynamic interactions between individuals and their environments. Consequently, farmers' psychological well-being is influenced by their reactions to stressors, including adverse weather. Research indicates that stressors characterised by uncertainty and unpredictability often elicit emotional distress and maladaptive coping strategies (Jones-Bitton et al., 2023). This observation is pertinent to agriculture, considering that numerous stressors encountered by farmers, like weather anomalies or international market volatility, are outside their direct influence.

Considering the intricate nature of psychological stress within agricultural contexts, the concept of psychological resilience becomes significant. Psychological resilience refers to a person's ability to cope with difficulties and maintain psychological balance after experiencing stress.

Recent investigations have determined that resilience is not solely an individual trait; rather, it represents a multifaceted process encompassing personal, social, and structural dimensions (Roy et al., 2022). In the context of agriculture, elements such as social support networks, community cohesion, adaptive coping mechanisms, and a robust sense of purpose can contribute to the cultivation of resilience within farming populations.

Importantly, the evidence shows that resilience mitigates the effects of stressors by reducing the probability of developing anxiety and depression (Phelps et al., 2024).

4.2 Scientific Background / Theory

Occupational burnout, alongside stress, constitutes a significant area of study within the field of psychological well-being. Burnout, as defined by Furey et al. (2022), manifests through emotional depletion, a decline in motivation, and a reduction in professional effectiveness, all of which arise from continuous exposure to work-related stressors. The agricultural industry, however, offers a uniquely challenging environment for this phenomenon due to factors such as prolonged work hours, the blurred boundaries between personal and professional life, and the commonality of generational farm ownership. Therefore, these factors together contribute to a greater likelihood of occupational burnout in farmers, which then hinders sound decision-making and the adoption of sustainable agricultural practices.

To develop a stress reduction plan, it is necessary to define the primary sources of stress among farmers. First, the environmental stressor can be identified as the most common factor that negatively impacts the mental state of people engaged in agriculture. Recently, climate change has led to extreme weather phenomena, such as droughts, floods, and heat waves, which pose serious threats to the economic well-being of farmers (Cianconi et al., 2023). The issue creates uncertainty, making individuals feel helpless and out of control. Economic difficulties, including unstable commodity prices, rising costs of production, and existing debt, are a persistent source of stress. These factors significantly affect mental health and are associated with negative outcomes in rural areas (Rudolphi et al., 2021).

Furthermore, it is essential to consider the social and cultural factors that exacerbate the mental health challenges faced by farmers. Agricultural labourers frequently reside in remote rural locales, often experiencing restricted access to healthcare provisions.

Moreover, the culture of farming communities emphasises self-reliance and hardiness, making it difficult to acknowledge psychological problems openly (Peterson et al., 2022). Consequently, stigma becomes a serious barrier to addressing mental illnesses, leading to adverse health outcomes. Mental health stigma can be defined as a set of negative attitudes and beliefs that prevent people from obtaining appropriate assistance.

4.2 Scientific Background / Theory

Interventions

To address the discussed issues, it is necessary to design a stress-reduction programme aimed at alleviating psychological distress and improving farmers' well-being. In recent years, considerable attention has been paid to mindfulness-based techniques for stress management (Goldberg et al., 2022). Generally, mindfulness describes a practice based on the maintenance of awareness about current thoughts and feelings with a nonjudgmental stance. Evidence shows that mindfulness-based interventions are useful in preventing mental disorders among high-risk groups, as they alleviate psychological distress and foster resilience (Goldberg et al., 2022). Therefore, mindfulness could be a beneficial approach here, especially since it doesn't require farmers to spend a lot of time on it. Meta-analyses show that mindfulness-based interventions are effective in reducing symptoms related to anxiety, depression, and occupational burnout.

Moreover, this practice fosters the development of improved coping strategies, thereby assisting individuals in adapting to dynamic circumstances (Goldberg et al., 2022). Considering that mindfulness can enhance cognitive flexibility, its use in agriculture could improve farmers' ability to make decisions. Beyond individual-focused strategies, initiatives aimed at increasing awareness of mental disorders and enhancing mental health literacy are also warranted. It has been proven that increasing mental health literacy leads to improved detection of psychological problems and reduction of stigma (Kutcher et al., 2023). In addition, peer support networks are helpful in rural areas, where the risk of isolation is high.

Sustainability

It is important to note the connection between psychological well-being and the adoption of sustainable agricultural practices. Sustainability can be viewed from three different angles, which are environmental, economic, and social. Farmers who experience stress or have poor psychological health are unlikely to engage in strategic planning and adopt sustainable practices. In contrast, mentally resilient farmers are expected to demonstrate high levels of adaptation, innovation, and sustainable land management (Phelps et al., 2024).

4.3 Psychological Challenges in Agriculture

Farmers face specific psychological challenges related to agricultural labour due to environmental, economic, physical, and social aspects associated with this work. The issues that farmers encounter are similar, but more importantly, they usually appear simultaneously and make it difficult to overcome them. Therefore, the psychological challenges associated with agricultural labour can have a significant influence on the health and well-being of farmers, affecting their decisions.

In the first place, the issue of fatigue should be considered because it is directly associated with high levels of stress. Working on farms involves long hours of labour, including planting and harvesting periods when the work takes place continuously without any rest and causes exhaustion. Such fatigue can affect people's cognitive abilities, making them less productive and attentive and more vulnerable to stress. Based on the findings provided by Furey et al. (2022), many farmers experience such problems as fatigue and inability to sleep well at night, which affects the likelihood of developing anxiety and depression. Moreover, it becomes difficult to disengage from work because of the absence of separation between personal and professional lives in cases of family businesses.

Another important psychological problem for farmers is the issue of risk perception and compliance with safety measures. Agricultural labour is considered one of the most dangerous types of work with high risk levels regarding injuries and fatalities. However, psychological factors can influence the perceptions of people involved in agricultural activities. They are accustomed to potential risks, and they may underestimate them, but at the same time, stress and pressure can push people to take dangerous decisions. In addition, when a person is exhausted after long hours of work, he or she may ignore safety measures to increase productivity. Based on the findings provided by Jones-Bitton et al. (2023), the level of stress has a negative impact on risk behaviour and decision-making. It means that farmers can decide to take unnecessary risks and perform dangerous operations under the influence of stress.

Climate anxiety and economic challenges are important psychological issues faced by farmers today because of global changes that take place. The process of global warming results in increased unpredictability of agricultural processes with the help of extreme weather phenomena. This situation can cause climate anxiety in farmers who fear the future and its uncertainties. At the same time, the problem of economic security exists as the issue related to price fluctuations, financial debt, and high costs of input resources.

4.3 Psychological Challenges in Agriculture

The research provided by Peterson et al. (2022) shows that financial strain is one of the leading causes of psychological problems in farmers. A recent survey showed that almost half of the respondents reported experiencing anxiety and emotional strain associated with both financial insecurity and climate change (European Commission, 2023).

Rural isolation and lack of social interactions are another psychological issue faced by farmers. They can often operate in secluded places where it becomes impossible to have convenient access to healthcare services, including those associated with mental health problems. Rural isolation becomes problematic since social interaction provides the opportunity to get support and communicate with other people and learn from them, improving mental health. Physical labour also prevents people from communicating with others, creating a sense of isolation and loneliness. Research has found that loneliness and isolation are highly correlated with high stress levels and anxiety (Fraser et al., 2022).



4.3 Psychological Challenges in Agriculture



The last psychological challenge can be described as mental health stigma associated with cultural traditions. People in rural communities value independence and the ability to cope with the situation, and these values are positive and beneficial. However, it means that people may have problems in communication and seek professional assistance if needed. Stigma may prevent farmers from overcoming their psychological issues successfully. According to Kutcher et al. (2023), stigma prevents farmers from seeking medical help regarding mental health issues.

At the same time, it should be noted that many farmers may have issues associated with leadership and communication skills, which affect the possibility of solving problems, establishing good relationships with other people, and managing work and team activities effectively. The skill of effective communication can positively affect work performance because it allows avoiding miscommunication and resolving potential issues. At the same time, it becomes difficult to work properly when under the influence of stress due to ineffective communication, Phelps et al. (2024).

To summarise, farmers face many psychological challenges such as stress, fatigue, risky behaviour, economic concerns, isolation, stigma, and climate anxiety. The mentioned psychological challenges can overlap in some cases since various stressors are present.

4.4 Coaching Strategies and Practical Solutions

It is important to help farmers address the issue of stress and increase their psychological resilience through a pragmatic approach, flexible programmes, and understanding the specifics of their work. It is crucial to understand the impact that limited time frames and seasons can have on farmers and their readiness to receive coaching. It is also critical to bear in mind specific features related to self-reliance, which is typical for farmers. As a result, a successful programme presupposes building mutual trust, providing simple tools, and suggesting gradual changes.

A significant first step in creating a coaching programme should be the use of person-centred and solution-focused approaches. Instead of concentrating on the existing problems, a coach must inspire farmers to emphasise their positive qualities and strengths as well as to move forward by taking small steps. Such an approach is highly applicable in practice due to the fact that the problems are typically perceived as huge obstacles and are unlikely to be coped with individually. Fragmenting a problem, farmers can regain their confidence (Grant, 2022).

The significance of communication should also be emphasised due to the fact that some farmers can feel uncomfortable discussing their mental problems owing to stigma. Therefore, it is important for a coach to keep in mind the need to communicate respect and empathy. Moreover, active listening can be considered a helpful technique since it means paying close attention to a person and validating his or her feelings. In addition, a coach should speak the language that a farmer understands by avoiding technical vocabulary. Casual discussions and even informal communication during regular farming activities can prove to be effective methods for reducing stress (Miller & Rollnick, 2023).

Stress reduction is another critical area in terms of coaching because there are a variety of techniques which can be easily applied to farmers' work. For example, simple relaxation techniques such as breathing exercises or meditation help control stress and emotional states regardless of specific conditions and the availability of equipment. Taking short breaks during a day, structuring the process and keeping it simple, and following sleep hygiene are other examples (Goldberg et al., 2022).

4.4 Coaching Strategies and Practical Solutions

Problem-solving techniques can also prove to be highly effective, especially in cases when a person feels uncertain. For instance, when encountering financial problems, farmers are likely to feel helpless and find it challenging to take any actions. The purpose of coaching in such cases is to make a person aware of the essence of the problem and generate possible solutions and actions.

Building good management skills can be considered a technique which can help increase a farmer's resilience. In case they have workers or manage people within their families, the ability to interact effectively will definitely be required. Training in effective communication skills, delegating tasks, and solving emerging disputes is essential. Creating reasonable expectations, establishing a discussion routine, and learning to see the point of view of another person can be considered useful recommendations (Phelps et al., 2024).

When implementing a coaching programme, one needs to be focused on sustainable changes. Therefore, coaching must include the techniques that can contribute to behaviour change. First of all, setting achievable goals, planning actions, and measuring achievements are the techniques used. Furthermore, motivational techniques can be applied, such as the analysis of personal values and goals.

It is apparent that there are numerous interventions implemented lately in different countries, particularly in Europe and neighbouring areas. These interventions demonstrate that a complex approach to helping agriculture requires certain steps to be taken together. In the following part, some of these steps will be mentioned. Some of the steps will be presented through the description of case studies focusing on actions undertaken in Cyprus, Greece, France, Italy, and Türkiye to promote wellbeing in the agricultural sector.



4.5 Good Practices / Case Studies

Cyprus

For example, recently implemented initiatives in Cyprus have helped integrate mental health into agricultural training sessions. In today's Cyprus, agricultural production relies on small family farms operating under difficult conditions related to drought and large water consumption requirements. Furthermore, agricultural companies have to operate within unstable economic conditions, which makes stress even more obvious. Unfortunately, agricultural producers do not always have access to necessary support services. However, thanks to European Union programmes such as AgriMental, farmers can take advantage of various training sessions where they talk about different well-being and stress management issues. It helps participants express their concerns and acquire necessary skills (European Commission, 2023).

Greece

Similar to the situation in Cyprus, in Greece farmers face additional challenges associated with unfavourable economic and weather conditions. Therefore, the introduction of a specific support system becomes highly required. Instead of launching new programmes, the FARMWELL project suggested a participatory approach based on working with farmers through practice groups. These groups bring together specialists, farmers, and researchers to talk about wellbeing problems and possible solutions. Thus, isolation among farmers becomes minimised, and specialists get to understand what farmers need rather than vice versa (FARMWELL Project, 2023).

France

France serves as yet another example of agricultural production that has to cope with well-being issues. According to statistics, mental health services addressing farmers' needs have become quite relevant. Furthermore, counselling programmes are also available through the collaboration of agricultural organisations and health institutions. Among the main characteristics of these services, anonymity can be highlighted. Indeed, farmers prefer discussing wellbeing issues anonymously. Nevertheless, farmers may receive professional advice without exposing themselves to any risks. Therefore, helplines remain quite relevant in France and other countries (European Agency for Safety and Health at Work, 2025).



4.5 Good Practices / Case Studies

Italy

Italy presents yet another example of agricultural interventions. In this country, social farming became one of the most promising initiatives designed to improve farmers' wellbeing. Social farming represents a mixture of social services and agricultural work. In other words, cooperation of farmers, social service providers, and local communities creates inclusive spaces where agricultural work benefits the social life of participants as well. Apart from its economic advantages, social farming becomes helpful in psychological respects since its application has been associated with improved wellbeing and self-esteem (Di Iacovo & O'Connor, 2022).

Türkiye

Finally, the last country to offer an example of a successful initiative is Türkiye. There, farmers are expected to face challenges related to economic instability, climatic uncertainty, and lack of access to healthcare services due to long distances. However, agricultural extension services remain close to farmers' hearts. Thus, such services are likely to become an efficient way to help with wellbeing. Namely, advisors undergo training for stress recognition and management of farmer stress. This type of intervention works efficiently due to the presence of mutual trust relations (Food and Agriculture Organization, 2022).



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Chapter 5: Mobile apps and wearable technology for stress management



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Overview



The agriculture sector has some of the most exhausting professions due to their hours of work, unstable economics, risk levels from weather and climate, and sheer numbers of manual labor hours. All of these factors may result in an increased level of stress and fatigue at work for farmers and agricultural workers. Both stress and fatigue can adversely affect mental health and work productivity (Fraser et al., 2005).

More recently, mobile phone applications (apps) and wearable technology have become an emerging source of support for mental health and stress management. Wearable technologies can provide individuals with real-time data about their physiological condition through devices like smartwatches, fitness trackers, and biometric monitoring devices. Some of the physiological variables measured by these devices are heart rate variability, sleep quality, and total activity level. When tracked over a period, these variables can indicate when an individual may begin to experience stress, fatigue and ultimately burnout (Van Dongen et al., 2023).

