ECOguard

Norwegian trials 2004-2005

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ECOguard

- A 99.9% food grade garlic concentrate.
- Liquid and granule formulations.
- Registration pending in Norway, registered in Denmark and the UK

Lab experiments: Repellent effect

- **Swede plants in pots sprayed with 4 ml solution 2% ECOguard**
- **Plants placed in cage with unsprayed plants**
- **2 replications, 2 repetitions**

  First experiment: 4 male and 4 female *D. floralis* (turnip root flies) per cage released 30 min. after treatment

  Second experiment: 8 male and 8 female flies per cage
- **Eggs counted after 6 days (Exp. 1) or 3 days (Exp. 2)**

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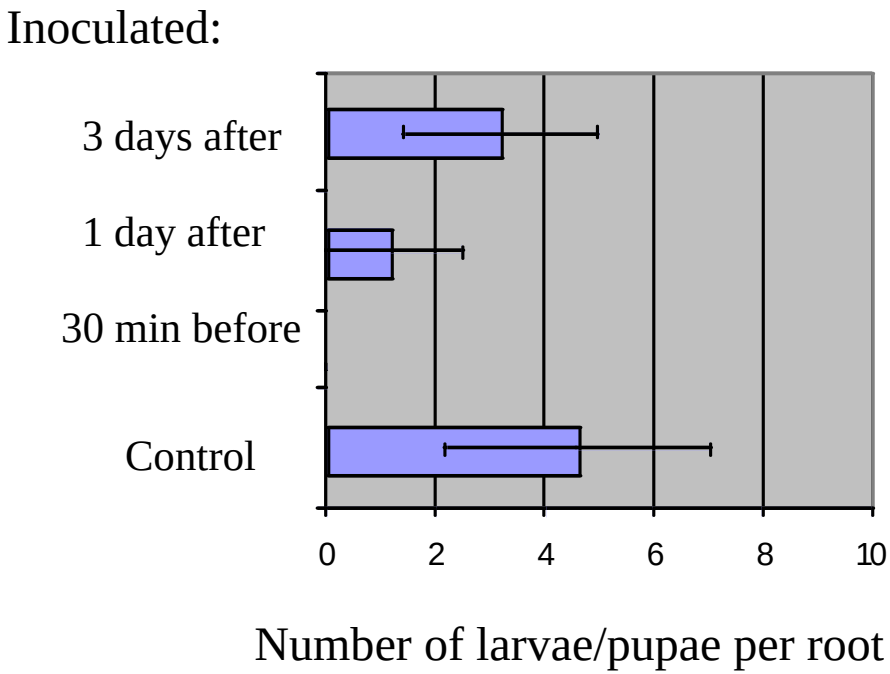
Repellent effect - ECOguard

Result: No repellent effect

Lab experiments: toxic effect

- **First experiment: - 2% ECOguard pipetted onto base of stem**
- **Second experiment: - 2% ECOguard sprayed onto plants**
- **Inoculated with10 eggs per plant:**
  - before treatment
  - 1 day after treatment
  - 3 days after treatment
  - 5 days after treatment (Exp. 2 only)

Toxic effect: Exp. 1
Pipetting onto base of stem



Toxic effect: Exp. 1
Pipetting onto base of stem

ECOguard Control

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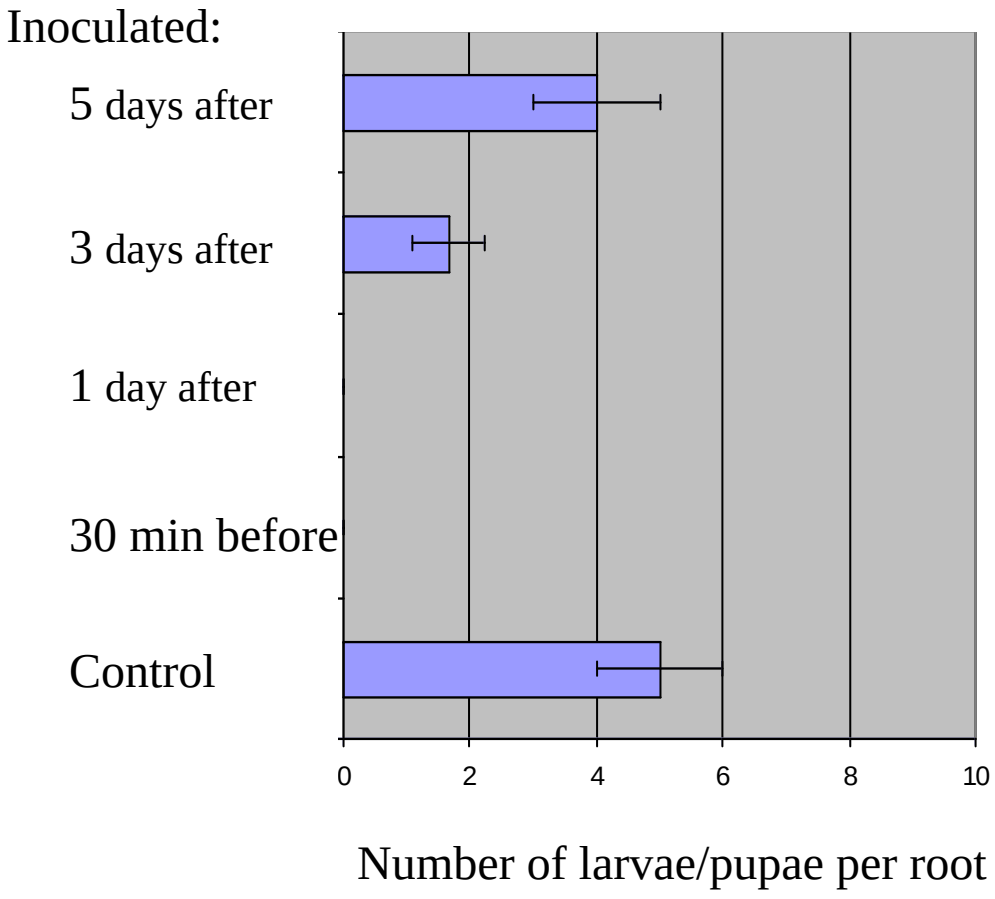
Toxic effect: Exp. 2
Spraying



