

# Regional habits and practices to control yellow rust in Europe

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Several yellow rust epidemics have occurred in Europe, during the last 10 years. Advisory services and farmers adopt control methods according to local habits and legal prescriptions. While Swiss farmers use limited fungicides, in other European regions, the use of fungicides is a standard method.

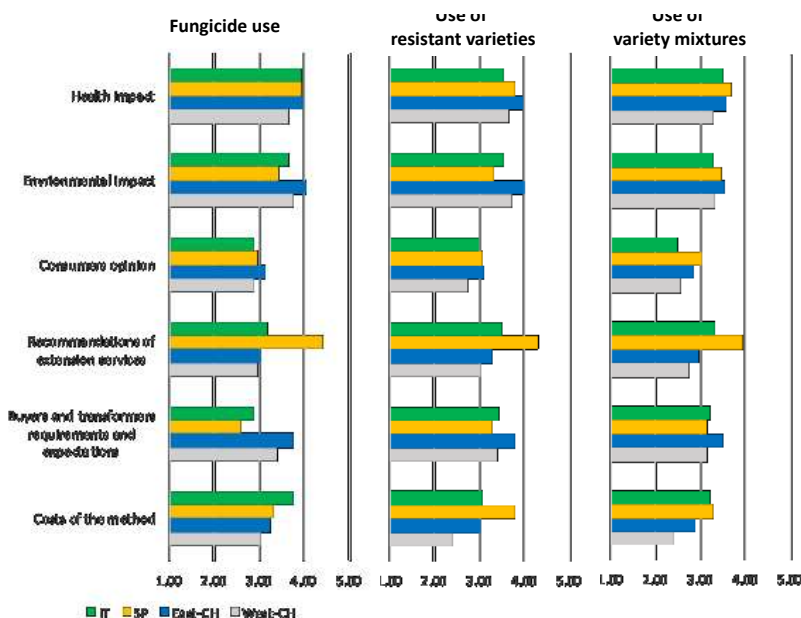
The RustWatch projects aims to establish an early warning system for rust diseases in Europe in order to promote the use of IPM methods. To be adopted by the professionals, RustWatch has set up case studies in six regions in Europe to discuss, exchange and understand the conditions to durably implement the early warning system. The first regional workshops helped to understand the tendencies in the use of control services by farmers. However, these tendencies do not inform us about the reason why certain methods are actually used.

In the present, we have set up an inquiry on impact of social, economic and cultural factors on their decision to use or to exclude (a) fungicides, (b) resistant varieties and (c) cultivar mixtures. The inquiry was held in the Northern and Western parts of Switzerland, in Sicily (Italy) and in Navarra (Spain).

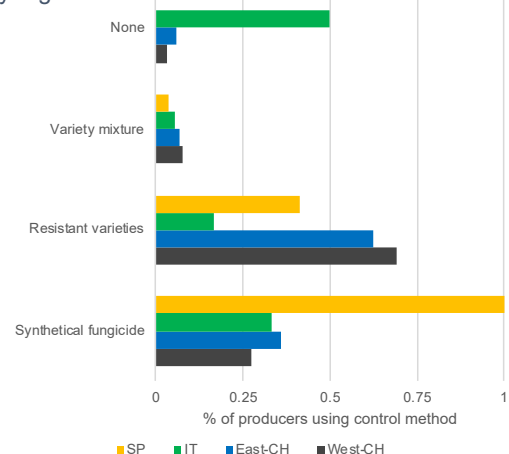
**Table 1.** Participation in the 4 study regions

	West-CH	East-CH	Sicily (IT)	Navarra (SP)
Number of participants	179	384	18	29

**Figure 2.** Social and economic factors impacting the choice of the producer to use or to refuse to use (a) fungicides, (b) resistant varieties, (c) variety mixtures. The preference scale is from 1 (low impact on the choice) to 5 (high impact of the choice)



**Figure 1.** Proportion of wheat producers using fungicides, resistant varieties or variety mixtures in the 4 study regions.



- The choice of the control method is different in each study region. While almost all interviewed farmers use fungicides in Navarra, 40% also use resistant varieties. More than 60% of the Swiss farmers use fungicides, the rest of them use resistant varieties. In Sicily, half of the the farmers do not control rust actively. About 20% use resistant varieties and 30% treat with fungicides.
- The use of fungicides arises concerns about human health and the environment in all regions.
- In Switzerland, the opinion of buyers/transformers is also determinant.
- The choice to use resistant varieties is motivated by reflexions on the impact on human health and on the environment.
- Variety mixtures are not much adopted, but they benefit of some interest by farmers influenced by the opinion of the consumers, especially in Sicily and in the Eastern part of Switzerland.
- Recommendations of advisory services are important for the choice of the control method, especially in Navarra.

## Conclusions

- Social, economic and cultural aspects indeed impact the choice of the farmers yellow rust control strategy.
- Farmers are seeking alternatives to fungicides. When available, they plant resistant varieties.
- Variety mixtures are recognized as efficient control method but raise financial concerns in some regions.