Mobile health applications, or mHealth apps, provide additional data analysis and personalised recommendations based on the information collected from wearable devices. For instance, common features found in mHealth apps include guided breathing exercises, meditation, stress-tracking tools, and behavioural coaching tools that facilitate stress management and improve overall wellness (Torous et al., 2020).

Digital technology can offer farmers and agricultural workers, whose jobs often place them in isolated areas with limited access to mental health services, various resources that are both convenient and flexible. Coaches and agricultural advisors may also leverage the use of digital technology within their coaching programmes to assist farmers in monitoring their stress and learning more effective coping mechanisms.

5.1 Learning Objectives



Upon completing this chapter, participants will:

- Gain insight into how mobile apps and wearables can be used to manage stress in agriculture
- Identify and use physiological indicators of stress (Heart Rate Variability, Sleep Disturbance)
- Identify digital tools to measure and regulate farmer/stress levels
- Utilize coaching strategies which support farmers in using digital wellbeing technologies
- Support farmers implementing digital well-being practices
- Promote behaviour changes that enhance psychological resiliency and work-life balance

5.2 Scientific Background / Theory



Understanding Stress and Its Psychological Foundations

The body's physiological response to stress is a way to prepare for a response to the challenges presented in an environment. Stress is a major component of human adaptation since it activates the biological systems of an individual to enable him or her to cope with the demands of his or her environment. However, when a person's stress becomes chronic or intense, there are serious consequences on a person's mental and physical health as a result.

The Transactional Model of Stress and Coping created by Lazarus and Folkman (1984) is one of the most influential frameworks for understanding how to cope with stress. In this framework, stress will occur when a person perceives the demands of the environment to exceed the person's available resources to cope with the demand. Thus, stress occurs not only because of the external situation but also because of how the individual interprets and reacts to it.

Cognitive appraisal consists of two facets:

- Primary appraisal is the initial evaluation made by a person as to whether the situation presents a threat, risk of harm, or a challenge.
- Secondary appraisal is when the person evaluates his or her ability to cope with the demands of the situation.

As farmers are constantly working under pressure from environmental conditions, changes in the marketplace, mechanical breakdowns, etc., and the added pressure of a time constraint from the need to plant or harvest, farmers are constantly required to appraise the situation and make decisions very quickly. Farmers will experience stress when they perceive the demands they face are greater than they personally have to cope with.

5.2 Scientific Background / Theory

A brief amount of stress can improve your performance by keeping you awake and motivating you to work harder. That said, when someone has been exposed to stress for a long time, they may suffer from a variety of negative results like emotional exhaustion, burnout, anxiety, or depression (McEwen, 2017). Prolonged exposure to stress also alters memory, attention, and decision-making – three things important for ensuring safe and productive agricultural practices.

The first step to providing farmers with support is learning how stress affects their body. New technologies, including wearables and mobile applications, create a new realm of possibilities for learning about physiological stress in real time while promoting self-awareness in the farmer.

Physiological Stress Response and the Role of the Nervous System

When people are under pressure, the organism's defence mechanisms within the body kick in to enable them to respond. This fight-or-flight response can be traced back to Cannon in the early part of the 20th century.

In general, there are 2 systems in the body that deal with this stress response:

1. The sympathetic nervous system (SNS) – an immediate response system.
2. The hypothalamic-pituitary-adrenal (HPA) axis – a more gradual response system.

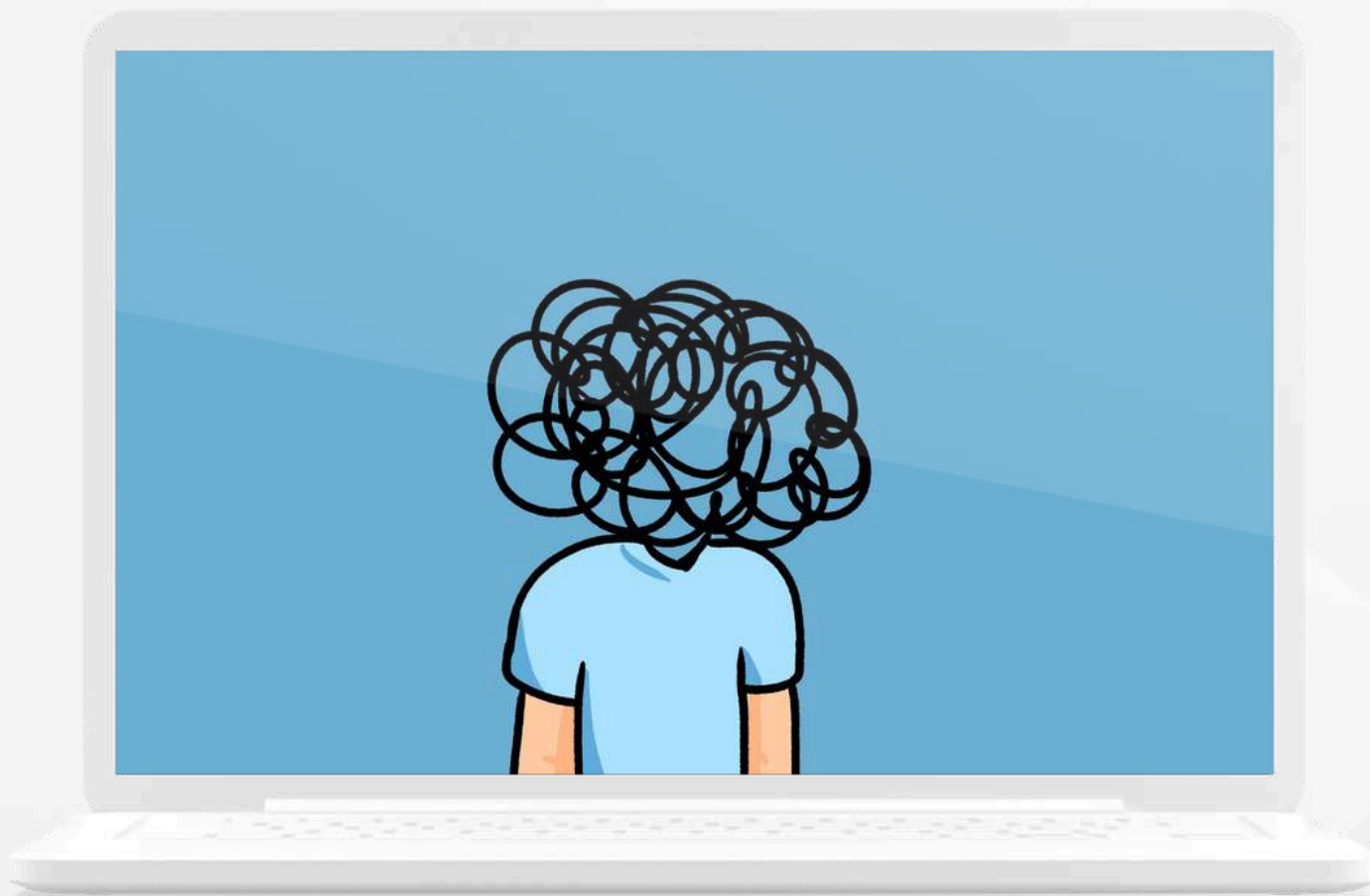
When an individual becomes stressed, the SNS responds almost immediately. This leads to the release of 2 different hormones (adrenaline and noradrenaline), which act to increase one's heart rate, blood pressure & respiration rate. Thus, these hormonal releases allow an individual to respond more effectively to an immediate threat.

On the other hand, cortisol (a steroid hormone), which is produced by the adrenal gland, is primarily secreted via the HPA axis when prolonged exposure to a stressor is ongoing. The role of cortisol is to provide energy stores in the body that can be mobilised to respond to the prolonged stressor. Although cortisol can be helpful in creating balance within the body over time, chronic activation (high levels of cortisol) can lead to decreased immune function, disturbed sleep patterns, and various mood disorders (McEwen, 2017).

5.2 Scientific Background / Theory

According to McEwen (2017), farmers and agricultural workers are repeatedly exposed to stressful conditions such as long hours, financial concerns, and unpredictable weather or nature of work. These factors can trigger the constant activation of the biological systems that respond to stress. Continuous activation over time can result in what researchers call an "allostatic load": that is, the cumulative effect of high stress levels on the body; the stress accelerates the wear and tear on the body.

Wearable devices can aid in the identification of the body's physiological response to stress. For example, by measuring heart rates, sleep, and physical activity levels, wearables can give insight into an individual's physical response to everyday stressors.



5.2 Scientific Background / Theory

Heart Rate Variability as an Indicator of Stress

Heart rate variability (HRV) is a major physiological marker that provides a significant indication of stress. HRV is defined as measuring the difference in the time interval between the heartbeats of different beats; that is, although many will perceive that the heart beats constantly, this is actually creating a rhythm that is variable based upon the degree of balance between the sympathetic and parasympathetic systems.

The parasympathetic system is responsible for recovery/rest processes, while, in contrast, the sympathetic system prepares the individual for an action. The physiological process of HRV therefore represents the continuous & direct interaction of these two systems.

Individuals with higher HRV generally demonstrate a more flexible nervous system, therefore having a better ability to adapt to challenges in their environments (Shaffer & Ginsberg, 2017). Greater HRV will also indicate that these individuals will demonstrate greater emotional regulation and greater resiliency to stress and will recover more quickly from physical exertion as compared to individuals with lower HRV.

Individuals presenting with lower HRV will develop a state of fatigue (i.e., stress), and as their HRV declines—they may also develop symptoms associated with chronic fatigue syndrome—following the same physiological process(es) associated with deficient resiliency. Research into the relationship between stress and HRV has also found that this same pattern would be expected for persons who exhibit a prolonged state of stress, whereby their HRV would decrease, reflecting decreased levels of autonomic balance.

Through wearables, health care professionals no longer have to be present to monitor your heart rate variance. In recent years, many devices like smartwatches and biometric handhelds have been created that allow us to monitor our HRV at any time...marking and estimating our HRV values while we sleep or rest.

Knowing how we might react in stressful situations can assist us in managing our productivity. For instance, if a farmer could have a record of their HRV while working during harvest, he or she could begin to understand how this might affect him or her based on the number of hours worked and how much he or she physically exerted himself or herself while working.

5.2 Scientific Background / Theory

Sleep, Recovery, and Mental Health

Proper sleep is a cornerstone of physical and psychological wellness. To stay healthy, all humans need an adequate amount of sleep in order to perform cognitive functions correctly, control their emotions when stressed out, have strong immune systems to prevent illness, and recover from physical exertion. Studies demonstrate a significant correlation between sleeping problems and increased stress levels, decreased productivity, and increased risk of work-related accidents (Barnes and Drake 2015). Sleep also disrupts attention, decision-making ability, and reaction time, all of which are essential for farm workers to operate in a safe manner. Farmers frequently have irregular sleep patterns, based on their ongoing seasonal workload, their need to get up very early to complete daily tasks, and their dependence on weather to complete their tasks. Many times, farmers do not get sufficient sleep during busy growing seasons due to trying to finish essential types of work such as harvesting crops or fixing equipment.

There is much useful information available to farm workers from the various types of wearable technology available for monitoring sleep patterns. Most of these devices track the amount of time a person spends sleeping, the amount of time spent in different stages of sleep, and any interruptions to sleep caused by external factors, such as noise or light. Knowing this information gives workers valuable insight into how their work habits and lifestyle choices affect their ability to sleep well at night.

A mobile app linked with a wearable device can provide an analysis of sleep data by giving personal recommendations to help improve sleep hygiene. For instance, users may be advised to keep regular sleeping hours, limit the use of screens before bedtime, and practise relaxation techniques before trying to sleep. Improvement of overall well-being and stress reduction is one of the best methods to improve the quality of sleep. Coaches working with farmers can use wearable devices to obtain sleep data to assist in having conversations regarding work/life balance and practices relating to recovery.

5.2 Scientific Background / Theory

Mobile Health Applications and Digital Wellbeing Technologies

The use of mHealth applications, otherwise known as mobile health apps, is gaining traction among users who want to improve their health and wellbeing. The majority of these apps can be downloaded onto your smartphone and will provide a multitude of services, such as monitoring your stress level, providing guidance on how to meditate, tracking your mood and offering you behavioural coaching. Digital mental health tools have been shown to provide increased access to psychological support to individuals in rural and remote areas where access to traditional healthcare services is limited (Torous et. al., 2020). The majority of the stress management apps utilise techniques from cognitive behavioural therapy (CBT), mindfulness-based stress reduction (MBSR) and behavioural psychology so that users can learn to identify their stress triggers, develop coping strategies for those triggers and manage their emotional response.

Mindfulness-based interventions have recently received considerable attention. Mindfulness is defined as "the process of focusing attention on the present moment without judgement". Studies have demonstrated that mindfulness-based practices can reduce perceived stress as well as improve emotional regulation (Kabat-Zinn, 2003). Mobile applications have made these mindfulness practices available via short guided exercises performed anywhere, such as during a break at work or after a long day of work. These tools provide individuals working in agriculture with flexible and practical options for obtaining stress relief when they may lack the time or access to professional counselling services.

Behaviour Change and Self-Monitoring

Wearable technology and mobile health applications promote self-monitoring, a key aspect of many behaviour change theories. Behaviour changes: researchers find that people will change their behaviours if they can see how their behaviours impact them. Therefore, self-monitoring increases the user's awareness of their health and increases the user's desire to take charge of their health. One example is a farmer who recognises that his/her sleeping habits are negatively impacting him/her due to a busy schedule. This observation may help motivate him/her to change his/her routine and get more sleep time. Similarly, tracking his/her daily activities may help the user to schedule times for physical activity and/or relaxation.

5.2 Scientific Background / Theory

Digital technology assists users with self-monitoring by providing continuous feedback and visual representations (such as graphs, notifications, and personalised recommendations) of what is happening with their behaviours, allowing the user to discover patterns in their behaviours. Users can then make informed decisions with regard to their health. Behavior Change Interventions that use digital tools have yielded positive outcomes in improving physical activity levels, sleeping patterns, and stress management strategies (Michie et al., 2013).

Biofeedback and Stress Regulation

Another fundamental concept of wearable technologies is biofeedback (BF). BF enables a person to receive immediate feedback of physiological processes, such as heart rate, breathing rate, or muscle tension. Many body processes are automatic and outside of our conscious awareness. Using wearable digital devices to provide real-time physiological signals allows individuals to monitor and better control those processes. For example, the display on a wearable device will show the heart rate of the user while doing breathing exercises. The user can consciously control their breathing speed, which will cause their heartbeat to gradually decrease, showing relaxation and a change to a calmer state of physiology. Numerous studies have shown how effective BF interventions are at reducing anxiety, improving emotion regulation, and enhancing stress resilience (Lehrer & Gevirtz, 2014).