Toxic effect: Exp. 2
Spraying

Control

ECOguard

Field trials in Chinese cabbage and cauliflower

- Transplants dipped in 4% solution of ECOguard before transplanting
- Sprayed 5x with ECOguard (2% in Chinese cabbage, 0.5% in cauliflower) at 5 day intervals beginning at first registered egg laying

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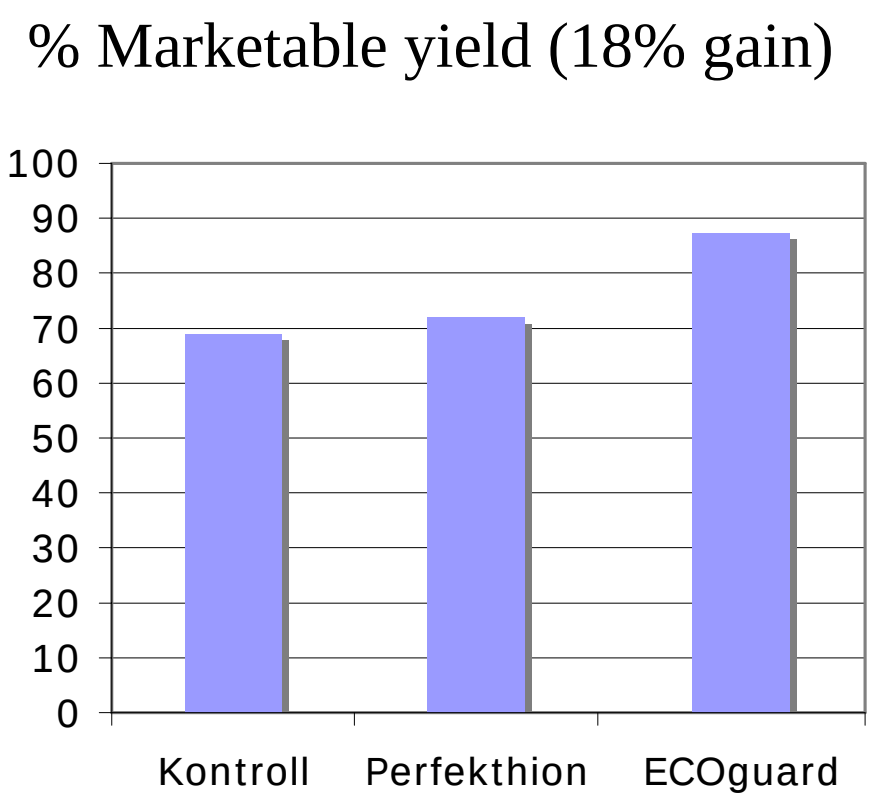
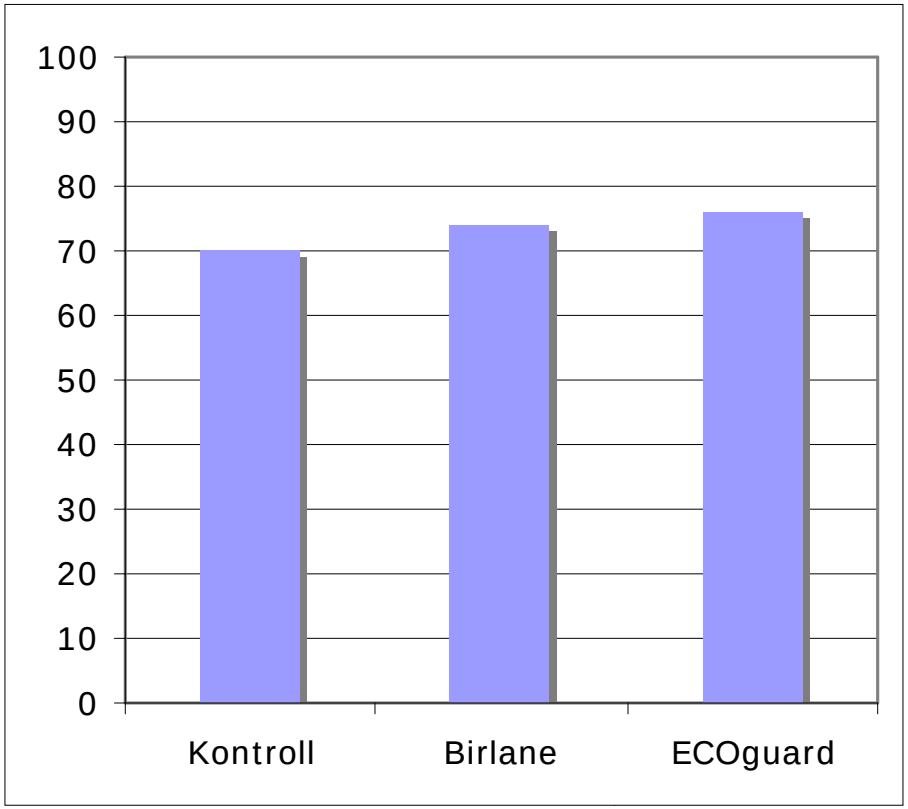
Lier - Chinese cabbage 2005



