



EUROPEAN UNION



# EU MISSIONS

ADAPTATION TO CLIMATE CHANGE



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## Creating a Mutual Fund to financially support farmers in North-East Italy

An innovative solution to improve farmers' resilience against weather-related damage and plant diseases

*The Agrifondo mutual fund complements existing crop insurance policies by integrating plant disease coverage into standard weather insurance guarantees. This allows farmers to receive compensation for weather-related losses through insurance and additional compensation for plant disease damage through the fund.*

### Key Learnings

- **Sharing risks and compensating for damage elsewhere:** In a mutual fund, each member acts as both the insurer and the insured. By contributing a participation fee, members collectively share risks and support one another, helping to reduce costs in case of climate- and disease-related crop damage.
- **Promoting good practices:** To receive funding in case of damage, the farmers are required to follow the voluntary guidelines of “Good Agricultural Practices”.
- **The “AKIS” system supports knowledge flows:** The Agricultural Knowledge and Innovation System (AKIS) is a platform that connects individuals, organisations, and institutions involved in producing and using agricultural knowledge. By integrating diverse expertise, AKIS facilitates better adaptation to challenges and helps reduce financial risks.

## About the region

As part of North-east Italy, the Veneto and Friuli-Venezia Giulia regions have a population of more than six million inhabitants. The regions have a high density of cities and villages, industries and agricultural businesses. These territories are well-known for wine production – such as Prosecco, Amarone, Valpolicella and Collio Friulano – for cheese – like Grana Padano and Asiago – and for ham, such as Prosciutto di San Daniele and others.

## Climate Hazards

Extreme Heat, Droughts, Flooding, Storms,

Ice and Snow

## Sector

Agriculture, Financial

## Key system

Local Economic System, Land use and Food

Systems



## Climate Threats

Over the past 10 years, extreme weather events have increased in frequency and intensity in the Veneto and Friuli-Venezia Giulia regions. Warming temperatures, droughts and frost at unusual times of the year are damaging plants, as climate change is increasing plant vulnerability towards diseases. The concentration of rainfall in spring favours fungal infections, and subsequent flooding hampers farmers from entering the fields on time for protection. Heavy rain in May characterised the 2014, 2019, 2023 and 2024 seasons, leading to significant damage from Fusarium head blight on wheat (Figures 1 and 2) and downy mildew on wine (Figure 3).



Figure 1: The consequence of heavy rain in a wheat field during the 2023 season. Image Credit: Agrifondo.



Figure 2: The effect of Fusarium head blight on wheat in the 2023 season. Image Credit: Agrifondo.