Wearable technologies are increasingly incorporating BF features and can help users through the BF process using a variety of techniques such as breathing exercises or relaxation. These technologies can be very useful for people who experience acute stress due to high-demand jobs. For farmers, BF tools may be helpful in managing their stress levels when they have time-sensitive responsibilities such as working on equipment or managing livestock or during the harvest period.

Digital Health Technologies in Occupational Wellbeing

Digital health technologies are getting more attention for use in the workplace to improve the overall health of employees and lessen the risk of burnout. Industries like healthcare, manufacturing, and transportation are utilising wearable devices to track fatigue, stress, and physical demands placed on workers. Studies show that wearable devices can help with identifying when workers are starting to become fatigued and can be used for developing interventions to improve worker safety and health (Smets et al 2018).

5.2 Scientific Background / Theory

The agricultural industry is now starting to utilise similar technologies; through the use of monitoring systems, farmers will be able to better understand how the different levels of work intensity impact their mental and physical health. This will enable farmers to create work schedules and periods of time to take a break as well as recovery strategies. Coaches and agricultural advisors could also utilise technology to initiate conversations with farmers on their overall wellness by providing data on how they have been sleeping and how long they have been physically active. The data collected from the wearable devices would enable coaches to work with farmers to create a healthier lifestyle and reduce their chances of burning out.

Integrating Technology with Coaching Approaches

While digital solutions can generate valuable data – through the use of smart devices – there is only so much benefit from those digital tools if they are not connected seamlessly into larger support systems. In other words, technology will not replace the need for people to have proper interaction with each other, provide empathy for one another or offer skilled/interpersonal guidance.

Coaches are a critical part of helping an agricultural producer define their data, think about what happened during the previous week/month and create effective methods of managing their stress. By working with agricultural producers to help them correlate the physiological metrics generated by the wearable device to what takes place in their normal day-to-day lives, including how they feel emotionally.

For example, a coach may review the wearables metrics for a producer to identify when they have had reduced sleep quality and the relationship between that reduced sleep quality and specific times during the agricultural season. From there, they can brainstorm ideas/options for improving recovery, e.g., scheduling recovery periods and/or delegating responsibility for completing specific tasks. When blended together, the use of technology (wearable) tracking/systematic support through coaching/a coach creates a hybrid approach to help agricultural producers manage their stress through a combination of innovative technology and human source support. Integrated support is becoming increasingly recognised as an effective means to support mental health and wellness through high-pressure sectors of employment.

5.2 Scientific Background / Theory

Implications for Agricultural Wellbeing

The introduction of mobile health apps along with wearables is a significant opportunity to improve mental health support in farming. These technologies provide the means for farmers to monitor their stress signs and improve their self-awareness and healthier routines. When combined with coaching interventions, the use of digital tools can assist farmers in recognising the relationships between their workload and stress and how they can recover from both increased workloads and stressors. By helping farmers detect signs of stress early on and encouraging them to take proactive steps toward dealing with it, digital well-being technologies are helping to build psychological resilience and develop sustainable farming practices. As digital health technologies continue to be developed, their ability to support occupational well-being in agriculture will continue to grow.

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5.3 Psychological Challenges in Agriculture

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Psychological Challenges in Agriculture

Agriculture is widely recognised as a high-risk profession not only in terms of physical safety but also in relation to mental health and psychological wellbeing. Farmers and agricultural workers face a unique combination of environmental, economic, social, and occupational stressors that can significantly affect their mental health.

Unlike many other professions, agricultural work is deeply interconnected with uncontrollable external factors such as weather conditions, climate variability, and market fluctuations. This lack of control can contribute to feelings of uncertainty, stress, and anxiety. In addition, the boundaries between personal life and work are often blurred in farming contexts, where individuals live and work in the same environment.

Research indicates that farmers are at higher risk of experiencing mental health problems compared to other occupational groups, including stress, anxiety, depression, and burnout (Fraser et al., 2005). Understanding these psychological challenges is essential for developing effective coaching strategies and interventions that support wellbeing in agricultural communities.



5.3 Psychological Challenges in Agriculture

Economic Pressure and Financial Uncertainty

Financial insecurity is one of the most stressful aspects of being a farmer today. Farmers typically have to work in very unpredictable economic environments where their income comes from sources out of their control. For example, the weather can change suddenly, which may destroy all or part of their crop; there can be outbreaks of insects that might eat all or part of their crop; and market prices can fluctuate several times before they sell their harvest. The financial loss from any of these types of events can be enormous and have long-lasting effects. These types of uncertainty create additional ongoing pressure and anxiety to maintain a constant income, forcing many farmers to borrow money or use credit cards to maintain their businesses. This creates a significant psychological burden for many farmers, particularly if they do not know whether they will be able to pay back the money and keep their land.

When farmers experience financial challenges, there can be negative consequences on their families. Farming is often seen as a family profession, and the financial challenges that farmers face will also affect the spouse and children. Thus, there can be increased tensions and less emotional support for family members of farmers. Research shows there is a significant connection between financial insecurity and various types of psychological distress, particularly anxiety, depression and thoughts about taking your own life (Fraser et al., 2005). The ongoing demands for high levels of productivity coupled with the uncertainty of income create an endless cycle of stress that seems nearly impossible for farm families to escape.

Workload, Time Pressure, and Physical Exhaustion

Agricultural work encompasses strenuous physical efforts, in addition to long hours, often stretching from early in the morning until late at night. Farmers seldom receive adequate breaks during peak seasons (planting and harvesting) due to the volume of work to be completed. The strenuous nature of agricultural work can result in extreme fatigue and is often associated with psychological stress. Fatigue interferes with cognitive processes, including attention, decision-making, and reaction time. These types of fatiguing conditions can increase the likelihood of suffering an accident/injury on an agricultural job site.

5.3 Psychological Challenges in Agriculture

Because many tasks/conducting business in agriculture are either time-sensitive or must be completed within specific periods, there is tremendous time pressure on farmers. Examples include harvesting crops at the correct time or ensuring there is continuous care of animals/populations of livestock. Long periods of working under high demand and with limited time to complete job tasks create an environment where farmers feel great stress because they are under constant pressure; this can lead to burnout, defined by feelings of being emotionally exhausted and having a diminished drive and sense of accomplishment. Burnout in an agricultural work environment can limit productivity and decrease the effectiveness of the decision-making process, thus impacting one's overall health and well-being. As individuals begin to lose the ability to regenerate from chronic fatigue, they will not be able to effectively cope with stress, leading to continuous effects of physical and psychological strain.

Social Isolation and Limited Access to Support

Rural/agricultural areas commonly struggle with social isolation. Due to this isolation, many farmers only interact with those in their family. As they work long hours apart from others, it is difficult for farmers to connect socially through networking. Social support is one of the most significant factors that help keep a person's mind healthy. Also, people can share experiences, get suggestions and receive emotional support through social support. Nevertheless, many farmers do not have access to social support systems like others do. Some farmers have barriers that stop them from asking for assistance. In many agricultural communities, farmers emphasise self-sufficiency and resilience, so these values may discourage farmers from discussing their mental health or pursuing professional help.

Many studies show that farmers tend to avoid asking for assistance for mental health-related issues compared with other groups of individuals (Roy et al., 2017). By avoiding help from others or using outside help for treatment, farmers can go long periods of time without addressing the stress, anxiety or depression they experience. Through digital technologies such as mobile apps, it is possible to use remote methods to access mental health services in order to reduce some degree of isolation. However, using digital technologies is not an adequate substitute for the advantages provided through actual contact with humans. The coaching strategies implemented should create and empower ways for social support systems to be created and for mental well-being to be openly discussed.

5.3 Psychological Challenges in Agriculture

Climate Change and Environmental Stressors

Farmers are faced with an increasing level of stress due to climate change, which has brought about multiple new complexities in the environment within which they work. Weather patterns are more difficult than ever to predict. Farmers have many different challenges to contend with because of unpredictable weather events, such as drought, torrential rain, extreme cold, etc. Examples of significant changes that climate change has caused include drought, which may result in a decreased level of crop yield and affected income. In the case of a storm or flood, farmers may sustain significant and, in some cases, total damage to their farming operation.

Research has shown that climate-related stress increases the likelihood of a farmer experiencing a higher level of anxiety, depression, and emotional distress (Berry et al., 2010). To effectively support farmers physically and psychologically, strategies that promote resilience in the face of changing environmental conditions are essential.

Occupational Hazards and Safety-Related Stress

In regard to workplace safety, agriculture is one of the most dangerous jobs' that farmers perform and have to deal with many types of hazards in their everyday lives, including injuries from using farm machinery, exposure to harmful chemicals and pesticides, working with animals (livestock), amongst others. When farmers have to constantly think about the possibility of being injured or killed, it can also create mental stress and strain as they are forced to make immediate decisions about their own and other people's safety, which can be very taxing on the mind. At the same time they are exposed to accidents or have a near-miss accident, they may suffer from long-term mental effects such as worry, fear, and post-traumatic stress disorder. Farmers are also at greater risk of injuring themselves because of fatigue. Fatigue increases the chances that they will be injured as a result of being too tired to work safely, which causes more mental stress. Digital technologies can improve safety for farmers by creating fatigue monitoring tools and giving users warnings of potential risks. Training, safety awareness, and supportive work environments are also needed to address the mental effects of workplace safety for farmers.

5.3 Psychological Challenges in Agriculture

Family Responsibilities and Work-Life Balance

In many farming situations, family life is closely integrated with agribusiness employment, as farms are usually run by family units. Therefore, the family's intimate relationships are entangled with the farmers' occupational duties. This interplay can pose a challenge to achieving a healthy work-life equilibrium. Farmers often experience difficulty separating the stress of employment from the stress of home life, leading to a lack of recovery due to continued exposure to stress. Family members can assist the farmer with agricultural responsibilities, potentially leading to an increase in stress.

For example, a spouse sharing in the operation of the farm could make it difficult for him/her to equitably share responsibilities among everyone in the family. Interpersonal conflict can emerge from financial stress, a disparity in the distribution of work, or challenges in decision-making. Such conflicts may exacerbate the strain and diminish the farmer's overall well-being. Supporting work/family balance through the stress management process is thus a critical issue to be addressed in assisting farmers. Examples of assistance that may be provided by coaches include helping farmers develop strategies for establishing boundaries, delegating tasks and scheduling down-time and family time.

Stigma and Mental Health Awareness

Seeking help for mental health issues can be hard for people in agricultural areas. Farmers might think about talking about their mental health issues, but they often do not because they are afraid that people will think less of them or that they are weak. These ideas about strength, independence and resilience can prevent farmers from talking about the stress or mental health issues that they may have had to deal with. Instead of seeking help to deal with stress, many farmers will try to deal with this on their own.

Farmers under-reporting or not reporting these issues is commonly due to their lack of knowledge of what mental health is. They may not know what type of symptoms anxiety, depression or stress has and just assume that they are fatigued. To address this issue, mental health education is necessary. Farmers need to become aware of their mental health so that they know it is a real issue and that it is important to seek help.



5.3 Psychological Challenges in Agriculture

Digital Divide and Barriers to Technology Use

There are many advantages to using mobile apps and wearable tech for managing stress, but they are only as effective as the availability of access/adoptability. Farmers in rural communities may have barriers like limited internet connection, lack of digital literacy and limited financial resources, which all impede their ability to access digital devices. Additionally, older farmers will most likely not be very familiar with digital technologies at all, so they will likely need more assistance to be able to effectively use the mobile apps and/or wearable technology. Coaches and trainers should assess those barriers prior to implementing the use of digital tools, by providing clear instructions, demonstrations of how to use them, and ongoing support, adoption rates will increase, and therefore, the overall effectiveness of technology as a whole will increase.



Cumulative Stress and Long-Term Impact

A primary reason for psychological difficulties in agriculture is that stress is an additive phenomenon. Farmers often face multiple sources of stress at once: financial difficulties, high workloads, environmental uncertainty, and social isolation. As these sources of stress build up over time, chronic stress develops, leading to complete burnout. Chronic stress has impacts on both mental and physical health, such as increases in cardiovascular disease, weakened immune systems and sleep disorders (McEwen, 2017).

5.3 Psychological Challenges in Agriculture

The long-term results of stress will also influence the farmer's ability to make decisions, be productive and have a high quality of life. If there is little or no treatment of the stress and mental health issues, depression and suicide may be the result.

Thus, it becomes critical to identify the problem early and provide the necessary intervention(s). Digital technology can be used to support early identification through monitoring physiological cues, while a coaching method can provide strategies for managing stress.

Implications for Coaching and Intervention

In order to create useful coaching interventions for farmers, it is important to understand the psychological issues that farmers are dealing with. Coaches need to be holistic when looking at the different causes of stress for farmers, as they are all connected.

Here are some important things to remember when coaching farmers:

- The connection between different stressors (for example, financial stress, environmental stress, and social stress).
- Awareness of stress indicators and early warning signs and how to identify them.
- Encourage open dialogue about mental health issues.
- Help create behaviour change through practical methods.
- Use technology to allow for self-monitoring and feedback.

By addressing these challenges, coaches can support farmers in building resilience, improving their quality of life, and continuing to do their jobs effectively in demanding agricultural settings



5.4 Coaching Strategies and Practical Solutions

Coaching in Real Agricultural Contexts

When doing stress-management coaching with farmers (as opposed to office-based workers/office professionals), it is necessary for the coach to take into account the experiences of farmers on a day-to-day basis. The nature of farming creates physical demands on the farmer that have specific deadlines for completion and constant changes in the environment. As a result, the coach must deliver practical, flexible solutions that can be applied in the field as opposed to delivering solely theory-based methods.

It is also essential to remember that agricultural producers usually do not have the time or interest in participating in long, complicated interventions through coaching. Therefore, coaching sessions should consist of specific, brief, practical advice that relates to the farmer's real-world, challenge-based workday experiences. Instead of discussing generalisations about stress, the coach may ask the farmer to describe a typical workday during busy times of the harvest season. The purpose of doing this is to provide a context for discussion about the specific experience of stress.

Overall, coaching is possible in various locations (such as the farm itself, at breaks from work, or by means of a brief online counselling session). The ability to be flexible in coaching is crucial in gaining participation from farmers. Coaches are to be busy accommodating and working around farmers' schedules as opposed to requiring farmers to conform and adjust to a time-structured coaching format. Digital tools may also be incorporated stepwise. A coach might recommend a basic sleep log available through a smartphone or smartwatch to start with instead of introducing multiple complex applications simultaneously. Integrating stress management into current routines rather than creating additional tasks is the objective.