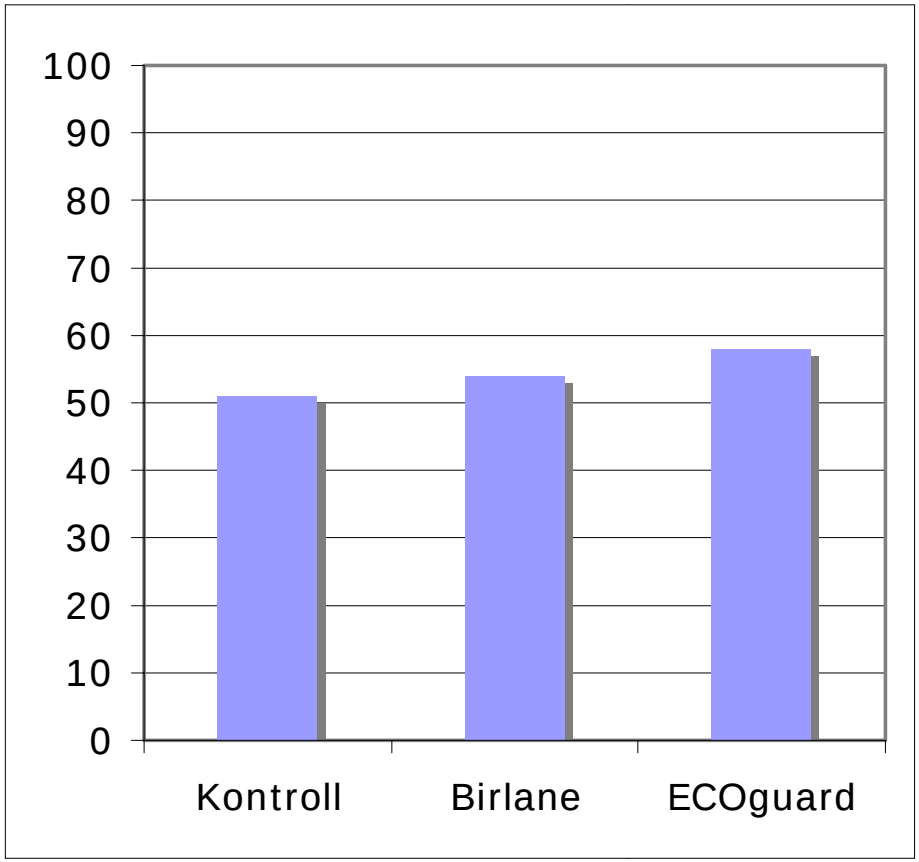
Stjørdal - cauliflower 2005

% roots with little or no damage
(6% gain)



