

Dear Ted,

Rijk Zwaan will offer you full cooperation in your discussion about the future of canola in your area. Based on our experience in other seed production areas worldwide we absolutely share your concern based on the following:

Canola (*Brassica napus*) will not cross pollinate with the *Brassica oleracea* and *Raphanus sativus* species that we produce. So the risk of outcrosses between canola and our hybrids does not exist. For this reason, no isolation requirements between *Br. napus* and radish hybrids are specified in our contracts. In the main production areas (France, Germany) there are no minimum isolation distances required either between the different *Brassica* and *Raphanus* species. For this reason seed productions of Canola can be located close to seed productions of other species. The risk for our *Brassica*- and *Raphanus* seed productions in areas with Canola productions lays in the area of common diseases, plagues and physical seed purity.

Taking France as an example, or more specific the Beauce area, the last decade major problems occurred.

Without doubt the biggest threat for *Raphanus sativus* (radish) seed crops has been the huge increase of the number of flowerbeetles, *Meligethes aeneus*. This insect migrates from canola to other flowering crops and is doing a lot of damage in the flowerbuds and reduces the amount of pollen, with very low yields and crop failures as a result. Mainly because of this problem radish seed production has decreased dramatically, both for OP and hybrids.

Also in the eastern part of Germany, we have seen a drop in radish seed productions due to the presence of the *Meligethes*. In this area also a lot of canola is grown.

For other brassicas, mainly head cabbage, a similar situation exists in the south of France. In these crops we see an increase of plantlosses due to the larvae of *Baris coerulescens*. This beetle specie is common in canola without doing much harm but can cause a lot of damage in cabbage seed crops.

Another problem that is starting to occur is the presence of canola volunteers in production fields. For some species, especially the *Br. oleracea*, seeds of canola can not be separated once they are present in an harvested seedlot. This off course gives us problems with physical purity of this seedlot. But with the actual increase of canola production based on GMO varieties, the biggest thread lays in unsaleable seedlots due to a contamination with GMO canola seeds.

The effect of a high presence of canola in a production area cannot be measured

easily. But with the presence of more and more volunteers in the area, it gives more possibilities for diseases like Alternaria, Pseudomonas and Xanthomonas to run a complete lifecycle and to infect seed crops in crucial moments of growth.

As a result of these problems we have seen a tendency that Brassica- and Raphanus productions are moved from the traditional areas in Europe to areas on the Southern Hemisphere, mainly New Zealand, Australia and Chile. In these production areas we are not facing Melighetes-problems yet and in these areas the canola pressure is less.

On the Northern Hemisphere Rijk Zwaan has completely stopped with the seed production of radish in France. We are now concentrating almost for 100% on the West Oregon area, With the absence of canola this has proven to be a very good alternative. Introduction of canola seed production in this important seed production area will mean a serious thread for the future of these high value crops.

Rijk Zwaan appreciates the efforts that or done by the production companies and the growers to avoid introduction of canola seed production in your area.

Best regards.

Klaas Schussler

Seed production Specialist.

Rijk Zwaan Production B.V.  
P.O. Box 40  
2678 ZG De Lier  
The Netherlands