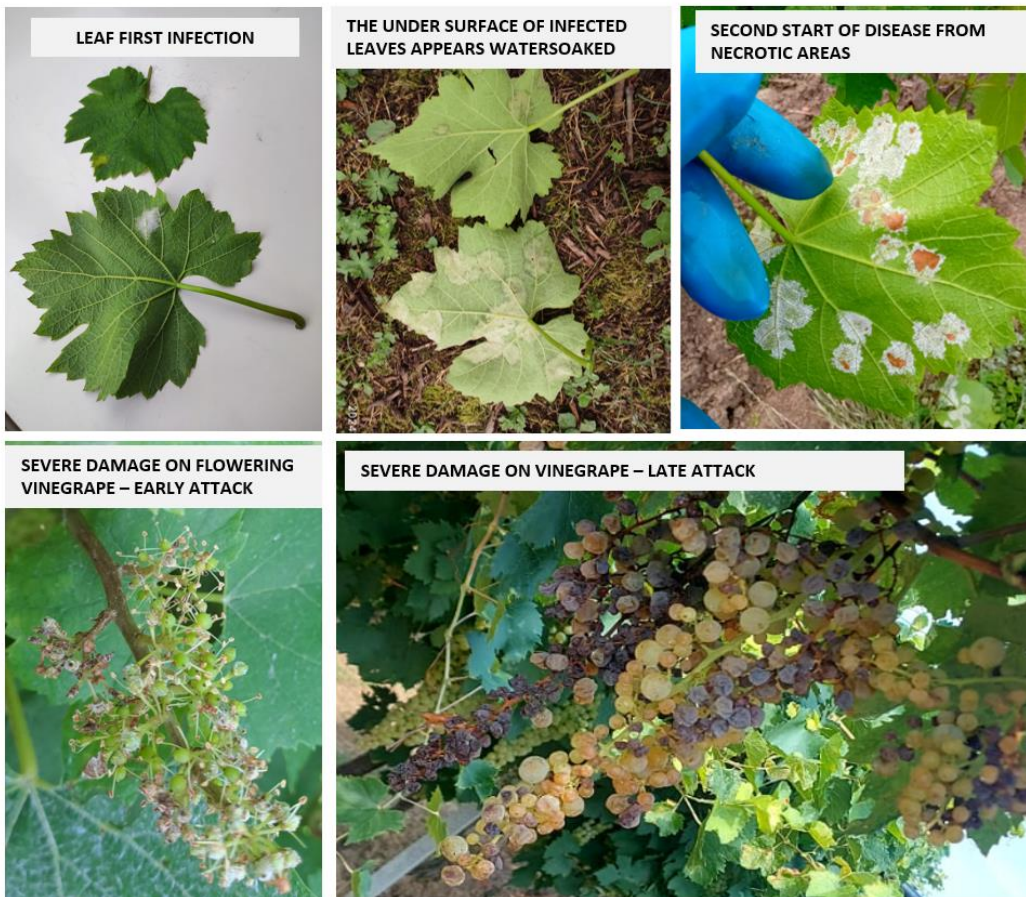


Figure 3: Downy mildew lookalikes during the 2024 monitoring season. Image Credit: Agrifondo.

During the 2015, 2017 and 2022 seasons, the opposite situation occurred with severe droughts and high temperatures increasing plant stress, favouring attacks as esca and flavescence dorée for vinegrape (Figure 4), and as corn borers and aflatoxins for corn (Figure 5). Rising temperatures in September and October allowed numerous insect species to extend their lifespan and increase the number of generations, attacking plants at uncommon times of the year.



Figure 4: Wine yard with a severe attack of Flavescence Dorée in the 2023 season. Image Credit: Agrifondo.



*Figure 5: Severe attack of stink bug and aflatoxins for corn in the 2024 season. Image Credit: Agrifondo.*

## **A mutual fund with EU subsidies improves farmer resilience**

Climate change directly affects the occurrence of plant diseases, increasing both their frequency and severity. Since 2019, Agrifondo has operated two main mutual funds, one focusing on wine grapes and the other on arable crops. These risk instruments work in synergy with weather insurance, improving farmers' resilience. By pooling resources, farmers share the financial risks associated with crop losses due to pests or pathogens. When outbreaks occur, the fund provides timely compensation, helping to stabilise incomes and ensure continuity of farming activities. EU support enhances the fund's capacity, making it more accessible and sustainable (up to 70% contribution). This proactive approach promotes quicker recovery, encourages the adoption of preventive measures, and contributes to long-term agricultural sustainability. As a mutual fund, Agrifondo reinvests any unused compensation from the year into a capital reserve that supports future campaigns. If exceptional damage occurs, the fund adjusts compensation amounts according to the available resources to ensure fair distribution among members.

## **Insurance Coverage of Agrifondo**

For wine grapes, the fund's main guarantees cover downy mildew, powdery mildew, botrytis, Esca, and Flavescence dorée. For arable crops, coverage includes Fusarium wilt, wireworm, rootworm, and corn borer. When damage exceeds 20% of the insured value, farmers receive compensation proportional to their policy coverage. To keep membership simple and affordable, farmers pay a single annual fee of 0.15% of the insured value – for example, €15 for €10,000 of coverage.

Figures 6 and 7 illustrate the intensity of disease-related damage (measured in euros of compensation) during the 2019–2024 period. In the worst years, certain diseases have been capable of destroying entire harvests, even when conventional treatments were applied. Climate change has significantly amplified these impacts, combining fungal diseases typical of wet years with insect infestations and phloem diseases that thrive under drought conditions. Figure 8 highlights the positive impact of EU contributions, which have encouraged new farmers to join the mutual fund and strengthened its capacity to provide compensation during difficult years.

However, the fund’s maximum compensation is limited to its annual capital stock, and in 2024, the extent of damage exceeded available resources, preventing full compensation for all farmers, despite EU support.

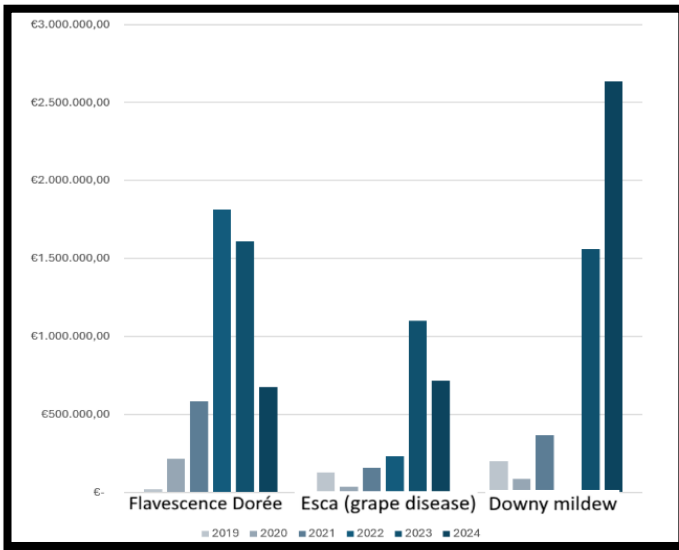


Figure 6: Winegrape fund: € of compensation for plant disease during 2019-2024. Image Credit: Agrifondo.