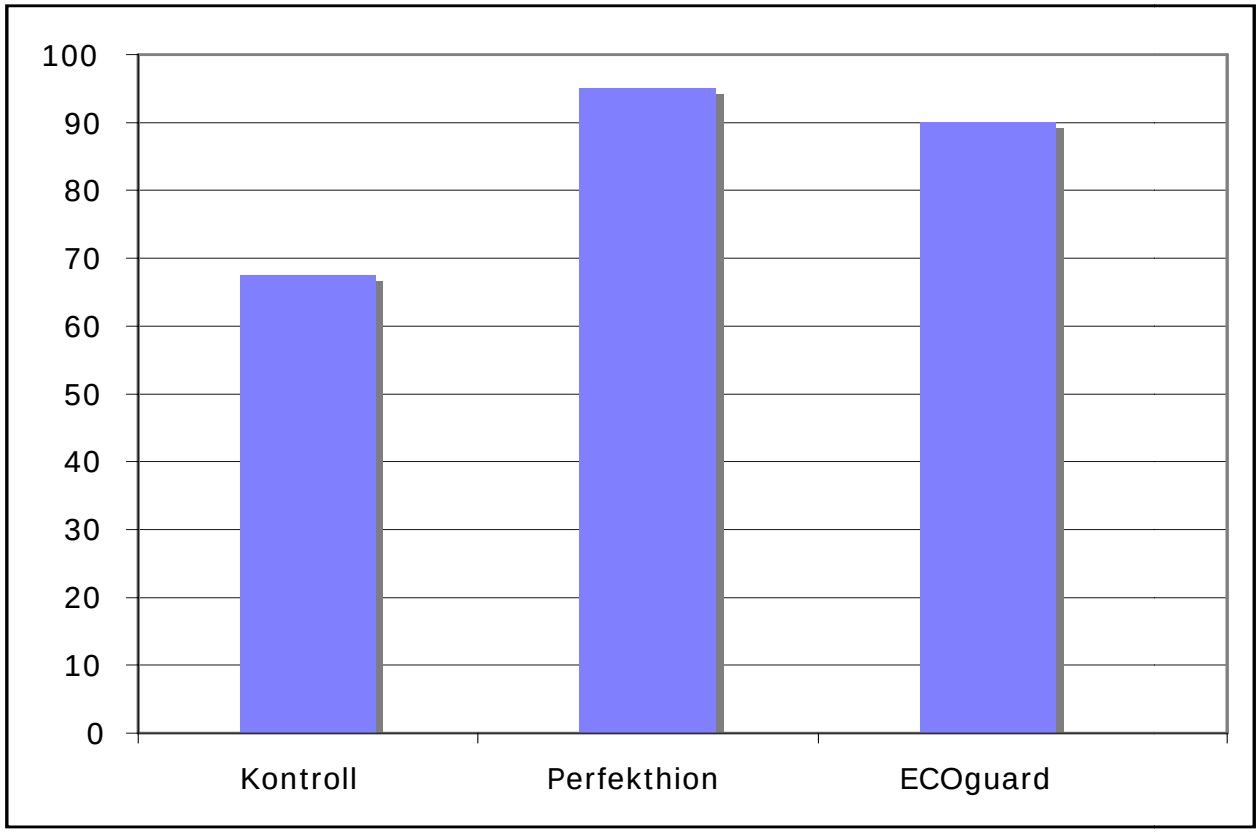
Lier - cauliflower 2005

% roots with little or no damage
(7% gain)



Hedmark 2004 - cauliflower

% roots with little or no damage
(22% gain)



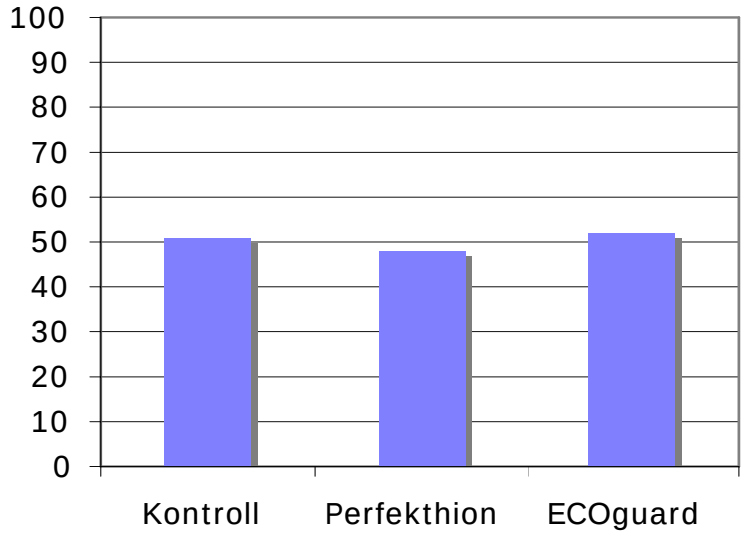
Field trials in swedes

Beginning at first registered egg laying:

- **Treated with ECOguard in granular formulation at 12 kg/ha 3x at weekly intervals**

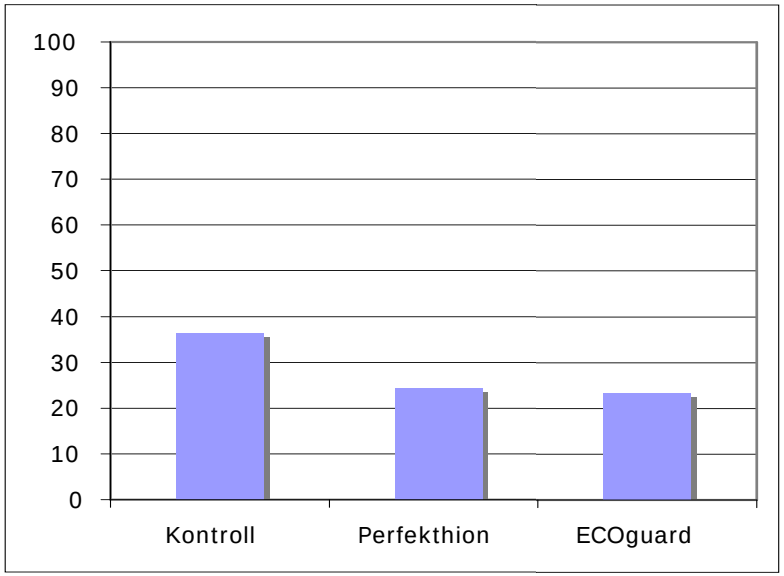
Midt-Troms - % marketable yield of swedes

2004



(1% gain)

