

Challenges and potential for organic rapeseed production in Denmark



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Abstract

The current organic oilseed rape area in Denmark is approximately 470 ha (Danish AgriFish Agency, 2012). However, the Danish market potential for organically grown oilseed rape is at least ten times higher than the current production (Nilsson, A. J., Statistics Denmark, personal communication June 2012). This gap between supply and demand is primarily due to frequent and severe attacks by two insect pest species, the cabbage stem flea beetle (*Psylliodes chrysocephala* (L)) and the pollen beetle (*Meligethes aeneus* F.).

In autumn and winter, cabbage stem flea beetle adults feed on winter oilseed rape seedlings and may cause considerable damage, as the larvae tunnel leaf stalks and stems.

Often organic rape seed crops have to be ploughed under in spring because of low crop plant survival after attacks by the cabbage stem flea beetle.

Objectives and primary investigations

Currently, a Danish field experiment with different management tactics are being conducted in commercially organic grown winter oilseed rape fields at 3 locations. The objective of the experiment is to investigate different non-chemical strategies to minimize crop damage by the cabbage stem flea beetle under field conditions. Eight different management tactics have been chosen

1. Variety Exclusiv, sown with a 12 cm row distance between the rows
2. Variety Ladoga with 25 cm row distance and hoeing at the 1-2 leaf-stage
3. Variety Exclusiv at 25 cm row distance and hoeing at the 1-2 leaf-stage
4. Variety Exclusiv in mixture with turnip, at 25 cm row distance between rows of the mixture, hoeing at the 1-2 leaf-stage of oilseed rape.
5. Variety Exclusiv and turnip in alternating rows. 25 cm between rows, hoeing at the 1-2 leaf-stage of oilseed rape.
6. Variety Exclusiv at 25 cm row distance, a cover of wood pellets is placed at the 1-2 leaf stage in a band surrounding the crop row.
7. Variety Exclusiv at 25 cm row distance, a cover of agricultural lime is placed at the 1-2 leaf stage in a band surrounding the crop row.
8. Variety Exclusiv, at 25 cm row distance, repeated hoeing/harrowing strategy starting at the 1-2 leaf stage with succeeding cultivations at 10 day intervals.

Next step

International network and cooperation towards methods to reduce the damage and yield loss caused by the cabbage stem flea beetle (*Psylliodes chrysocephala* (L)) and the pollen beetle (*Meligethes aeneus* F.) in organic rapeseed.

