

# Use of rock dust against the rape pollen beetle

## Problem

The rape pollen beetle is a major pest in rapeseed cultivation. An infestation can lead to high yield losses.

## Solution

Rock dust or other dusty products applied to the rapeseed plants at the beginning of developing buds prevent the pollen beetle from eating, and thus mitigates the damage. Suitable substances are silicate rock dust (product name "Klinospray"; combined with the wetting agent "Heliosol"), Kaolin (a clay mineral; product name "Surround" and others) and locally available rock dusts. Several trials on the application method and effectiveness were carried out.

## Outcome

Through the use of rock dust at the beginning of the bud development, the infestation by the rapeseed beetle can be reduced by an average of one third. In the treated area the pods per square meter increased by up to a quarter, thereby increasing the yield in treated areas by around 25 %.

## Applicability box

### Theme

Pest and disease control

### Geographical coverage

Global

### Application time

When the temperature reaches more than 15 °C or when the buds appear between the leaves.

### Required time

Per application with a sprayer: about 0,5 hours per ha; per application with a fertilizer spreader: about 1 hour per ha

### Period of impact

Current crop

### Equipment

Field sprayer (or fertilizer spreader)

### Best in

In well-fertilised rapeseed crops in risky sites before/at the time of arrival of beetles.

## Practical recommendation

- **Optimal time of treatment:** The rape pollen beetles enter the fields at a temperature of 15 °C. Therefore a first treatment with rock dust is appropriate as soon as this threshold has been reached and the buds become visible between the leaves and will be reached by the spray liquid (BBCH 52).
- **Note:** Pollen beetle infestation is supported by late blooming, frequent rapeseed cultivation and cultivation close to woodland.
- A second treatment should be performed shortly before blooming begins to also protect the lateral buds. In the case of heavy rain, further applications may be required.
- Very finely ground rock dust can be sprayed with the usual farm method. More coarsely ground meal is applied with a fertilizer spreader.
- **Spray application:** In order to achieve optimal effectiveness, the rock dust should be sprayed with a large quantity of water (600 l per ha) by using a regular field sprayer (3 bar and 3,5 km/h). "Klinospray" (30-50 kg per ha) is applied in a mixture with Heliosol (2 l per ha). "Surround" can also be used without a wetting agent for an application rate of 20-25 kg.  
In order to create a spraying solution, mix the rock dust with the wetting agent in a bucket and pass it through a sieve before pouring it into the tank. Do not stop the circulation pump before the tank is completely empty. Immediately rinse out the tank after spraying.
- **Dusting application:** More coarse rock dusts (e.g. "Klinofeed" or other products) can be applied with the bar spreader or a pendulum spreader. Pneumatic fertilizer spreaders are not suitable. Application with a fertilizer spreader is very labour-intensive as the maximum working width is 6 m, which means that several paths within the crop are necessary. During application, there must not be any wind. The quantity required is about 200-250 kg per ha.