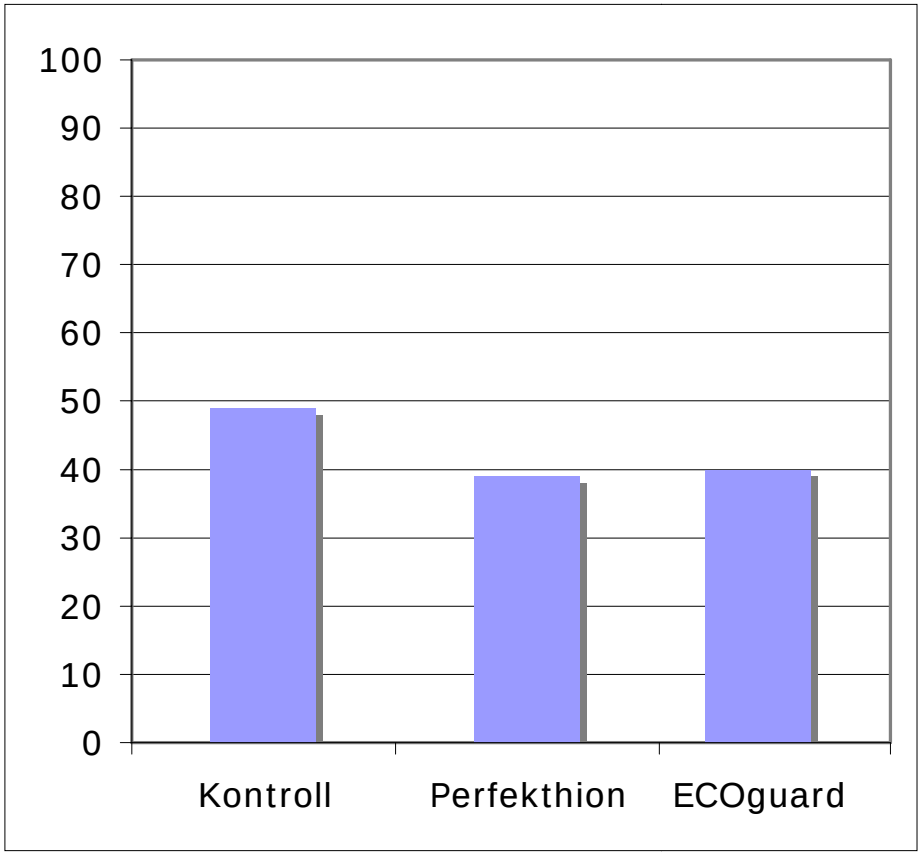
2005



(-13%)

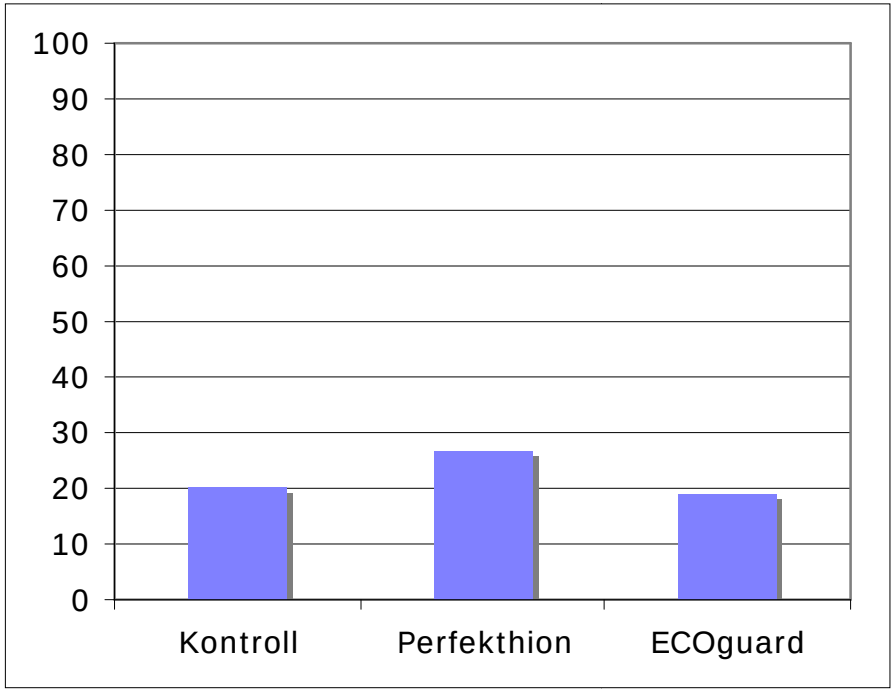
Namdal - % marketable yield of swedes 2005

(-9%)



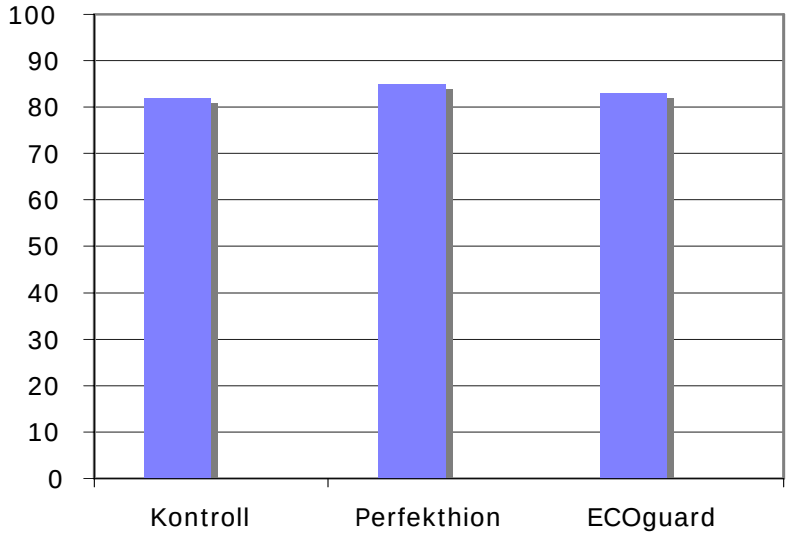
GA-FA - % marketable yield of swedes 2004