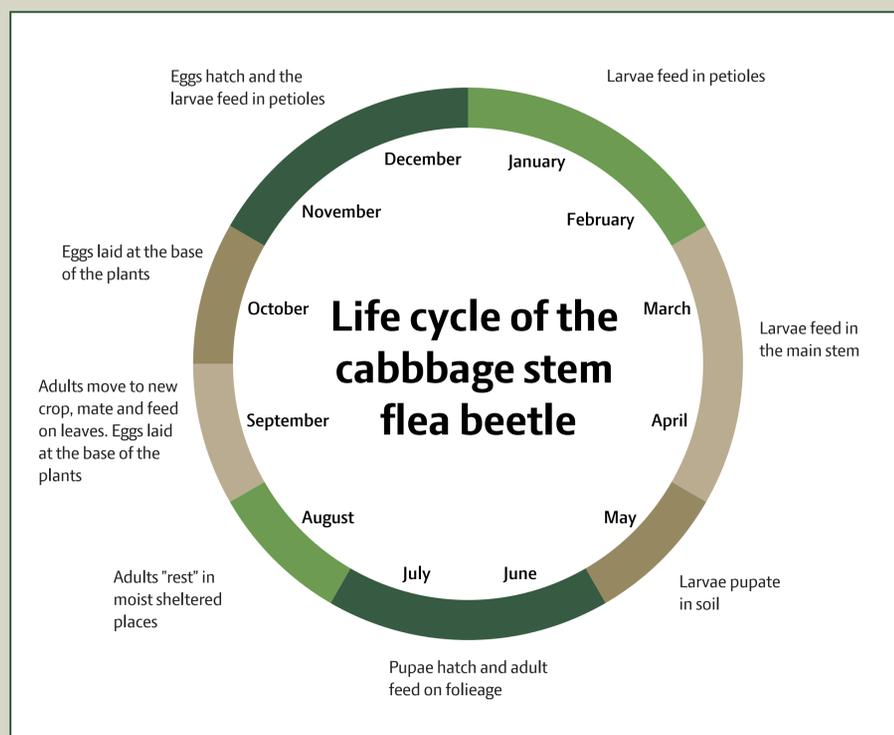
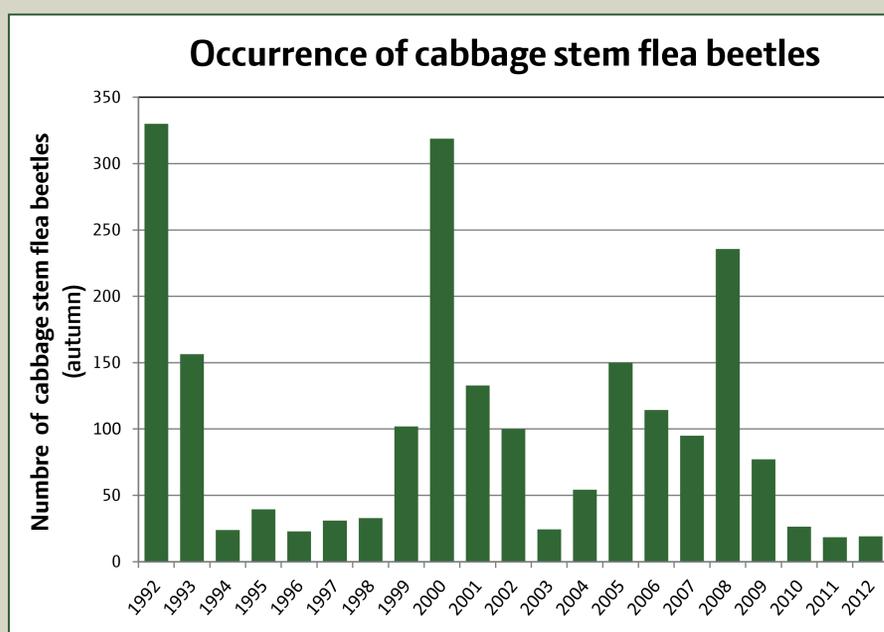
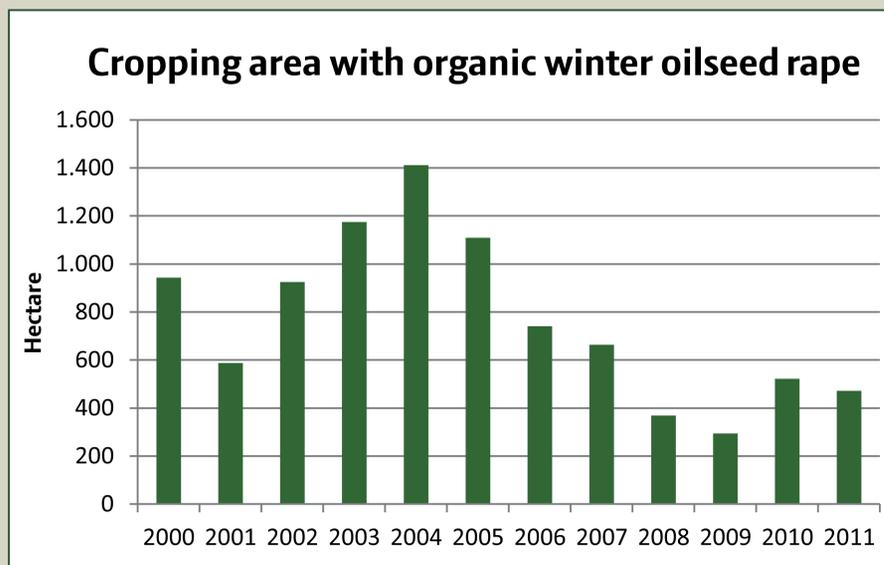


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