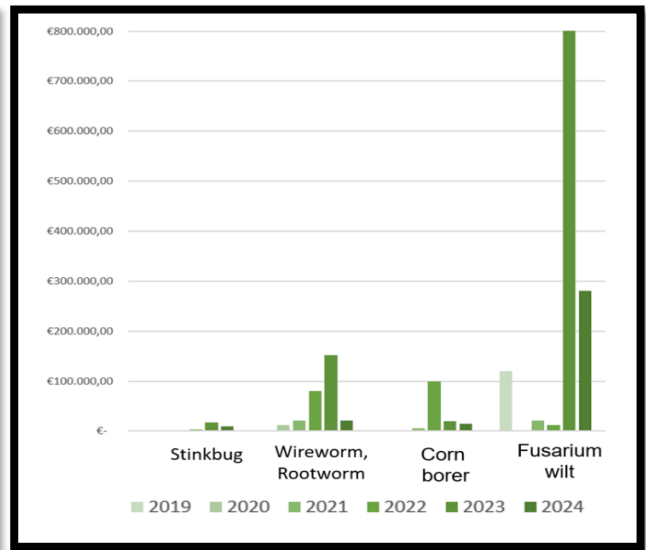


Figure 7: Arable crop fund: € of compensation for plant disease during 2019-2024.

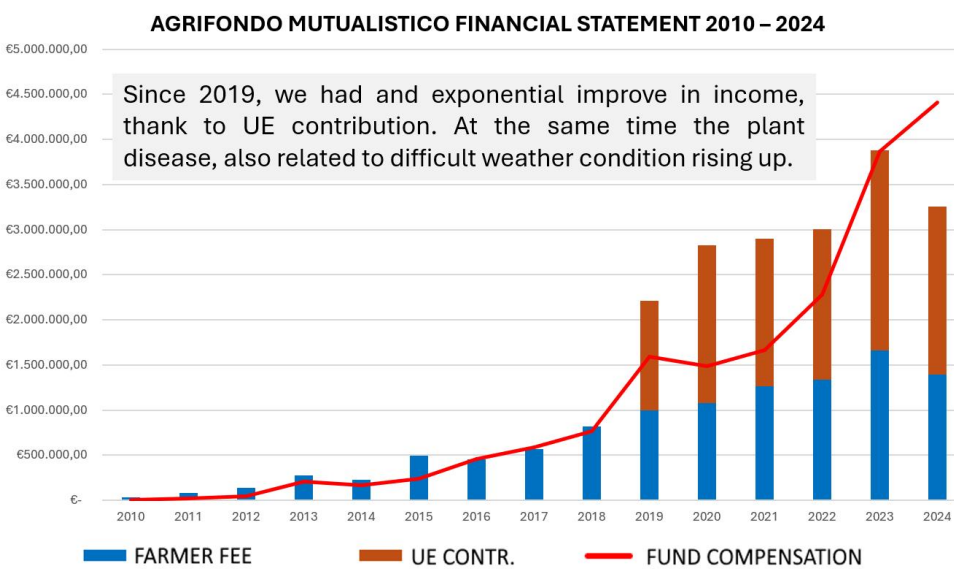


Figure 8: sum of income/outcome ratio for all Agrifondo fund from 2010 to 2024. Image Credit: Agrifondo.

**CAPITAL STOCK**

A key point in Mutual Fund is the creation of Piggy bank. During the good years the fund save money and integrate eventually during the worse years.

### Encouraging prevention, adaptation and avoiding the “Moral Hazard”

Just before the harvest season starts, it’s the right time to take charge of all the claims that arrive during the growing period. Still, damage from plant diseases can largely depend on how well farmers apply **Good Agricultural Practices**, making it difficult to assess losses without considering human influence. To ensure fairness and accuracy, Agrifondo uses a two-step verification system that compares expert reports with regional data. This approach helps prevent “moral hazard,” meaning the risk that farmers might neglect preventive measures or overstate losses because they expect compensation:

1. Upon receiving a claim from a farmer, a qualified technician carries out an on-site assessment to confirm adherence to Good Agricultural Practices and estimate crop damage at the time of harvest (Figure 9);
2. The team compares the expert's report with regional public data collected during the season on average damage levels (Figure 10).



Figure 9: Damage estimation. Image Credit: Agrifondo.