(-1%)



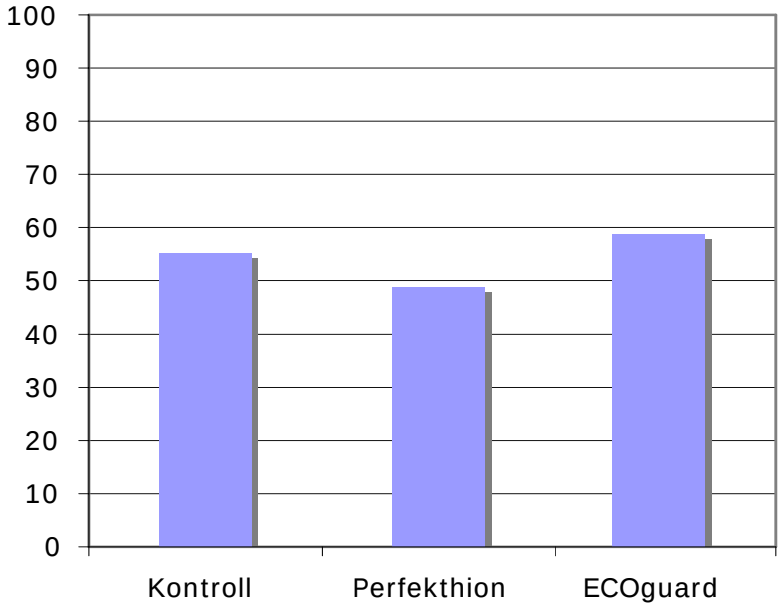
SørØst - % marketable yield of swedes

2004



(1% gain)

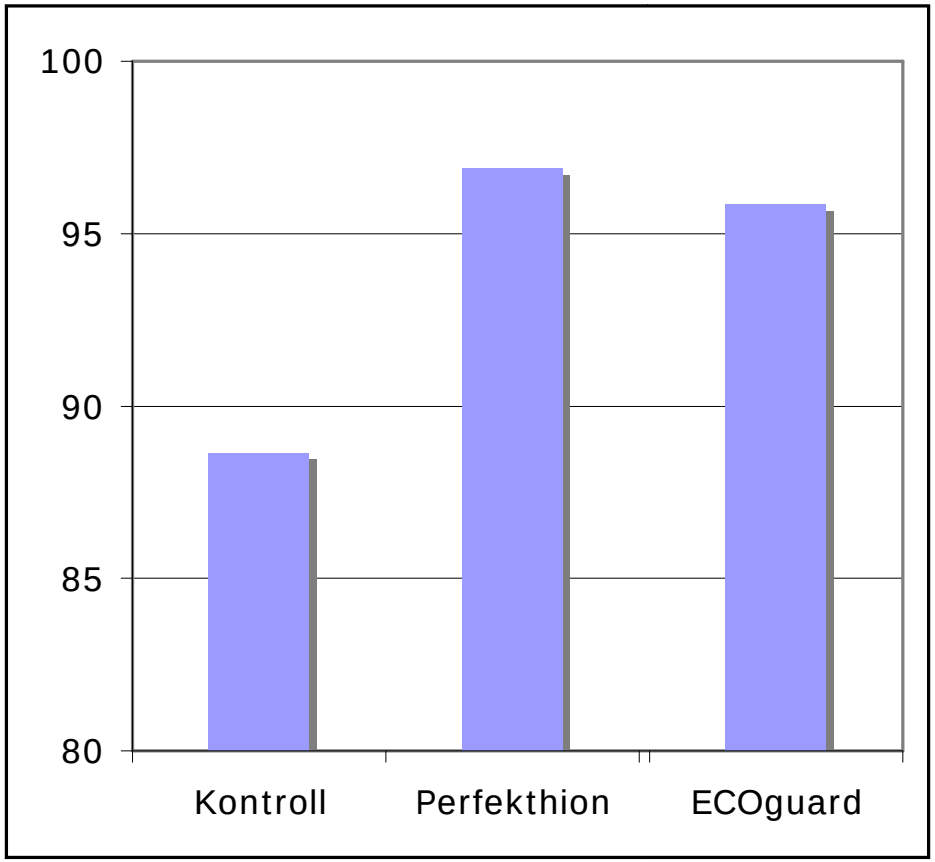
2005



(4% gain)