5.4 Coaching Strategies and Practical Solutions

Creating a Practical and Trust-Based Coaching Relationship

To create trust, people must communicate differently and show how they are practically relevant. When farmers see how they will benefit from coaching in their everyday lives and from working with their families, they will be more willing to participate in coaching. To use an example of how to achieve this in practice, coaches are better-off not using too much theory in their conversations with farmers; however, they should use examples from real-life experiences rather than theory alone. Rather than describing stress as a “psychological” concept or term, a coach might explain what stress is by saying, “After having worked for 12 consecutive hours without resting, your body has not recovered enough to function properly. You are going to wake up very tired, cranky, and stressed the next day!”

Another way to build trust with farmers is through consistency. Frequent (very short) check-ins (rather than infrequent long ones) will create an atmosphere conducive to building trust. A 10-15 minute check-in will still be valuable to the farmer as long as it creates an opportunity for the farmer to be able to think about their current situation. Coaches who respect the farmer's previous experience and knowledge will only further develop trust. Farmers have been doing their work long enough that they are the experts within that field, so coaching should not be treated like a top-down approach but as a partnership; thus, when coaches use open-ended questions, such as "During busy times, what is the best thing you do?", farmers are encouraged to take an active role in the process and to be more likely to assume the responsibility for the solution.

It is essential that a coach provides a clear explanation of what the purpose of any device or application is prior to introducing it into training sessions. For example, the coach could explain by saying, “This device will enable you to identify when your body is becoming fatigued through overtraining so you can take appropriate steps to prevent feeling fatigued through overuse.” This type of clear statement helps to create a level of acceptance and a reduction in resistance to the adoption of these technologies.



5.4 Coaching Strategies and Practical Solutions

Using Digital Tools in Everyday Practice

When using mobile applications and wearable technology, there must be a tangible outcome associated with their usage. Farmers will not consistently use digital solutions without an evident, immediate benefit from using these resources. A good method for starting to introduce farmers to the use of mobile applications and wearable technology is to begin with one simple task, e.g., monitor their sleep. The coach may engage the farmer in tracking their sleep over a couple of nights and revisit the data at a later date. For instance, if the data depicts that a farmer sleeps an average of five hours per day during peak busy times, this can lead to a starting point for discussion.

Similarly, wearable devices that track both heart rate and level of activity can assist in determining if farmers are working too much. A coach may observe that a farmer's level of activity is quite high, yet they have had very little sleep, thereby demonstrating a risk for fatigue. This scenario could prompt a practical discussion regarding the implementation of short breaks or adjustments of work schedules.

It is essential that all data be evaluated in context and used as a tool to evaluate the farmer's situation. Numbers alone mean nothing; they have to be associated with the reality of the farmer's situation. For example, a decrease in the farmer's heart rate variability (HRV) could signify that the farmer is experiencing increased levels of stress; however, the coach needs to investigate what is happening in the farmer's life at this time. There are many ways mobile applications can be utilised for short-term, effective usage. One way is to do a guided deep breathing exercise in order to help you manage stressful times.

A coach could ease you with the following suggestion: "Next time you feel like things are getting out of hand, do this 2-minute breathing exercise, then continue your work." When we utilise digital tools, it's crucial to make sure they're simple and meaningful and part of our daily routine – not seen as extra work.



5.4 Coaching Strategies and Practical Solutions

Practical Stress Management Strategies for Farmers

Stress management for agricultural workers must be practical and appropriate for their job. It is often difficult for farmers to take long breaks or attend structured stress management sessions, so the stress management techniques need to be simple and fast.

One effective technique to help manage stress is taking micro-breaks during the day. Micro-breaks of 2-5 minutes in length can help the body and mind recover between tasks. A coach can encourage farmers to take micro-breaks during busy times. For example, after completing a heavy lifting task, a farmer might stretch, take a few deep breaths, and briefly pause before moving on to the next task.

Breathing techniques are another good stress management option because they can quickly be implemented and require no equipment to use. Deep breath control can also decrease the physical stress response in the body by triggering the body's relaxation response. A coach can teach simple breathing techniques during a coaching session and encourage the use of these techniques regularly. Improving sleep is another important aspect of stress management. Coaches should work with individual clients to identify their barriers to good sleep rather than providing general recommendations. For example, a farmer may be up late on their phone or worrying about what will happen in the morning. Practical solutions might include creating a bedtime routine, reducing screen time before bed, and writing down all the things that need to be done the following day to reduce mental overload.

Time management is also important for helping to relieve stress. As a result, coaches can help farmers to determine which tasks they should prioritise and which operations they see as the highest priority. For instance, many farmers find that making simple changes, such as planning out their work schedule the day before, can greatly decrease the levels of pressure they feel when working on the farm. As well as developing new ways of managing stress, it is important for stress management to be integrated within each farmer's normal daily practice. The goal should be to make small and sustainable improvements to their overall quality of life and to eventually create a better environment for themselves and their families.

5.4 Coaching Strategies and Practical Solutions

Supporting Behaviour Change Through Coaching

Modifying habits can be extremely challenging, especially within structured and stable environments. The use of coaching aids individuals in creating manageable steps to modify behaviours that can be subsequently supported with ongoing encouragement.

To use a practical process of behaviour modification, it is best to focus on changing one behaviour at a time, for example, coaching a client to increase the amount of sleep they are receiving before adding/reducing work and increasing relaxation to the agricultural routine. Using technology as an approach to support the behavioural modification process can provide the ability for participants to record their progress and receive feedback as well as support their overall behavioural modification goals. Using an example with farmers who track their sleeping patterns and make minimal changes to help them sleep better will create measurable growth and motivation to continue modifying behaviours.

Coaches also need to explain to their clients that there will be setbacks. Farming is unpredictable; therefore, it will not always be possible to consistently apply new behaviours. The role of the coach will be to assist farmers in modifying and continuing such behaviours, not just giving up on improving habits. The role that reflection plays within behaviour changes is critical. After coaching for a certain amount of time (after a programme/strategy is implemented), the coach will ask some questions about what changed and what went well. This will help the farmer identify their progress and strengthen the positive behaviours that they displayed. Those small changes can ultimately lead to significant improvements in terms of stress management and overall wellbeing.



5.4 Coaching Strategies and Practical Solutions

Strengthening Support Systems and Long-Term Wellbeing

To effectively manage stress sustainably, it is necessary for us as individuals to develop long-term sustainable habits through the support of others; therefore, having a supportive group around us will be critical to our ability to learn how to manage our stress levels on an ongoing basis. Through encouraging farmers to connect with family and friends and to build relationships through their community, farmers can enhance their social circles and develop new social connections that they can call upon when they need assistance or encouragement. Group sessions in farming-related settings can be particularly beneficial for farmers who wish to learn about how to better cope with stress. Understanding that others experience similar issues can help farmers feel less isolated and offer opportunities to support one another.

Digital devices can assist in providing continuous feedback and reminders for farmers over prolonged periods of time, although technology, such as texting or typing, cannot replace face-to-face interactions. A combination of coaching and technology is considered to be the most effective model for supporting individuals as they create long-term routines. Coaches need to assist farmers in establishing routines that can continue over time. These routines may include regular self-monitoring, establishing regular sleep patterns, and using effective techniques to manage stress. While no farmer will entirely be able to eliminate their life's stress, practical assistance from a coach through developing effective techniques for managing stress effectively is possible. If farmers have developed effective stress management practices, they will be more resilient in dealing with future challenges and therefore make better decisions than if they had not learnt how to cope with their stress. In the long run, developing an effective blend of coaching and technological assistance will allow farmers to develop strong sustainable habits that will positively impact their health and prevent them from exceeding their personal goals as well as achieving their professional goals.



5.5 Good Practices / Case Studies

Case Study 1- Multi-Actor Mental Health Support Groups in Greece (FARMRes / FarmWell Approach)

Context

In recent years, European projects such as FARMRes and FarmWell have focused on improving farmers' mental health through participatory approaches. In Greece, practice groups were created to bring together farmers, agricultural advisors, psychologists, and local stakeholders to discuss stress, wellbeing, and coping strategies. These initiatives responded to growing concerns about mental health in agriculture, especially in regions affected by climate change and economic pressure.

Problem

Farmers in Greece reported high levels of stress linked to unpredictable weather conditions, rising production costs, and market instability. At the same time, there was a strong reluctance to discuss mental health openly and limited access to structured psychological support. Social isolation and lack of awareness further contributed to the problem.

Intervention / Method

The intervention involved the creation of practice groups (PGs) where farmers participated in facilitated discussions. These sessions were designed to be informal and practical, focusing on real-life experiences rather than theoretical knowledge.

Key elements included the following:

- Group discussions on stress and daily challenges
- Sharing of personal experiences among farmers
- Introduction to simple coping strategies (e.g., breaks, communication, planning)
- Awareness of available support services
- Gradual introduction of digital tools (e.g., stress apps, communication platforms)



5.5 Good Practices / Case Studies

Case Study 1- Multi-Actor Mental Health Support Groups in Greece (FARMRes / FarmWell Approach)

Results / Lessons Learned

The practice groups proved effective in reducing stigma and encouraging open conversations about stress. Farmers reported that simply sharing experiences with others helped them feel less isolated.

An important lesson was that peer support is a powerful tool in agricultural communities. Farmers were more willing to engage when discussions were led by people who understood their context.

Another key finding was that digital tools were more easily accepted when introduced gradually and linked to real needs. For example, farmers were more willing to use simple mobile apps for communication or stress tracking after participating in group discussions. This case demonstrates that combining community-based support with practical coaching approaches can significantly improve mental wellbeing in agriculture.



5.5 Good Practices / Case Studies

Case study 2 – Digital Stress Monitoring and Coaching Support (European Occupational Health Approach)

Context

Across Europe, several occupational health initiatives have explored the use of wearable technologies and digital tools to monitor stress and fatigue in high-risk professions, including agriculture. These approaches are increasingly being adapted for farmers as part of broader efforts to address psychosocial risks in the sector.



Problem

Farmers often experience chronic stress and fatigue but may not recognise early warning signs. Long working hours, physical demands, and lack of rest contribute to reduced wellbeing and increased risk of accidents. Traditional interventions are often reactive rather than preventive.

Intervention / Method

In this approach, farmers were equipped with wearable devices (e.g., smartwatches or fitness trackers) that monitored physiological indicators such as the following:

- Heart rate
- Sleep quality
- Physical activity levels

The data collected was then used in coaching sessions to support reflection and behaviour change.

5.5 Good Practices / Case Studies



The coaching process included:

- Reviewing sleep and activity data with the farmer
- Identifying patterns of fatigue or stress
- Discussing practical adjustments (e.g., introducing breaks and improving sleep routines)
- Setting small, achievable goals
- Using mobile apps for guided breathing or relaxation exercises

Results / Lessons Learned

This approach showed that objective data increases awareness and motivation. Farmers who saw clear evidence of poor sleep or high workload were more likely to make changes. One important lesson was that data alone is not sufficient. The role of the coach was essential in helping farmers understand and apply the information. Without guidance, many participants found it difficult to interpret the data. Another key finding was that small changes, such as improving sleep or taking short breaks, had a noticeable impact on wellbeing. Over time, these changes contributed to better energy levels and reduced stress. This case highlights the importance of combining technology with human support to achieve meaningful results.

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Annex 1: Practical tools for coaches



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Chapter 1 - Practical Tools for Coaches

Tool 1. Quick self-check before a higher-risk task

Before beginning a higher-risk task, the participant can ask:

1. What is different today compared with usual conditions?
2. Am I rushing because of real necessity or because I feel pressure?
3. How alert am I right now?
4. Have I already made small mistakes today?
5. Do I have the proper equipment and protection?
6. Would I feel comfortable if another person I care about did the task exactly this way?

This tool is useful because it interrupts automatic behaviour and activates reflection.

Tool 2. Warning signs of stress-related safety risk

Coaches can invite participants to monitor the following signs:

- increased impatience or irritability;
- difficulty concentrating;
- forgetting routine steps;
- repeatedly misplacing tools or materials;
- feeling mentally “full” or overloaded;
- skipping meals, water, or rest;
- difficulty sleeping and then continuing to work at full pace;
- acting on autopilot without active hazard scanning.

The coach can ask participants to identify which three signs appear first for them personally.

Chapter 1 - Practical Tools for Coaches

Tool 3. Warning signs of fatigue-related impairment

Participants can be taught to notice:

- heavy eyelids or visual blurring;
- slower thinking;
- repeated yawning;
- clumsiness or reduced coordination;
- difficulty remembering what was just done;
- zoning out during repetitive tasks;
- needing to re-read or re-check simple information;
- unusually risky confidence or the thought “I just need to push through.”

This tool is particularly useful during seasonal peaks.

Tool 4. Reflective coaching questions on risk perception

- Which risks in your work have started to feel normal?
- When do you most often take shortcuts?
- What do you tell yourself in those moments?
- Which tasks make you over-rely on experience?
- When are you least likely to ask for help?
- What would safer competence look like in your work?

These questions support deeper behavioural insight.

Chapter 1 - Practical Tools for Coaches

Tool 5. Near-miss reflection sheet

After a near-miss, participants can record:

- the task being performed;
- time of day;
- fatigue level;
- emotional state;
- environmental conditions;
- what shortcut or assumption was involved;
- what could be changed next time.

This simple tool helps convert isolated events into structured learning.

Tool 6. Group discussion prompts for trainers

- Why do familiar tasks sometimes become more dangerous than unfamiliar ones?
- How do stress and financial pressure affect safety choices?
- What makes it difficult to stop working when tired?
- What messages did you learn about toughness, endurance, and asking for help?
- How can a farm team support safe decisions during busy periods?

These prompts can be used in workshops with farmers, VET learners, or trainers.



Chapter 2 - Practical Tools for Coaches

Goal-setting is a well-established method for improving performance. Locke and Latham (2002) demonstrate that specific and challenging goals lead to higher performance compared to vague or easy goals. In agricultural contexts, goal-setting helps teams prioritise tasks, allocate resources, and monitor progress. Coaches can guide teams in developing SMART goals and breaking them into actionable steps. Open-ended questions are central to coaching practice. They encourage reflection, ownership, and problem-solving:

- What is the main challenge your team is facing?
- What options do you have to address this issue?
- What would success look like in this situation?

These questions align with solution-focused coaching approaches, which emphasise strengths and future-orientated thinking (Grant, 2011).

Group discussions are effective tools for knowledge exchange and collective learning. Participatory approaches increase engagement and improve the application of knowledge (Younker & Radunovich, 2021). Facilitators should ensure that discussions are inclusive and structured, allowing all participants to contribute. Experiential learning methods, including simulations and role-play, support skill development by allowing participants to practice real-life scenarios. These methods are based on experiential learning theory, which emphasises learning through action and reflection (Kolb, 1984).

