

## The open days in arable crops in INTIA, a great success of participation

**More than two hundred professionals related to the sector have participated in technical demonstrations that have been held continuously for 36 years to show the trials in which, among other parameters, the effects of herbicides, the behavior of different varieties, or the different types of diseases and control strategies are analyzed.**

The presentation of the trials and demos results is part of the **Regional Program for the Control of Rust in developing wheat in the framework of the European project H2020 RustWatch**. This program is fundamentally based on the choice of varieties resistant to yellow rust (GENVCE variety trials), the monitoring of the evolution of this disease in the campaign (AGROIntegra collaborative Warning Station) and the use of fungicide treatment programs (trials INTIA in 2019). At the same time it is planned that in 2020 and 2021 INTIA will carry out several tests with alternative products to fungicides under the RustWatch project.

Experimentation in extensive winter crops has been taking place in Navarra for decades and open days to teach agricultural professionals the tests carried out, they already have a whopping 36 uninterrupted editions. They are a conference that INTIA organizes in the months of May and June, depending on the weather of the year, and in which attendees can check the behavior of cereal varieties and other alternative crops on the field.

In this 2019 campaign, four days have been held that have brought together more than two hundred professionals related to the sector.



**The first one was held on May 21 and was raised through two visits to two locations in the semi-arid drylands of Navarra: Olite and Falces.** In Olite it was possible to verify the effect of herbicides against the grassland weed that each campaign is spreading more through the different cereal areas of Navarra; and the 22 variants could be observed with pre-emergency or post-emergency treatments and good chemical control of some herbicides in winter applications or in very early weed states. Irache Garnica, specialist of INTIA, explained that the latest applications if not accompanied by the weather, do not ensure good results and if they are also applied on populations of vallico resistant to certain chemical groups of herbicides, the solutions are still more complicated and there are Than resort to other alternatives. Next, the group moved to Falces to observe the behavior of the more than 47 varieties tested of wheat and barley in an area that is classified as semi-arid dry land. Jesús Goñi, specialist of INTIA, showed an essay of different varieties of barley according to sowing date and explained that for a campaign with a few months of February and March drier and hotter than usual, the varieties have maintained a good vigor in general maintaining Good production prospects.

**The second day was held on May 30 and was attended by more than 80 technicians from chemical companies that visited the trials that INTIA performs in crop protection.** During the day, in addition to the herbicide test in Olite against grass weed, another one was visited in Rípodas against the “foxtail”, a very abundant weed in the plots where moisture is retained more. The visit continued in the experimental farm of Berrioso, where trials of control strategies of fungi in cereals are located. There, Jesús Zúñiga, an INTIA specialist explained the three fungicide trials: Camargo wheat and control of diseases such as brown rust and septoria; **yellow rust control strategies with different fungicide application times**; and control of leaf diseases in barley Planet, with 10 different variants. Zúñiga highlighted the low incidence of these diseases in barley, unlike in wheat where the important presence of yellow rust has been evident especially in sensitive varieties. In these cases, a single application at the time of greatest sensitivity according to the warning of the INTIA Warning Station in the different areas, has proved sufficiently effective for the control of this fungus.

**The third day was devoted entirely to seeing several trials of different species in the fresh drylands of Navarra, in the Berrioso farm,** where, in its more than 10 hectares, INTIA has carried out up to 50 different trials with more than 16 different crops . These trials are included in the agro climatic zone of fresh dry land and the more than 70 attendees belonged to the cereal cooperatives of the middle and lower mountains. They had the opportunity to see more than 35 varieties of wheat and 20 of winter barley, framed within the GENVCE network. Jesús Goñi, specialist of INTIA, explained the novelties of these varieties and the behavior in this campaign, their main characteristics, **tolerances to yellow rust and sensitivity to foot diseases.** And in the legume section, Arturo Segura, also a specialist of INTIA, presented a pea test with 23 varieties of different vegetative cycles and with destiny I think. In addition, the differences between varieties to the treatments carried out with fungicides could be observed and an excellent test of chickpeas for human consumption was highlighted as a new market niche and alternative to cereals.

**The fourth and last day took place in the irrigation of Olite on June 7.** In it, the trials of winter and spring soft wheat varieties and long and short cycle barley varieties were presented, as well as comments on the respective diseases such as yellow rust that can be developed under these conditions of new irrigation.

## **CONCLUSIONS IN RELATION TO RUSTWATCH EUROPEAN PROJECT**

- Variety trials have clearly shown the differences in yellow rust sensitivity of soft wheat varieties grown in Navarra, having to highlight the case of Camargo, as a variety that has needed more than one fungicidal application, compared to others that have Past the campaign without the need for fungicidal applications.
- In relation to the trials of fungicidal treatment strategies, the conclusions highlight above all the importance of choosing the most appropriate time to intervene, at the end of the confinement and with the presence of the disease.
- The field monitoring of yellow rust through the collaborative Warning Station has been very useful to avoid unnecessary fungicidal treatments in varieties that have barely developed the disease.