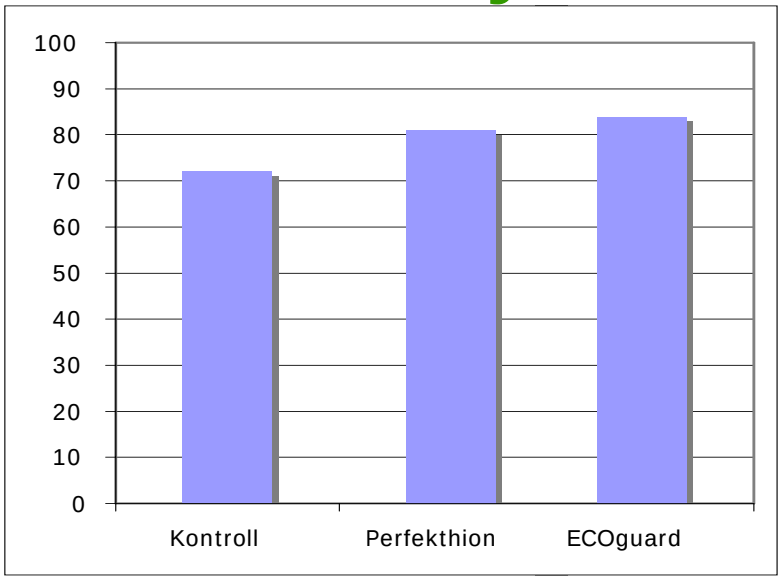
Hedmark - % marketable yield of swedes 2005

(8% gain)



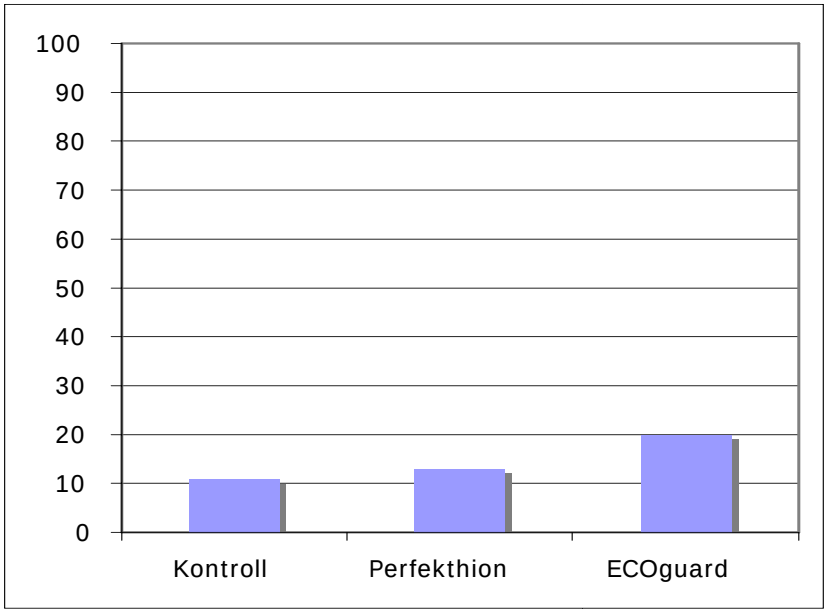
GA-FA - % marketable yield of swedes

Øyen 2005



(11% gain)

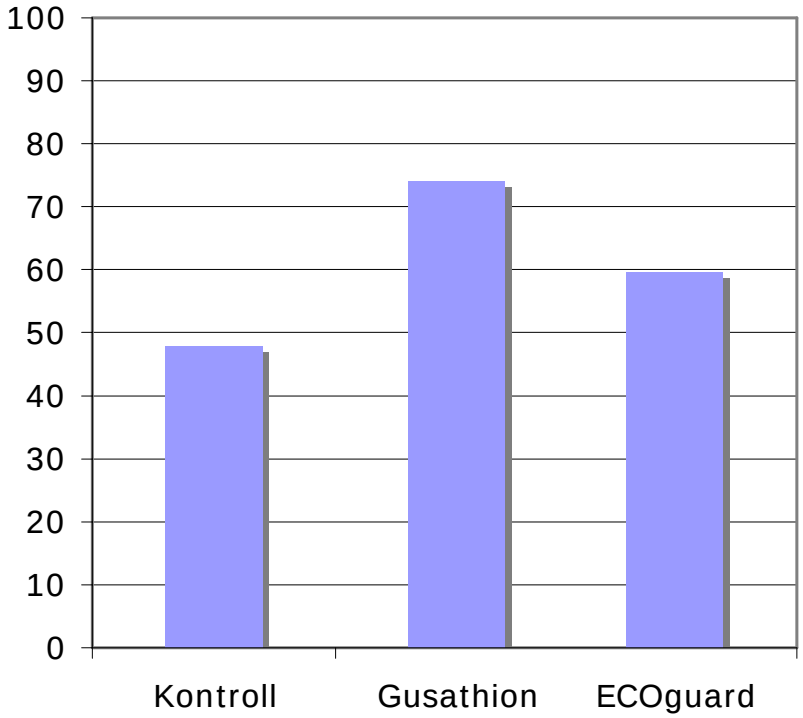
Haugestad 2005



(10% gain)

