

## **Insecticide Use Maintains Productivity of European Oilseed Rape Fields**

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Oilseed rape is an important crop in the European Union. Rapeseed oil is used in the production of cooking oils, margarines and salad dressings. After the oil has been pressed out, the solid remains of the rapeseed are used as animal feed. Oilseed rape is called "canola" in the U.S. and Canada. The name "rape" originated from the Latin word "rapum" meaning turnip. In Europe, oilseed rape is attacked by a wide range of insect pests. Insects attack the roots, stems, leaves, flowers, pods, and seeds of oilseed rape plants. In the years before development of chemical insecticides, yield losses due to insects in European rapeseed fields were significant. In Germany, a full yield of rapeseed was harvested only one year during the period from 1910 to 1939. Yield reductions from insect pests averaged 25% and amounted to as much as 50% in two years [1].

A recent survey determined that in 18 of 20 European countries, 50% or more of the rapeseed acres are sprayed with insecticides to control populations of blossom beetles (also called pollen beetles)[2]. In 8 of the countries, more than 90% of the rapeseed acres are sprayed for blossom beetles. Blossom beetles hibernate in the woods and migrate to rape fields attracted by the crop's yellow flowers. The adults feed on pollen, and lay eggs in holes chewed in the base of the flower buds. An individual female lays up to 185 eggs. The eggs hatch and the larvae feed on the flower parts for up to three weeks [3]. Feeding by larvae results in buds falling from the plant, resulting in podless stalks and dramatically reduced yields [4].

European organic farmers are reluctant to grow oilseed rape because it is attacked by so many insects, which are difficult to control without chemical treatments [5].

### **References**

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Oilseed rape field



Spraying oilseed rape



Beetles feeding on rape flowers and buds