Role-play exercises can be used to develop communication, leadership, and conflict resolution skills. Action-planning tools help translate discussions into concrete steps. These tools typically include:

- Identified issues
- Proposed solutions
- Assigned responsibilities
- Timelines for implementation

Chapter 2 - Practical Tools for Coaches

Self-assessment tools enable teams to reflect on their functioning and identify areas for improvement. Reflective practices are widely recognised as effective in adult learning, as they promote critical thinking and behavioural change (Kolb, 1984). A team self-assessment checklist can include dimensions such as the following:

- Communication clarity
- Trust and mutual support
- Role definition
- Safety awareness

Team-building exercises provide opportunities to observe and improve group dynamics. These activities highlight communication patterns, leadership roles, and problem-solving strategies. Research on group cohesion shows that shared experiences contribute to stronger relationships and improved performance (Marcos et al., 2010). The effectiveness of these tools depends on how they are applied. Coaches should:

- Adapt tools to the specific context
- Facilitate reflection after each activity
- Link practical exercises to theoretical concepts
- Encourage continuous learning and improvement

Chapter 3 - Practical Tools for Coaches

This chapter provides ten concrete tools that coaches and trainers can use directly when working with farmers. Each tool is designed to respond to specific challenges identified in previous chapters: the difficulty of expressing stress, the accumulation of pressure, limited time, and the low tendency to seek support. The tools are intentionally simple, adaptable to different contexts, and grounded in the realities of agricultural work.

They are organised into four categories that reflect the natural arc of a coaching process: opening the conversation, mapping complexity, supporting action, and consolidating learning. Coaches are not expected to use all ten tools in every session — the categories are a guide to selecting what is most appropriate at a given moment in the coaching relationship.

Cat.	Tool	Name	Format
A	1	Behaviour and Feelings Chart	Individual / group
A	2	Situational Exploration Questions	Individual
A	8	Adaptive Communication Guide	Individual
B	3	Control and Influence Mapping	Individual / group
B	9	Co-created Visual Tool	Individual
C	5	Micro-Action Planning	Individual
C	4	Daily Pressure Rating	Individual (self-use)
D	6	Body Signal Check	Individual
D	7	Reflective Pause	Individual / group
D	10	Peer Exchange Prompt	Group

Overview — tools by category

Chapter 3 - Practical Tools for Coaches

Category A: Opening and connecting

Tools 1, 2, 8 — for starting conversations and building trust

The most common barrier to supporting farmers is not lack of knowledge on the coach's part — it is the difficulty of getting the conversation started at all. Farmers in distress are frequently reluctant to engage with anything that feels like a mental health intervention. They may be guarded, time-pressed, or simply unused to discussing their inner experience with an outside professional. The three tools in this category are designed for exactly this situation. They provide the coach with structured, low-threshold ways to open a conversation about stress and pressure — starting from the farmer's daily reality rather than from clinical or coaching frameworks. Used well, they do not feel like tools at all: they feel like a natural extension of a practical conversation about the farm.



Chapter 3 - Practical Tools for Coaches

Tool 2 Situational Exploration Questions

Purpose

To help farmers move from general, undifferentiated stress — 'everything is difficult' — to specific, workable issues that can be addressed step by step. This tool transforms a vague sense of overwhelm into a concrete, discussable situation.

How to use

Use open-ended questions grounded in daily farm experience. Focus on recent, real situations rather than abstract reflections. Listen without interrupting or redirecting too quickly. Once the farmer has described the situation, summarise and check understanding before moving toward solutions:

"So the main pressure seems to come from... Is that right?"

This summarising step signals that the coach has listened and gives the farmer the opportunity to correct or deepen the picture.

Coaching questions

"What has been the most demanding part of your work recently?"

"When during the day do you feel the most pressure?"

"What has changed compared to previous seasons?"

"Is there a specific moment or decision that has been weighing on you?"

Why it works

Farmers are significantly more likely to engage when conversations are anchored in practice rather than wellbeing framing (Chapter 5.2). This technique draws on motivational interviewing principles — specifically the use of open questions and reflective listening to build engagement and clarify the presenting problem before any intervention is attempted.

Reference / resource

Motivational interviewing: Miller, W.R., & Rollnick, S. (2012). *Motivational Interviewing: Helping People Change* (3rd ed.). Guilford Press.



Chapter 3 - Practical Tools for Coaches

Category B Mapping and structuring

Tools 3, 9 — for making complexity visible and giving farmers a structured picture of their situation

One of the most consistent findings in the research is that farmers under sustained pressure experience their difficulties as a single, undifferentiated weight rather than as a set of distinct, addressable problems. Financial concerns, workload, climate uncertainty, and long-term anxiety blur together into a general sense of being overwhelmed — and this blurring itself is part of what makes the situation feel unmanageable. The tools in this category address this directly. They help farmers externalise complexity: taking what is held internally and making it visible, organised, and discussable. Once the situation is mapped — even roughly, even on a scrap of paper — it changes character. It becomes something the farmer can look at and respond to, rather than something they are simply inside of. Both tools in this category involve the farmer actively in the process of construction. This is deliberate: tools that the farmer has helped to build are more likely to be used, more likely to feel relevant, and more likely to generate genuine insight.



Chapter 3 - Practical Tools for Coaches

Tool 3 Control and Influence Mapping

Purpose

To reduce feelings of helplessness and redirect energy by distinguishing clearly between what the farmer can control, can partially influence, and cannot change — a distinction that is often blurred under sustained stress.

How to use

Draw three concentric circles or three labelled columns on paper:

Zone 1 — I can control: work organisation, daily schedule, small operational decisions

Zone 2 — I can influence: supplier relationships, crop variety choices, risk mitigation measures

Zone 3 — Outside my control: weather, market prices, national policy

The farmer places current concerns into each zone. The coach then focuses the discussion on Zones 1 and 2. Zone 3 concerns are acknowledged without dismissal — the goal is not to deny them, but to prevent them from consuming all available attention and energy.

Coaching questions

"Which of these feels most urgent to you right now?"

"Of the things in your control, which one would make the biggest difference?"

"Is there anything in Zone 3 that we could partially move into Zone 2 with the right preparation?"

Why it works

Loss of perceived control is one of the most consistently identified psychological mechanisms driving anxiety in farmers (Chapter 3.5). This tool is grounded in cognitive-behavioural coaching and acceptance-based frameworks, both of which identify the control/influence distinction as a core stress management strategy. It does not minimise uncontrollable stressors — it redirects cognitive and emotional resources toward areas where action is possible.

Reference / resource

Circle of Control framework: Covey, S.R. (1989). The 7 Habits of Highly Effective People. Free Press. Applied here to the specific stressor profile of climate-exposed farmers.

Chapter 3 - Practical Tools for Coaches

Tool 9 Co-created Visual Tool

Purpose

To increase relevance, ownership, and post-session utility by building a visual representation of the farmer's situation together during the session — using their own words, their own farm layout, and their own priorities.

How to use

Rather than presenting a pre-designed template, invite the farmer to construct a simple visual collaboratively. This could be a map, a list, a diagram, or a prioritised overview. Key principles:

- Use the farmer's own words, not the coach's categories
- Draw or write on paper the farmer can keep after the session
- Keep it simple enough to complete in 10–15 minutes
- Focus on what the farmer identifies as most relevant

Examples of what can be co-created: a farm stress map (see Chapter 5.7 for the full Climate Stress Map protocol), a decision priority list, a seasonal pressure calendar, or a personal resource inventory.

Coaching questions

- "If we were to draw this situation out, what would be at the centre?"
- "What are the main areas of your farm that feel most under pressure right now?"
- "Looking at what we have mapped together — what stands out to you?"

Why it works

Participatory approaches consistently produce better engagement and retention than expert-delivered content — particularly in contexts where autonomy and professional identity are central (Deci & Ryan, 1985, as cited in Chapter 5.6). The physical act of drawing or writing also externalises internal experience, making it easier to discuss and act on. Tools built collaboratively are more likely to be used after the session because they belong to the farmer, not the coach.

Reference / resource

Participatory design: Deci, E.L., & Ryan, R.M. (1985). Intrinsic Motivation and Self-Determination in Human Behaviour. Plenum Press. Climate Stress Map protocol: Chapter 5.7 of this manual.



Chapter 3 - Practical Tools for Coaches

Category C Action and change

Tools 5, 4 — for moving from awareness to doing and building momentum

Insight without action changes very little. A farmer who can name their stressors clearly and who understands what is and is not within their control still needs to do something different for the situation to improve. This is often where coaching stalls: the gap between understanding a problem and actually taking a step toward addressing it is wider than it appears, particularly when energy is depleted and confidence is low. The two tools in this category work on different timescales. Micro-Action Planning operates in the immediate term — it helps farmers identify a single, concrete, achievable step that can be taken in the next few days. Daily Pressure Rating operates over weeks and months — it builds the habit of self-monitoring, making patterns of stress visible before they escalate. Both tools share a common logic: they make change feel possible by making it small. Under chronic stress, the capacity for large-scale transformation is limited. What remains available is the capacity for small, deliberate adjustments — and those, accumulated over time, are often what produce real and lasting change.



Chapter 3 - Practical Tools for Coaches

Tool 5 Micro-Action Planning

Purpose

To translate complex or overwhelming situations into small, immediately achievable steps — reducing paralysis and restoring a sense of momentum and agency in farmers who are facing problems that feel too large to address.

How to use

After identifying a specific challenge, ask the farmer to identify the smallest possible action that would move the situation forward. The criteria are strict: the action must be realistic given current capacity, implementable within the next few days, and entirely within the farmer's control.

Examples of micro-actions:

- Adjusting one task in the daily schedule to reduce physical overload
- Contacting one specific person (supplier, advisor, peer) about a pending issue
- Testing one small change in practice to evaluate its feasibility

Coaching questions

"What is one small action that would make this situation slightly easier?"

"When specifically could you do this — which day, which moment?"

"What might get in the way, and how would you handle that?"

Why it works

Large, complex problems often feel impossible to address as a whole. Breaking them into small steps reduces cognitive overload and supports a sense of progress — essential to maintaining motivation under chronic stress. The implementation intention questions ('when specifically', 'what might get in the way') significantly increase the likelihood that planned actions are carried out, as demonstrated by substantial research in behaviour change psychology.

Reference / resource

Implementation intentions: Gollwitzer, P.M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist*, 54(7), 493–503. Solution-focused coaching: Grant, A.M. (2012). Making positive change. *Journal of Systemic Therapies*, 31(2), 21–35.



Chapter 3 - Practical Tools for Coaches

Tool 4 Daily Pressure Rating

Purpose

To help farmers become aware of cumulative stress patterns and identify periods of overload before they escalate. The tool supports self-monitoring between coaching sessions and makes invisible pressure visible over time.

How to use

The farmer rates each day or week on a simple scale from 1 to 5:

- 1 = Low pressure — routine, manageable
- 3 = Medium pressure — demanding but functional
- 5 = Very high pressure — overwhelmed, difficult to cope

Optionally, they add one short note: the main difficulty of that day, or one thing that helped. This can be done on paper, in a phone note, or summarised verbally at the start of each coaching session. No formal recording system is required — the habit of pausing to rate is itself the intervention.

Coaching questions

- "Looking back at this week, what number would you give it overall?"
- "Were there specific days that stood out as particularly heavy — what was happening?"
- "Did anything bring the number down on the better days?"

Why it works

Stress in agriculture is cumulative rather than episodic — repeated exposure across seasons without adequate recovery significantly increases distress (Chapter 3.4). Without structured awareness, farmers often experience this accumulation as a constant undefined heaviness rather than as a pattern they can act on. The simple rating scale transforms subjective experience into something observable and discussable, and over several sessions can reveal triggers, seasonal patterns, and genuine sources of relief.



Chapter 3 - Practical Tools for Coaches

Category D Reflection and connection

Tools 6, 7, 10 — for closing, consolidating, learning from experience, and reducing isolation

Good coaching does not end when a plan is made. It ends when the farmer has had an opportunity to step back from the immediate problem, recognise what they have learnt, and reconnect — with their own experience, with their own body, and with others who share their situation. The three tools in this category serve this closing and consolidating function. The Body Signal Check brings attention to the physical dimension of stress, which is often the earliest and most reliable signal that pressure is building. The Reflective Pause creates a brief, structured moment of learning at the end of a session — building the habit of extracting insight from experience rather than simply moving on to the next problem. The Peer Exchange Prompt addresses one of the most damaging aspects of farmer distress: the isolation that causes each farmer to experience shared, structural problems as uniquely personal failures. These tools are often the most underestimated. In practice, they are frequently what farmers remember long after the session has ended.



Chapter 3 - Practical Tools for Coaches

Tool 6 Body Signal Check

Purpose

To help farmers recognise physical signs of stress, which are frequently noticed before emotional awareness and often more accessible in cultural contexts where emotional expression is limited or stigmatised.

How to use

Invite the farmer to reflect briefly on their physical experience rather than their thoughts or feelings. This can be a brief check-in at the start of a session or a standalone short exercise. The coach may also observe non-verbal cues and reflect them gently back – posture, pace, and signs of fatigue – as a way of opening a conversation the farmer might not initiate directly.

Coaching questions

"Where do you feel the tension most in your body during a demanding day?"

"When do you notice you are most physically tired — morning, midday, evening?"

"How has your sleep been recently? Is it easy to switch off at night?"

Why it works

Stress in agriculture is frequently expressed somatically before it is recognised psychologically — fatigue, tension, sleep disruption, and physical pain are among the most commonly reported early indicators (Chapter 4.5). Approaching wellbeing through the body rather than through direct emotional questioning is more acceptable in contexts where self-reliance and emotional restraint are valued. Sleep disruption in particular is both a symptom of stress and a driver of further cognitive and emotional impairment — addressing it directly is clinically significant.

Reference / resource

Somatic coaching: Strozzi-Heckman, R. (2014). The Art of Somatic Coaching. North Atlantic Books. See also: NHS Every Mind Matters at www.nhs.uk/every-mind-matters



Chapter 3 - Practical Tools for Coaches

Tool 7 Reflective Pause

Purpose

To create a brief, structured moment of reflection at the end of a session — building the habit of learning from experience and shifting from continuous reaction toward more intentional action over time.

How to use

At the end of a conversation or session, invite the farmer to reflect on three points:

1. One thing that was difficult — naming it explicitly
2. One thing that worked — identifying even a small success
3. One thing to try next — a concrete intention for the coming period

This can be done verbally, in brief writing the farmer keeps, or as a group round where each participant shares one point. The explicit identification of what worked — however small — is particularly important for farmers under chronic stress: research on learned helplessness shows that positive experiences are frequently discounted or overlooked when sustained pressure narrows attention.

Coaching questions

"Looking back at this session — what stands out as most useful?"

"What is one thing that went better than expected this week, however small?"

"What is one concrete thing you want to try or change before we speak again?"

