

Workshop PIWI

Is a systemic innovation approach possible with PIWI?

Töpfer, Reinhard*; Trapp, Oliver

Julius Kühn Institute (JKI) Institute for Grapevine Breeding Geilweilerhof, Siebeldingen, Germany

*reinhard.toepfer@julius-kuehn.de

Abstract

Grapevine breeding looks back on more than 200 years of tradition. A time-lapse view reveals significant breeding progress with many new varieties. The dilemma of fighting harmful pathogens, losing plant protection agents, and at the same time facing increasing demands for sustainability poses a challenge for viticulture, as does the need of adaptation to climate change. The EU has set an ambitious goal by halving the use of pesticides in agriculture by 2030, which is particularly challenging in a crop protection-intensive sector such as viticulture.

Ambitious goals can only be achieved by implementing innovations. In view of the transformation goals towards sustainability, however, an individual entrepreneurial innovation is not enough to achieve the ambitious goals - a systemic innovation approach is required. This includes a wide use of fungus-resistant varieties (PIWI). However, in a system spoiled by success such as viticulture, there are considerable tendencies to persist instead of proactively tackling innovations. However, the way has been mapped out: climate change is forcing us to change varieties. This creates an opportunity for new, robust varieties. However, we must avoid frustration in the viticultural sector and discuss the existing problems:

- Slow market introduction.
- Lack of enological experience.
- Remaining plant protection.
- How durable can resistance be?
- Are NBT a supplement for breeding or an alternative?
- What can breeders do to implement better resistance concepts?

The discussion of these and other aspects within the workshop should take us a step further and open up possible options.

Keywords: PIWI, durable resistance, market introduction, systems innovation