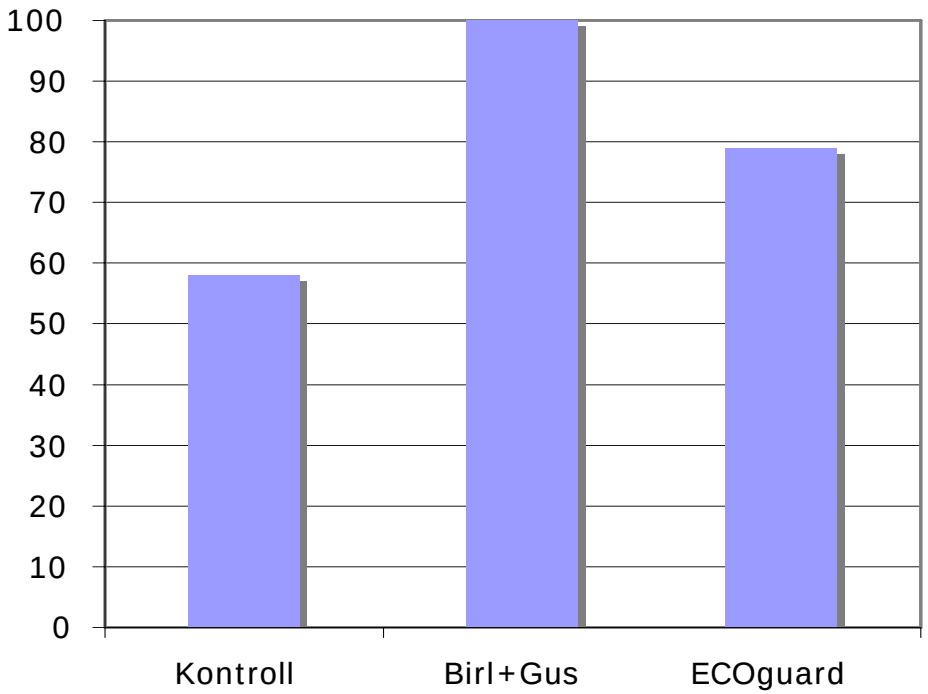
SørØst - % marketable yield of (transplanted) swedes 2005

(11% gain)



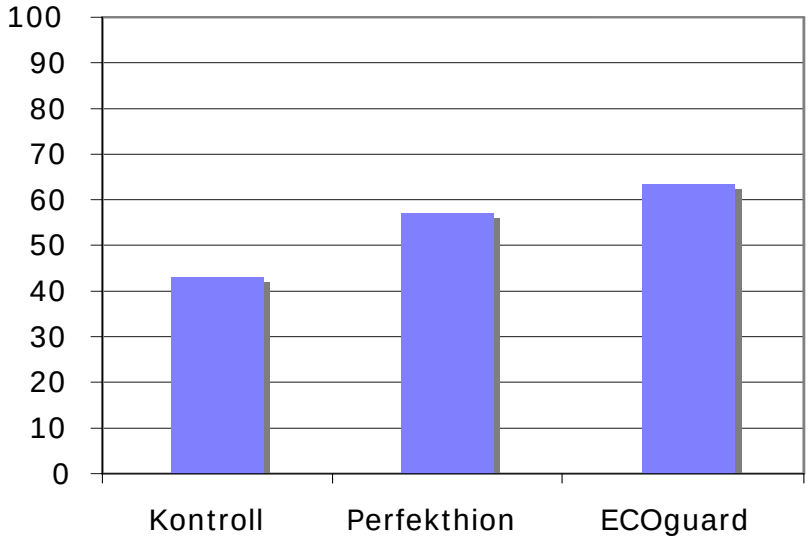
Stjørdal - % marketable yield of swedes 2005

(21% gain)



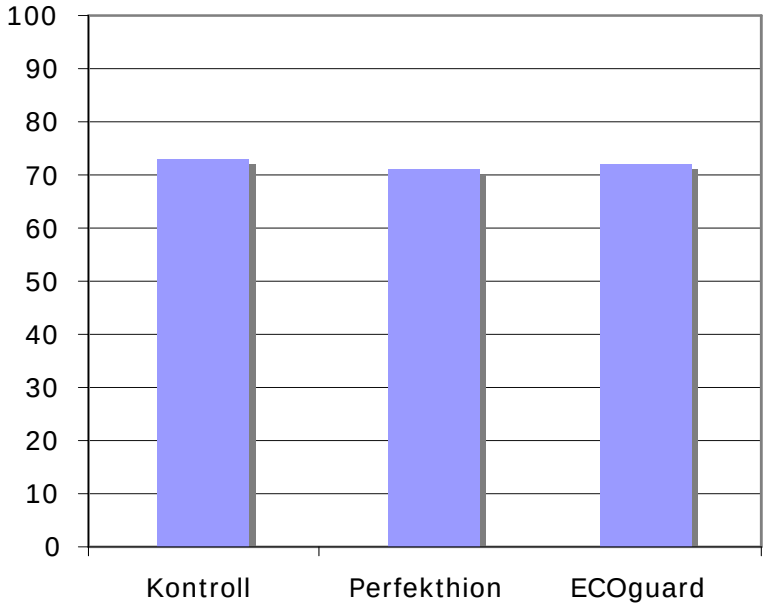
Toten - % marketable yield of swedes

2004



(20% gain)

2005



(0%)

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Conclusion

- ECOguard gave increased marketable yield in many cases, often as good as OP-insecticides, in some cases better.
- More studies are being conducted to relate efficacy to:
  - timing of treatment in relation to oviposition
  - precipitation/irrigation and treatment
  - frequency of treatment
  - dose