Why it works

Learning and behaviour change occur not through experience alone, but through structured reflection on experience (Schon, 1983; Kolb, 1984). In agricultural coaching, this tool counters the tendency for each session to remain focused on immediate problems without building cumulative insight. It also directly addresses learned helplessness by making positive experiences visible and memorable.

Chapter 3 - Practical Tools for Coaches

Using these tools together

These tools are not sequential steps in a fixed programme — they are a repertoire. Coaches select and combine them based on the farmer's situation, the available time, and the stage of the coaching relationship. A first meeting with a farmer who has never engaged with coaching before calls for a very different combination than a follow-up session with someone already in a reflective process.

As a general orientation: Category A tools are most useful for opening conversations and building initial trust. Category B tools are most useful once a challenge has been identified and the farmer is ready to examine it structurally. Category C tools support the transition from awareness to action. Category D tools consolidate learning, sustain motivation, and reduce the isolation that compounds all other stressors.

No single tool is sufficient on its own. The most effective coaching interventions combine structured technique with genuine relational attentiveness — knowing when to use a tool and knowing when to put it aside and simply listen.

Phase	Goal	Recommended category / tools
Opening / first contact	Build trust, reduce resistance, understand situation	Category A — Tools 1, 2, 8
Exploration	Clarify the problem, externalise complexity, map the situation	Category B — Tools 3, 9
Action planning	Define small achievable steps, build momentum	Category C — Tools 5, 4
Consolidation	Reinforce learning, sustain motivation, reduce isolation	Category D — Tools 6, 7, 10

Suggested sequencing by coaching phase

Chapter 4 - Practical Tools for Coaches

Helping the farmers manage their well-being requires the practical tools that are not complicated and relevant. Considering the tight schedule and the specificities of farmers' activities, the instruments should be relevant and applicable. The recommendations listed below are aimed at helping trainers provide the farmers with efficient means of addressing their problems.

Coaching Questions

One of the most effective coaching tools is the open question. The question is designed to encourage self-reflection. It is supposed to be relevant and actionable but not judgemental.

Some questions can be found below:

- What makes me upset right now in my farm life?
- What will help me cope with hard times?
- How can I make my life better?
- Who will help me with that?

Such questioning fosters the farmers' ability to analyse their condition and make efforts to reduce their stress (Neenan, 2022).

Reflection Activities

The reflection activities are helpful for improving the farmers' self-awareness and understanding of their stress and their reaction to it. One of such exercises is "stress reflection", during which the person should think about the following three aspects:

- What happened?
- How did I feel?
- How did I react?

It is also important to keep a diary with three positive events each day to avoid focusing only on the constant stress. These activities help develop the farmers' stress management and emotion regulation (Bennett-Levy & Finlay-Jones, 2023).

Chapter 4 - Practical Tools for Coaches

Checklist for Daily Wellbeing

The checklists are effective tools for monitoring the farmers' health status and detecting the first signs of stress. For example, one may consider the following stress checklist:

- Am I exhausted throughout the day?
- Have I rested today?
- Do I feel overwhelmed?
- Did I make breaks during the day?

Using these checklists regularly promotes establishing positive practices such as making regular breaks, drinking water, and talking to other people. These practices help raise self-awareness essential for behaviour change (Michie et al., 2022).

Helping the farmers manage their well-being requires the practical tools that are not complicated and relevant. Considering the tight schedule and the specificities of farmers' activities, the instruments should be relevant and applicable. The recommendations listed below are aimed at helping trainers provide the farmers with efficient means of addressing their problems.

Coaching Questions

One of the most effective coaching tools is the open question. The question is designed to encourage self-reflection. It is supposed to be relevant and actionable but not judgemental.

Some questions can be found below:

- What makes me upset right now in my farm life?
- What will help me cope with hard times?
- How can I make my life better?
- Who will help me with that?

Chapter 4 - Practical Tools for Coaches

Such questioning fosters the farmers' ability to analyse their condition and make efforts to reduce their stress (Neenan, 2022).

Reflection Activities

The reflection activities are helpful for improving the farmers' self-awareness and understanding of their stress and their reaction to it. One of such exercises is "stress reflection", during which the person should think about the following three aspects:

- What happened?
- How did I feel?
- How did I react?

It is also important to keep a diary with three positive events each day to avoid focusing only on the constant stress. These activities help develop the farmers' stress management and emotion regulation (Bennett-Levy & Finlay-Jones, 2023).

Checklist for Daily Wellbeing

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Chapter 4 - Practical Tools for Coaches

Themes for Group Discussions

Group discussions have been proven effective in overcoming loneliness and exchanging experience with other people. It often turns out very helpful to discuss problems and solutions with other people who deal with similar issues.

The themes for discussions can be:

- What causes stress among farmers today?
- How can I cope with stress while being engaged in intense activities?
- What local resources for support function?

Creating a positive environment is key to the successful discussions, as it makes people more willing to share and accept new practices (Kirkwood et al., 2023).

Self-Assessment Tools

Using self-assessments can help farmers understand their stress level.

The examples of assessment are:

- On a scale from 1 to 10, what is the level of my stress today?
- How do I feel about myself while facing stressful situations?

Checking the results enables identifying trends and achieving progress through continuous measurement. Such self-assessment does not involve complications for the farmers' well-being (OECD, 2022).

Chapter 4 - Practical Tools for Coaches

Goal Setting and Behaviour Change Promotion

Goal setting and promoting behaviour change starts with defining specific goals.

The examples are:

- Making daily breaks
- Consistently communicating with friends and colleagues
- Using stress management tools

The process involves the action plan defining when, where, and how the farmer intends to meet the goal. It is important to focus on small achievements rather than big unrealisable goals (Michie et al., 2022).

Adapting the Tools for the Farmers' Needs

Each tool has to be used flexibly, taking into account the specific preferences and requirements of the farmers. Some people may feel embarrassed participating in exercises and would like to have a talk with their coach.



Chapter 5 - Practical Tools for Coaches

Introduction to Practical Coaching Tools

When working with farmers, coaches need tools that are straightforward, versatile, and applicable to day-to-day life. Theoretical exercises are not generally effective in agricultural situations, so tools should also be easy to understand, quick to use, and adaptable to different types of work environments.

Practical tools are designed to help farmers identify stressors, reflect on their experiences and develop new, small (but significant) changes to their routines. These tools should not introduce an additional burden but rather should fit naturally into existing routines such as planning their daily schedule, taking breaks or reflecting on the end of their day.

Additionally, advances in mobile apps and wearable technology create additional opportunities for coaches. Digital tools can be used in conjunction with traditional coaching methods to provide coaches and farmers with instantaneous feedback, as well as assist them with self-monitoring. The goal of using digital tools should be to make them practical and relevant.

The following section contains examples of tools that can be utilised by coaches during training sessions or on an individual basis. These tools are meant to enhance awareness, facilitate dialogue, and create changes in behaviour.

Reflection Tools for Identifying Stress Patterns

Fostering awareness through structured reflection is a very useful tool for many farmers who often focus more on getting things done than on their self-care. Using structured reflection gives farmers the opportunity to step back and see how their work affects their physical and emotional well-being. One simple, yet effective, tool for helping farmers implement structured reflection is the Daily Reflection Check-in. At the end of each day, during a coaching session, the coach should prompt the farmer to reflect on three questions: What worked well? What caused me stress? How did I feel physically and emotionally? Although answering these questions may take less than five minutes, doing them regularly will allow the farmer to develop an understanding of his/her stress patterns over time.

Chapter 5 - Practical Tools for Coaches

For instance, if a farmer completes this process over a period of time, he may begin to see the correlation between certain activities, such as working on a timeline, dealing with mechanical failures or managing equipment, and the stress they produce. Once he identifies these correlations, he can begin to plan how to manage his stress levels.

Stress Trigger Mapping is a very effective activity. The farmer is asked to talk about their normal day-to-day activities and at which points in that day they feel an increase in their stress level. After identifying those times, the coach can help put those occurrences into different categories, such as time pressure, excessive physical fatigue, or a surprise. Once these occurrences have been placed into these different categories, the farmer can see them in either picture or word form, and it will give them a better understanding of the concrete form of stress that they experience and help them find a solution to that stress.

Digital tools help assist reflection by providing data for self-observational purposes. For instance, the farmer can track the amount of sleep they are getting and sync that with their personal reflections to see a correlation between poor sleep and a very stressful day, thereby reinforcing the importance of recovery from stressful events.

As a coach, you want to guide self-reflection without giving judgement so that the farmer can come to their own conclusions. By taking this approach, it creates some level of ownership, which will increase the probability of a behavioural change.

Simple Assessment and Monitoring Tools

To develop effective assessment tools, they do not require sophisticated techniques, particularly in agricultural contexts where simple practical techniques prove more successful. An example of an assessment tool that could be used is the "Weekly Stress Scale". Each evening or weekly, farmers can be asked to rate their stress levels on a scale of 1-10 (1 being the lowest and 10 being the highest). As these levels of stress are recorded each evening/weekly, patterns may develop where farmers identify having higher levels of stress during specific time periods or work activities.

Chapter 5 - Practical Tools for Coaches

Another example of a practical tool could be employing an “Energy Level Check”. In this case, farmers can evaluate their energy level (low, medium, or high) at various points throughout the day and will be able to identify when they have reached the point of fatigue and may need a break. These types of devices can give objective information about the type of data that the types of tools checked by farmers do not provide. For instance, if a farmer says that they are always tired, and when a farmer uses the wearables to track their sleep duration, heart rates, or daily activity levels, they can now check if they are getting enough sleep versus sleeping erratically. It is also important for the coach to keep in mind that they are there to help farmers by supporting them with tools that they can use to guide their decisions and help them succeed, instead of just overwhelming them with excessive amounts of data. The objective of the assessment tools that the farmer uses is not to collect large amounts of information but rather to produce results that can be used for making smart decisions. One way to make your assessments useful is to regularly review them with the farmer. By reviewing the information that the coach has collected with the farmer during their coaching session, the coach can help the farmer understand how to interpret the collected data into meaning for assisting in their decision-making processes.

Practical Coaching Questions and Guided Conversations

The effectiveness of coaching is primarily determined by asking the right questions. You want to be asking open questions, practical questions and questions based on real experiences versus hypothetical questions or concepts. For example, instead of asking, “Are you stressed?”, a better question to ask would be “When during your day do you feel the most stressed?”. This encourages farmers to think of a specific time rather than giving a general answer.

It can also be helpful for coaches to ask about how your body feels. For example, “What does your body feel like when you are stressed or tired?” This helps to establish a relationship between emotional states and physical sensations. This can be very useful when you are working with someone who is using wearable technology, as it can tie in to the actual data as well.

Another way to use questions as a coach is to develop problem-solving skills. For example, “What could you change in your daily routine to make this situation less stressful?” and “What have you done in similar situations to help you solve this problem?” These types of questions will encourage farmers to think about what they have done in the past and help them develop a plan to successfully address the issue.

Chapter 5 - Practical Tools for Coaches

Practical Exercises for Stress Reduction

Coaches can provide farmers with self-directed and simple exercises in addition to using conversational tools. These exercises should be quick, simple to do and adaptable to various circumstances. Controlled breathing is an excellent example of a simple exercise. Demonstrating how to breathe in for four seconds, hold for one to two seconds, and then breathe out can be done as a demonstration during the coaching session but should also be used during stressful times at different times of day. Another example of a simple exercise is "Pause and Reset". This exercise encourages farmers to take a brief break (even if it's just one minute) between tasks in order to step back, stretch and pay attention to breathing, which will help relieve tension from physical exertion, as well as mental fatigue. Farmers can also reduce stress through physical movement; light stretches or movement exercises can be performed during breaks and will increase the blood flow to all parts of the body and reduce tiredness. Coaches can create very simple movement routines that don't require equipment. Mindful exercises can also be used in agriculture. For example, while a farmer is working in their fields, they can concentrate on the sounds they hear or the smell of the crops or any other sensory experience while farming. This brings your attention back to what you are currently doing and decreases your level of stress.

Using Digital Tools as Practical Coaching Aids

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Chapter 5 - Practical Tools for Coaches

Supporting Long-Term Use of Tools

It is important to have regular follow-up with the farmer. During coaching sessions, coaches should ask farmers about the practical tools they are using and their perceived effectiveness. If the farmer is not finding the practical tool effective, it can either be quickly modified or replaced with another tool. Additionally, motivation may be enhanced by recognising the small accomplishments of farmers. For example, if a farmer indicates that due to their improved sleep habits they are feeling more rested, this achievement should be acknowledged and celebrated. When implemented over time and consistently, these practical tools will become an integral part of the farmer's daily routine, ultimately contributing to long-term health and wellbeing.



Annex 2: Protocol of exercises



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Chapter 1

Exercise 1: Spot the Bias, Reduce the Risk

Objective: To help participants recognise how cognitive biases, stress, and fatigue affect risk perception and safety decisions in agricultural work.

Target group: Farmers, agricultural workers, VET learners, coaches, trainers, and agricultural advisors.

Duration: 50–60 minutes

Materials needed: Printed agricultural scenarios or photos, flipchart or board, sticky notes, markers, reflection sheet.

Step 1. Preparation

The trainer prepares 4–6 short scenarios from agricultural work. Examples may include:

operating machinery late in the day after a long shift;

- repairing equipment quickly during a busy period;
- skipping protective equipment for a short chemical-related task;
- continuing animal handling work while distracted or emotionally upset.

Step 2. Activity instructions

Each group receives one or two scenarios and discusses:

- What is the immediate safety risk?
- What might the worker be thinking?
- Which psychological factor is influencing the decision?
- What safer alternative action could be taken?

Participants write their ideas on sticky notes.

Chapter 1

Exercise 1: Spot the Bias, Reduce the Risk

Step 3. Group discussion

Each group presents its scenario. The trainer links participants' observations to key concepts such as optimism bias, overconfidence, normalisation of deviance, stress overload, attentional narrowing, and fatigue-related judgement errors.

The trainer then asks:

- Which of these situations feels familiar in real agricultural life?
- Why do people choose the unsafe option even when they know better?
- What could help a worker pause and choose differently?

Step 4. Personal reflection

Participants complete a short reflection sheet:

Which scenario was most similar to my own experience?

Which bias or pressure affects me most often?

What is one pause-question or routine I will use in my work from now on?

Expected learning outcomes:

By the end of the exercise, participants will be able to:

identify common psychological distortions in safety-related situations.
explain how stress and fatigue influence choices;
propose safer alternatives in realistic agricultural scenarios;
commit to at least one personal safety-related behavioural change.

Chapter 1

Exercise 2: Blind trust walk: farm safety communication

Objective: Improve trust and clarity of verbal communication within farm teams.