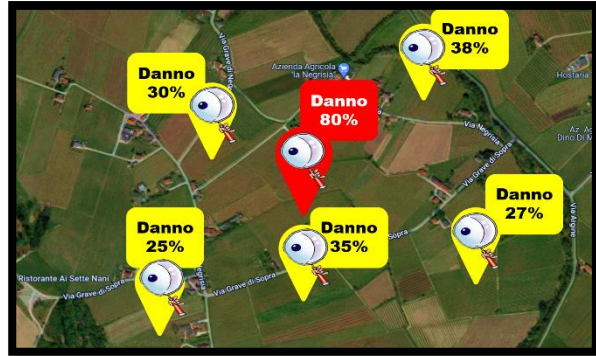


Figure 10: Average damage identification in an area. Image Credit: Agrifondo.

Using this method:

1. avoids/reduces compensation for possible human error;
2. allows the correct reading of real damage in the field by the inspector;
3. enables knowledge transfer to help the farmer avoid future damage.

## Risk Assessment in Farm Business and AKIS strategies to improve Good Agricultural Practice

Effective risk management relies on a full understanding of all potential risks, but as climate change accelerates, farms face new and previously unknown threats. Accurately assessing risk is often challenging, especially in agricultural businesses, due to the inherent uncertainties and variability of farming operations. Traditionally, farmers have focused on some key risks:

- Weather conditions, historically the most critical factor affecting crop and livestock productivity.
- Plant diseases, which may be less immediately visible but can cause severe losses if not managed promptly.

However, several emerging factors are increasing the complexity and magnitude of agricultural risks, often leading farmers to underestimate potential threats:

- Climate change, which increases the frequency and severity of extreme weather events.
- Invasive insects and new plant or animal diseases, which can spread rapidly and unpredictably.
- Restrictions on chemical inputs, reducing options for disease and pest control.
- Rising production costs, which magnify the financial impact of any loss.

Enhancing knowledge and awareness for a comprehensive and accurate risk assessment is a key strategy to empower farmers. By understanding and anticipating risks more effectively, farmers can make better-informed decisions, protect their livelihoods, and ensure the sustainability of their operations. Agrifondo strives to share knowledge in line with AKIS objectives annually, aiming to promote and support the adoption of best practices, encourage responsible behaviours, raise awareness among local communities, and strengthen resilience through innovative pest management skills. These activities are free of charge to member farmers, ranging from direct consultancy during claims to decision support systems, weekly bulletins, demo days, and conferences, as well as weather stations and phenological phase forecasts through the Fenometeo Projects.

## Background information and team

Founded in the 1970s, the Condifesa associations united to secure better insurance for weather damage and simplify insurance procedures, later joining forces in 2010 to create “Agrifondo Mutualistico”, a mutual fund offering compensation for wildlife damage, reseeding, and structural losses. Since 2019, with support from European Agricultural Fund for Rural Development funds, Agrifondo has expanded its coverage to include damage from plant diseases and pest infestations affecting vineyards and arable crops.



*Figure 11: Agrifondo's field damage assessment team. Image Credit: Agrifondo.*

The team of over 12 technicians, distributed across two regions, participates in seasonal refresher and collaborative training courses to ensure accurate damage assessments and provide technical guidance that addresses gaps in compliance with Good Agricultural Practices. This continuous knowledge-sharing, a core element of AKIS activities, promotes strong connections between farmers and their territory while supporting good practices, encouraging responsible behaviour, raising community awareness, and strengthening resilience through innovative pest management skills.

Today, Agrifondo brings together more than 10,000 members and covers over €1 billion in insured value. It protects more than 50,000 hectares of vineyards, 100,000 hectares of arable land, and 10,000 hectares of fruit crops. Between 2019 and 2024, it collected about €8 million in participation fees, received around €12 million in EU subsidies, and paid out €18 million in compensation.

*“A solution created by farmers for farmers.”,*

*Flavio Bortolato, First director of Agrifondo Mutualistico Veneto and Friuli-  
Venezia Giulia*

## Summary

Damage from plant diseases has increased significantly over the past twenty years. In response to these emerging threats, Agrifondo Mutualistico, supported by EU contributions, launched two mutual funds that work in synergy with crop insurance, representing the main agricultural sectors of the region: one for wine grapes and one for arable crops. Currently, the funds have over 10,000 members and provide coverage exceeding €1 billion. Between 2019 and 2024, Agrifondo collected approximately €8 million in participation fees from farmers, requested around €12 million in EU subsidies, and awarded €18 million in compensation. This approach goes beyond traditional insurance by fostering new behaviors among farmers, encouraging them to form networks to share knowledge and adopt innovative tools such as decision support systems and weather station networks. These systems promote good practices, including Integrated Pest Management, enhance resilience, protect incomes, and reduce the reliance on chemical treatments.

## Further information

- <https://agridan.agrifondomutualistico.it/>
- <https://www.condifesatvb.it/>
- <https://condifesavenetoest.it/>
- <https://www.codive.it/>
- <https://www.condifesafvg.it/>

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