Target group: 2–5 farming adults per exercise (can scale by running pairs sequentially); suitable for mixed groups (e.g. family members, crew)

Duration: 30 minutes (5 minutes briefing, 10 minutes activity, 15 minutes discussion)

Materials needed: A marked “minefield” area (10×5 meters) using ropes or cones; obstacles (bags, cones) scattered on ground; blindfolds or cloths (one per pair)

Steps of the exercise:

Preparation: Arrange a clear open space. Place obstacles randomly across a “field” area, making sure paths are narrow

Activity instructions: Pair participants. One person is Guide, the other is Walker (blindfolded). The Coach sets a simple destination (e.g. a marked box) the pair must reach through the obstacle field using only verbal instructions.

Walkers put on blindfolds. Guides stand at the field edge. On “Go,” the Guide verbally directs the blindfolded Walker step by step toward the goal, avoiding obstacles. (E.g. “Two steps forward... turn right... slowly now...”). Guides cannot physically touch Walkers; they can only speak.

Once the goal is reached or time is up, roles switch (the previous Walker guides the previous Guide through a different obstacle layout). The goal is to reach the end as quickly and safely as possible.

Group discussion: After both rounds, reconvene and ask:

- How did it feel to trust someone guiding you?
- What instructions were most helpful or confusing?
- How did Guides decide what words to use?
- What do you think this exercise has to do with real farm work? (e.g. directing team members in the field).
- What would you do differently next time to improve?

Chapter 2

Exercise 1: Exercise climate stress map of the farm

Each partner has contributed one exercise related to their chapter. The protocols below describe the objective, target group, materials, and step-by-step facilitation guide for each activity. All exercises are designed to be adaptable across face-to-face, online, and blended delivery formats.

This annex presents the exercise contributed by the chapter on climate change and farmer mental health. The protocol is written for facilitators and coaches who deliver training with agricultural audiences. It can be used as a standalone session or as part of a longer programme.

Objective:

To support farmers in identifying and externalising climate-related stressors within their farm environment, recognising available resources, and defining practical strategies to reduce or better manage pressure. The exercise helps participants move from a general sense of stress to a structured understanding of their situation, while encouraging actionable and realistic responses.

Target group:

Farmers, agricultural workers, and farm managers. Suitable for both individual and group settings. No prior experience of coaching or training is required.

Duration:

60 to 90 minutes, depending on group size, delivery format, and depth of discussion.

Group size:

Optimal: 6 to 14 participants. Can be adapted for individual coaching (30–45 minutes) or larger groups with subgroup facilitation.

Delivery:

formats Face-to-face, online (digital whiteboard), or blended (paper drawing + digital sharing). See format guidance in the preparation section.



Chapter 2

Exercise 1: Exercise climate stress map of the farm

Materials:

- In-person A3 paper sheets (one per participant), pens or markers, and coloured markers (optional for stress zone highlighting).
- online Digital whiteboard platform (Miro, Mural, or Jamboard). Participants need a device with internet access. Shared document as an alternative if the whiteboard is unavailable.
- blended Printed A3 sheets for on-site participants; digital whiteboard or shared document for remote participants. Smartphone or webcam for photo sharing of paper drawings.

Steps of the exercise

Step — Preparation (before the session begins)

The facilitator introduces the purpose of the exercise, explaining that it aims to help participants reflect on their farm in relation to current climate-related challenges. It is important to emphasise from the outset that there are no correct or incorrect answers, and that the focus is entirely on personal experience — not technical performance or correct farm management.

Before starting, the facilitator should briefly acknowledge that many farmers are currently facing similar pressures linked to climate variability. This normalises the discussion and reduces the risk that participants feel singled out or exposed. A short opening statement such as the following is effective:

"Climate change is creating new pressures for farmers across Europe. This exercise gives you a structured way to look at your own situation — what feels difficult and what resources you already have."



Chapter 2

Exercise 1: Exercise

climate stress map of the farm

Format-specific preparation

- In-person: distribute A3 sheets and pens. Ensure there is enough space for participants to draw without feeling observed. Tables rather than theatre seating work best.
- Online: open the shared digital whiteboard in advance and create one labelled frame per participant. Test screen-sharing and confirm all participants can access the platform. Provide a 2-minute orientation to the tool if needed.
- Blended: brief both on-site and remote participants on how sharing will work (photo upload, camera sharing, or screen share). Ensure remote participants have access to the digital board before the session begins.

Step 1: Drawing the farm

Participants create a simple, freehand representation of their farm, including key elements such as fields, buildings, water sources, livestock areas, and other operational zones that feel relevant to them.

The facilitator should explicitly emphasise that artistic quality is irrelevant — what matters is that the drawing reflects how the participant perceives and experiences their farm, not how it looks on a map. A rough sketch with labelled zones is entirely sufficient. This step serves a specific psychological function: it anchors the entire exercise in something familiar and concrete, and gives participants a visual reference to work with in the steps that follow. Participants who work with their farm mentally every day often find this step surprisingly engaging.

Delivery notes

- In-person: participants draw freely on A3 paper. Allow 8–10 minutes. Play quiet background music if the group needs help settling.
- Online: participants draw using the freehand tool on the digital whiteboard or use shapes and text boxes to represent areas. Allow an additional 3–5 minutes for tool familiarisation.
- Blended: on-site participants draw on paper; remote participants use the digital board. Both groups are given the same instructions simultaneously.



Chapter 2

Exercise 1: Exercise

climate stress map of the farm

Facilitator prompt

"Draw your farm as you experience it day to day — not as it appears on a map. Include the areas that take up most of your attention, whether or not they are physically large."

Step 2: Identifying stress points

Participants mark on their map the areas or activities associated with stress, difficulty, or persistent concern. These may include zones affected by drought, flooding, or extreme heat; areas requiring intensive or unpredictable labour; parts of the farm linked to financial risk or recurring operational problems; or any area that tends to occupy mental space disproportionately.

The facilitator guides reflection using open questions rather than a checklist. The goal is not to produce an exhaustive inventory, but to help each participant identify what is most alive in their experience right now.

Guiding questions

"Where on your farm do you feel the most pressure at the moment?"

"Which areas have been most affected by recent weather conditions or climate variability?"

"Are there parts of the farm that take more mental energy than their physical size would suggest?"

Delivery notes

- Participants can use a colour (red or orange) to mark stress zones, or simply circle them and add a short label. Keep this step to 10–12 minutes.
- In online and blended formats, participants can use coloured shapes, sticky notes, or symbols to mark stress areas on their digital map.
- The facilitator should circulate (in-person) or monitor frames individually (online) and offer brief encouragement, without guiding content.

Chapter 2

Exercise 1: Exercise climate stress map of the farm

Step 3: Mapping available resources

For each stress point identified in Step 2, participants now identify resources — things that already exist or could be mobilised to help manage or reduce that stress. Resources are defined broadly and intentionally: they may include technical or practical solutions, personal skills and accumulated knowledge, support from family members or neighbours, access to advisory services or peer networks, financial buffers, or simply the fact that the problem has been managed before.

This step is psychologically significant. Farmers under chronic stress tend to focus attention on what is wrong and what is missing. The deliberate mapping of resources — alongside stressors, on the same page — shifts the frame from deficit to capacity. It does not minimise the difficulty; it contextualises it.

The facilitator should acknowledge that some stress points may initially feel resource-free. In those cases, the question becomes, 'What would a resource look like here?'

'What is missing that, if present, would make a difference?'

This opens the door to identifying gaps that can be addressed, rather than simply cataloguing problems.

Delivery notes

- In-person: resources can be written directly next to each stress point on the map, in a different colour if available.
- Online: participants add sticky notes or text labels to their digital map, positioned next to the relevant stress zone.
- Allow 10–15 minutes. The facilitator may prompt briefly if participants are stuck.



Chapter 2

Exercise 1: Exercise

climate stress map of the farm

Facilitator prompt

"Next to each area of difficulty, try to note at least one thing that helps, or could help, even if it is not yet fully in place."

Step 4: Defining priority strategies

Participants select one or two priority stress points — not necessarily the largest but the one that feels most actionable or most urgent — and define a realistic, small-scale strategy to reduce or better manage the associated pressure. The emphasis on small and realistic is deliberate: under conditions of chronic stress, large proposed changes often increase rather than reduce anxiety. What is needed is a first step that feels genuinely possible.

The facilitator supports this step by helping participants distinguish between what they can act on now and what requires longer-term planning or external conditions to change. If a participant identifies a strategy that is dependent on factors outside their control, the facilitator can gently redirect toward what is within reach.

Guiding questions

"What is one action you could take in the short term that would make this situation slightly easier to manage?"

"Is there a small change in how you organise this area — or how you think about it — that might reduce some of the pressure?"

"What would need to be true for this to feel less overwhelming? Is any part of that within your reach?"

Delivery notes

- Strategies can be written on the map or on a separate sheet. Allow 10 minutes.
- In online and blended formats, participants can add a final coloured note (e.g. green) indicating their intended action for each priority area.
- Encourage participants to be specific about timing: not 'I will try to...' but 'I will do X by Y date'.

Chapter 2

Exercise 1: Exercise climate stress map of the farm

Step 5: Group discussion

If the exercise is conducted in a group setting, participants are invited to share their maps and reflections with the wider group. Sharing is encouraged but not compelled — the facilitator should make clear that participants may share as much or as little as they choose.

The discussion focuses on three areas: identifying challenges that appear across multiple farms, exchanging different approaches to similar situations, and generating practical ideas that participants may not have considered individually. The facilitator's role here is not to teach or evaluate but to draw connections between what participants share and to ensure that the discussion remains grounded in concrete farm experience.

Discussion focus areas

- Common challenges: Which stressors appear across multiple farms? What does it mean for the group that these are shared rather than individual?
- Different approaches: How have different participants responded to similar situations? What can be learned from the range of strategies in the room?
- Practical exchange: Are there specific resources, contacts, or techniques that participants are willing to share with the group?

Closing reflection

At the end of the discussion, the facilitator invites each participant to identify one takeaway — either a concrete action they intend to implement or a shift in perspective that emerged from the session. This can be shared with the group or noted privately.

The facilitator closes by acknowledging the difficulty of the situations participants have described and reaffirming that the pressures discussed are shared and structural — not individual failures.



Chapter 2

Exercise 1: Exercise

climate stress map of the farm

Delivery notes

- In-person: participants place their maps on the table and talk through them. The facilitator can use sticky notes to highlight themes that recur across multiple maps.
- Online: participants share their screen or display their digital board frame. The facilitator can use a summary board visible to all to capture common themes.
- Blended: on-site participants show their paper maps via camera or upload photos. Ensure remote participants have equivalent visibility and speaking time.
- Allow 20–30 minutes for group discussion. In larger groups, consider subgroups of 3–4 before a plenary round.

Delivery format summary

The table below summarises the main adaptations required for each delivery format. All three formats produce equivalent outcomes when the preparation and facilitation guidance above is followed.

Format	Key adaptations	Main facilitation consideration
Face-to-face	A3 paper, markers, table seating. No technology required.	Ensure physical space allows drawing without participants observing each other closely during Steps 1–3.
Online	Digital whiteboard (Miro / Mural / Jamboard). Pre-built participant frames. 5 min tool orientation.	Monitor individual frames actively. Use breakout rooms for sub-group discussion in groups over 8.
Blended	Paper for on-site + digital board for remote. Photo sharing for paper maps.	Actively manage equity of participation. Remote participants often need more deliberate invitation to speak.

Chapter 2

Exercise 1: Exercise climate stress map of the farm

Facilitator notes

1. On creating psychological safety

This exercise asks farmers to make their difficulties visible — both to themselves and, in group settings, to others. The facilitator's tone in the opening minutes determines whether this happens genuinely or defensively. Normalise difficulty early. Make clear that the facilitator is not there to assess farm performance. If participants are hesitant, share a brief example of the kind of stress point that might appear on the map — something concrete and relatable, not dramatic.

2. On what to do when a participant is in evident distress

Occasionally, the exercise surfaces distress that is more acute than anticipated. If a participant appears overwhelmed or withdrawn, do not push for sharing. Offer a private conversation after the session. If the participant's situation suggests they may benefit from professional support, refer them gently to appropriate local resources. Do not attempt to provide counselling within the session.

3. On time management

Steps 1 and 2 tend to move quickly once participants are engaged. Step 3 (resources) often needs the most facilitation — resist the urge to skip it or shorten it. It is psychologically the most important step in the sequence, because it shifts the frame from deficit to capacity. The group discussion can expand or contract depending on available time; Steps 1–4 can be run without discussion in 45 minutes if necessary.



Chapter 2

Exercise 1: Exercise climate stress map of the farm

Evidence base and rationale

The Climate Stress Map exercise is effective because it combines three mechanisms that are independently supported by research evidence, and that reinforce each other when used together.

Visualisation and externalisation. Making stress visible on paper — literally placing it in the external world rather than holding it internally — is a well-documented technique for reducing the cognitive and emotional load associated with complex problems. When stressors are externalised, they become more specific, more manageable, and more discussable (see Chapter 3.3 on the stress pathway, and Chapter 5.3 on externalisation techniques).

Structured reflection and action planning. The progression from stress identification to resource mapping to strategy definition follows the logic of solution-focused coaching: it moves participants from problem description toward capacity recognition and actionable next steps. This structure has been shown to reduce overwhelm and support motivation under conditions of chronic stress (Grant, A.M., 2012, as cited in Chapter 7, Tool 5).



Chapter 3

Exercise 1: Managing stress in daily farming life

Objectives:

To enable the participants to identify their stressors and be aware of their own stress responses and coping mechanisms that might aid them in becoming mentally strong.

Target Group:

Farmers either as individuals or groups

Time Needed:

45-60 Minutes

Equipment Required:

A Flip Chart or White Board; Markers; Optional: Printed Worksheets; Pens & Paper (for participants)

Exercise Procedure:

Step 1: Introduction to the Topic (10 Minutes)

The facilitator begins the activity by giving some introduction on stress related to agriculture and stressing that stress is a very natural response to every kind of challenging situation. The participants are asked to reflect upon their work and think about those instances in their work that proved to be difficult for them.

Example of an Introduction Question:

"What are the most stressful moments for you in farming?"

Such answers are noted down on a flip chart.

Step 2: Instructions for the Activity (20-25 minutes)

The participants are required to undergo a reflective task for themselves comprising three simple steps as follows:

Step A: Describe Your Stressor

In this step, the participants describe one incident that took place recently during their work and was considered a source of stress for him/her.



Chapter 3

Exercise 1: Managing stress in daily farming life

Step B: Think About the Reaction

This step requires the participants answering the following questions:

- What happened?
- How did you feel emotionally and physically?
- How did you react?

Step C: Alternative Solutions

In the last step, the participants are expected to answer the following questions:

- What will I do differently next time?
- What could I do to reduce my stress next time?
- Who or what could help me in such situations?

Once the reflective exercise is completed, participants can conduct paired/group sessions in case they wish to share their experience with someone.

Step 3: Group Discussion (15-20 minutes)

In this session, the facilitator conducts discussion with the help of the following prompts:

- What are the most common stressors?
- What coping strategies do the participants adopt?
- Any new strategies?



Chapter 3

Exercise 1: Managing stress in daily farming life

Following are the points that must be highlighted in this discussion:

- That stress is a very common phenomenon in a farm environment.
- Small changes matter a lot.
- To avail of others' support in such situations shows strength.

Expected Outcome of the Exercise:

- Increase Awareness Regarding One's Own Stressors
- Understanding of Personal Stress Reactions;
- Discovering Coping Methods;
- Peer Support & Shared Experience.



Chapter 4

Exercise 1: Understanding your stress: Using digital tools for daily awareness

Objective

Participants will observe the influence of stress on their bodies and behaviours through this exercise so they can also leisurely track it; learn how to manage stress via mobile apps or wearable tech; and observe their own ranges of motion as they apply these interventions. We want to use this exercise to help individuals increase their self-awareness of how stress is affecting them and to provide them tools/tools that they can use digitally to aid in the management of their stress.

Target Group

Farmers, agricultural workers, agricultural trainees, and rural professionals participating in coaching or training sessions on wellbeing.

Duration

60 minutes

Materials

- Smartphones
- Internet connection
- Flipchart or whiteboard
- Markers or pens

Optional: wearable devices (smartwatch or fitness tracker)



Chapter 4

Exercise 1: Understanding your stress: Using digital tools for daily awareness

Steps of the Exercise

1. Preparation

Before a session takes place, trainers have the option of choosing one or two easy and free mobile applications with a focus on helping manage stress, such as apps used to support the tracking of breath and/or sleep. If there are any types of wearable devices available, trainers can confirm with the team that at least one will be available to demonstrate to the entire group.

Additionally, the trainer would provide a very brief overview of basic indicators of stress (e.g., fatigue, how well a participant slept, and the participant's heart rate) using everyday, descriptive language rather than technical terminology. To further prepare for an upcoming session, participants are to consider a typical job or workday and identify the times during the course of their day when they were most fatigued or stressed.

2. Activity Instructions

The programme starts with an overview of stress in agriculture and how participants are then asked to share examples of daily work stressors / stressful situations. This allows participants to connect the exercise to their real life.

Once the connection is established, the program provides an introduction to a simple online tool (such as an app for a smartphone or a wearable technology device). The introduction provides a demonstration of the function of the tool; common features include the following:

- Sleep or activity monitoring
- Quick breathing or relaxation exercises
- Feedback about the user and how they feel (e.g. daily summary or measure of stress level)



Chapter 4

Exercise 1: Understanding your stress: Using digital tools for daily awareness

Once participants have seen the demonstration, they are encouraged to try out the digital tool (if they have a smart phone) or watch the demonstration to see how the tool works. The trainer may also encourage participants to participate in a brief (2-3 minutes) breathing exercise or look at example sleep/activity statistics.

Finally, following this introduction to the digital tool, each participant is asked to complete a brief reflection activity about the following:

- What they learned about themselves regarding their daily routine and stress
- Will this tool be useful to them in their job?
- What times during their day might be realistic times to utilise this tool?

For modelling purposes and to support some discussion, the trainer may write some key points from each of these questions on a flip chart.

3. Group Discussion

- What are some challenges that may inhibit you from using the tool on an ongoing basis?
- How, if at all, can the tool assist you in managing your stress/fatigue?

The trainer will summarise the session by outlining various key points (e.g., the importance of small changes, utilising the tools regularly, and coupling the tool with practical habits such as breaks/sleep) that emerged from this discussion. The session will conclude with a brief summary of the session and encouragement for participants to experiment with at least one of the tools or strategies presented.



Annex 3. Micro-Credentials



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Micro-Credentials Model

Introduction

Agriculture is considered one of the psychologically most difficult areas at present within Europe. Agriculture involves people working under highly stressful conditions with climate instability, economic risks, lack of labor resources, dangerous workplaces, remoteness, seasonality, and constant exposure to various physical and emotional stressors. In addition to having an impact on productivity and sustainability, such working conditions can affect the mental and physical well-being, resilience, emotional state, and decision-making abilities of farmers and other employees (Nye, 2025; Iwinski et al., 2026).

It has recently been found out that psychological well-being in agricultural enterprises is related to workplace safety, resilience, cooperation, adaptive strategies, and social networks of individuals. Climate change, fatigue, constant stress, burnout, and other psychological issues have become common in European agriculture and represent a serious problem for sustainable development (Powell, 2025; Blake et al., 2025).

Thus, it is clear that the assessment of sustainable agriculture needs to go beyond its environmental and economic aspects and include human sustainability as well. If the agricultural sector wants to develop sustainably, human well-being should be preserved. Therefore, psychological well-being, workplace safety, resilience, social cooperation, and adaptability are crucial for sustainable agriculture.

At present, a new concept of sustainable agriculture is embodied in the Micro-Credentials Model "Coaching for Psychological Wellbeing and Human Sustainability in Agriculture", based on the AgriMental Coaching Manual and covering the following themes:

- Psychology of Workplace Safety in Agriculture
- Social Psychology for Teamwork in Agriculture
- Combating Psychological Consequences of Climate Change for Agricultural Economies
- Stress and Psychological Resilience of Farmers
- Mobile Application and Wearing Devices for Managing Stress

Micro-Credentials Model

Conceptual Foundation of the Model

Human sustainability forms the basic assumption of the model, which implies the ability of agricultural processes to support the psychological, functional, social, emotional, and adaptive abilities of people who are actively involved in agricultural activities.

The approach involves an integrative and interdisciplinary view of the processes, according to which safety, health, resilience, teamwork, self-regulation, and climate adaptation skills are seen as components of sustainable performance in agriculture.

The present model rejects the assumption that occupational safety, resilience, well-being, and social relationships are isolated concepts but considers these variables as interlinked processes that impact each other.

It has been proven that stress impacts safety, fatigue deteriorates the process of making decisions, climate uncertainty affects the ability to regulate emotions, social isolation decreases resilience, and organisational culture influences help-seeking skills and adaptability (Kahneman, 2011; Reason, 1990; Kyle et al., 2025). Thus, the model promotes the idea of moving from the reactive approach to the implementation of proactive approaches and the creation of resilience coaching programmes.



Micro-Credentials Model

Micro-Credentials Framework Logic

The framework is based on modern European micro-accreditation principles and includes support for:

- flexible learning paths;
- modular certification;
- learner-centered education;
- competency-based learning;
- stackability;
- recognition of prior learning;
- portability of certificates, and
- labour market relevance.

Programmes are designed as small, focused learning modules that can be used either as independent micro-certificates or together as parts of a certificate path.

The design facilitates vocational education and training (VET), continuing professional development (CPD), lifelong learning, and non-formal adult education in rural and agriculture settings.

The framework is appropriate for use by:

- farmers;
- agricultural workers;
- agricultural advisors;
- rural educators;
- VET instructors;
- wellness professionals;
- agricultural co-operatives; and
- rural development professionals.



Micro-Credentials Model

Structure of the Micro-Credentials Framework

The programme is structured around six interconnected competency-based modules.

Module	Title	Main Focus
MC1	Psychology of Work Safety in Agriculture	Risk perception, cognitive bias, fatigue, safety behaviour
MC2	Social Psychology and Team Effectiveness	Communication, teamwork, leadership, social support
MC3	Climate Change and Psychological Resilience	Climate stress, adaptation, coping strategies
MC4	Stress Management and Psychological Wellbeing	Burnout prevention, emotional regulation, resilience
MC5	Digital Wellbeing and Wearable Technologies	mHealth, biofeedback, stress monitoring
MC6	Integrated Coaching Practice	Applied coaching interventions and behavioural change

The learning pathway is modular and stackable. Learners may complete individual modules according to professional needs or progressively combine modules into a broader micro-credentials certification pathway.



Micro-Credentials Model

Learning Outcomes

Upon completion of the micro-credentials programme, learners will be able to:

- explain the psychological factors influencing wellbeing and safety in agricultural environments;
- recognise signs of stress, fatigue, burnout, emotional overload, and psychological distress;
- identify cognitive and behavioural patterns affecting decision-making and safety behaviour;
- apply coaching techniques to support resilience, behavioural regulation, and wellbeing;
- strengthen communication, teamwork, and peer-support systems in agricultural settings;
- promote sustainable coping strategies and adaptive functioning under climate uncertainty;
- use digital wellbeing technologies and wearable systems for stress monitoring and self-awareness;
- support psychologically safe and sustainable agricultural workplaces and integrate human sustainability principles into agricultural practices.

Competency Domains

The framework is organised around five interconnected competency domains.

1. Psychological Safety and Occupational Wellbeing

This domain focuses on the psychological dimensions of agricultural safety and occupational functioning.

Key competencies include the following:

- risk perception,
- fatigue awareness,
- stress recognition,
- emotional self-regulation,
- cognitive awareness,
- and safe behavioural routines.

The domain draws primarily from Chapter 1 of the AgriMental Coaching Manual and emphasises the role of cognitive bias, stress, fatigue, and behavioural normalisation in unsafe agricultural practices.



Micro-Credentials Model

2. Social Sustainability and Team Effectiveness

Agriculture is deeply relational and community-based. Family systems, seasonal teams, cooperatives, and rural communities strongly influence wellbeing and resilience.

Key competencies include the following:

- communication,
- collaborative problem-solving,
- leadership,
- social support,
- conflict-sensitive interaction,
- and psychological safety within teams.
-

This domain is informed by Chapter 2 and highlights the importance of social cohesion and collective resilience in sustainable agricultural environments.

3. Climate Adaptation and Psychological Resilience

Climate-related disruption increasingly affects not only agricultural productivity but also emotional wellbeing and adaptive functioning.

Key competencies include the following:

- adaptive coping,
- resilience-building,
- uncertainty management,
- emotional processing,
- and future-orientated problem-solving.

This domain is based on Chapter 3 and supports psychological adaptation under conditions of environmental uncertainty and continuous change.



Micro-Credentials Model

4. Behavioural Sustainability and Emotional Regulation

Sustainable agricultural functioning requires the ability to regulate behaviour, manage stress, and maintain healthy routines under demanding conditions.

Key competencies include the following:

- self-awareness,
- emotional regulation,
- burnout prevention,
- behavioural reflection,
- resilience-oriented habits,
- and sustainable coping strategies.

5. Digital Wellbeing and Technological Support

Digital technologies increasingly provide accessible tools for supporting psychological wellbeing in rural and agricultural environments.

Key competencies include the following:

use of wearable technologies,
digital stress-monitoring,
biofeedback interpretation,
mobile wellbeing applications,
and responsible use of digital wellbeing tools.

This domain is informed by Chapter 5 and supports preventative intervention and learner autonomy.



Micro-Credentials Model

Contribution of the AgriMental Chapters to the Micro-Credentials Model

Each chapter of the AgriMental Coaching Manual contributes to the development of specific competency areas and learning outcomes within the framework.

Chapter	Contribution to the Micro-Credentials Model
Chapter 1 – Psychology of Work Safety in Agriculture	Provides the psychological and behavioural foundations for occupational safety, fatigue awareness, cognitive bias recognition, and reflective decision-making.
Chapter 2 – Social Psychology Model for Team Effectiveness in Agriculture	Contributes to communication skills, teamwork, leadership development, social support systems, and collective resilience.
Chapter 3 – Counteracting the Psychological Impact of Climate Change on Agricultural Economies	Strengthens adaptive coping, climate resilience, uncertainty management, and emotional adaptation to environmental disruption.
Chapter 4 – Stress and Psychological Resilience for Farmers	Supports stress management, emotional regulation, resilience-building, burnout prevention, and sustainable coping strategies.
Chapter 5 – Mobile Apps and Wearable Technology for Stress Management	Introduces digital wellbeing technologies, physiological monitoring, biofeedback systems, and digital self-regulation practices.

Together, the five chapters create an integrated framework that combines scientific knowledge, practical coaching tools, behavioural approaches, and applied wellbeing strategies for agricultural contexts.

Micro-Credentials Model

Pedagogical and Coaching Approach

The pedagogical philosophy of the framework is grounded in:

- learner-centred education,
- experiential learning,
- reflective practice,
- behavioural coaching,
- and competency-based learning.

The framework recognises that agricultural workers possess extensive practical experience and contextual knowledge. Consequently, the educational approach avoids purely prescriptive or top-down methods.

Instead, coaching is used to facilitate:

- reflection,
- dialogue,
- self-awareness,
- collaborative problem-solving,
- and sustainable behavioural change.

The coaching methodology integrates principles from:

- positive psychology,
- cognitive-behavioural coaching,
- resilience theory,
- stress management,
- and solution-focused approaches.



Micro-Credentials Model

Particular emphasis is placed on creating psychologically safe learning environments in which learners can openly discuss:

- stress,
- fatigue,
- uncertainty,
- emotional pressures,
- and occupational challenges without stigma or judgement.

Learning and Assessment Methods

The framework combines formal, non-formal, and experiential learning approaches.

Learning methods include:

- workshops,
- coaching sessions,
- reflective activities,
- peer learning,
- case-study analysis,
- digital self-monitoring,
- scenario-based learning,
- and workplace-based practice.

Assessment approaches are competency-orientated and aligned with transparent learning outcomes.

Assessment methods include:

- reflective journals,
- practical case analysis,
- coaching simulations,
- portfolio assessment,
- intervention design,
- and applied workplace activities.



Micro-Credentials Model

Expected Impact

The framework aims to generate impact at individual, organisational, and community levels.



Individual Level

Learners are expected to:

- strengthen resilience,
- improve emotional regulation,
- reduce stress and burnout,
- improve safety awareness,
- and develop sustainable coping strategies.



Organisational Level

Agricultural organisations and rural workplaces may benefit from:

- improved communication,
- stronger teamwork,
- safer workplace cultures,
- reduced psychological strain,
- and improved wellbeing awareness.



Community and Societal Level

At a broader level, the framework contributes to:

- sustainable rural communities,
- reduced mental health stigma,
- improved climate adaptation capacity,
- and more human-centred agricultural sustainability systems.

Micro-Credentials Model

Conclusion

The European Micro-Credentialing Framework emerges as an innovation and an interdisciplinary tool aimed at improving psychological well-being and human sustainability in agriculture. This goal is attained via combining the concepts of occupational psychology, resilience, social support networks, behavioural coaching, coping with climate change, and digital technology for well-being within one concept. The idea here is to develop sustainable competences for those specialists who become increasingly important in today's agriculture. To summarise, the European Micro-Credentialing Framework recognises that the notion of agricultural sustainability goes beyond ecological adaptations and economic resilience and includes individual well-being as well.



Micro-Credentials Model

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