CONTROL OF MELOLONTHA
MELOLONTHA WHITE GRUBS

MELOLONTHA PROJECT
3 YEARS

ECONOMICAL DAMAGE DUE TO THE GRUBS IN THE TREES AND ORNAMENTALS SECTOR

HELLINGMAN

MELOLONTHA PROJECT
3 YEARS

- NEMATODE MIX HETERORHABDITIS BACTERIOPHORA AND STEINERNEMA FELTIAE

- RATE: 250.000 ECH = 500.000/M2 INJECTED IN THE SOIL

HELLINGMAN

MELOLONTHA PROJECT
3 YEARS

- 3 WEEKS AFTER TREATMENT:
  - 6 WHITE GRUBS FOUND IN THE TREATED AREA
  - 1 HAD LARGE NEMATODE INSIDE = COULD BE STEINERNEMA
  - AND OTHER SMALL ONES.

HELLINGMAN

MELOLONTHA PROJECT
3 YEARS

- THE TREATED AREA WAS NOT KEPT WET
- VERY HOT SUMMER
- MY BELIEVE: LOT OF NEMATODES DIED DUE TO THE HEAT AND DRY SOIL CONDITIONS
- WHITE GRUBS WENT DEEPER IN THE SOIL TO AVOID HEAT

HELLINGMAN

MELOLONTHA PROJECT
3 YEARS

- REASON FOR MY CHOICE FOR THE MIX:
  - STEINERNEMA FELTIAE – ABLE TO SURVIVE LOW TEMPERATURES
  - GRUBS CAN BE TREATED EARLIER IN THE SPRING AND LATE SUMMER
  - HETERORHABDITIS BACTERIOPHORA; NEMATODES THROUGH SKIN ALSO
  - S. FELTIAE NEEDS NATURAL OPENINGS

HELLINGMAN

MELOLONTHA PROJECT
3 YEARS

- FURTHER I BELIEVE:
  - MIX OF NEMATODES RELEASES DIFFERENT BACTERIA
  - COULD HAVE SOME IMPACT INSIDE THE GRUB
- SOMETHING FOR YOU SCIENTISTS TO TRY?

HELLINGMAN


TRIAL AT GOLFCOURSE
WITH SIMON PIGGOTT 2002

TRIAL AT GOLFCOURSE 2002

- APPLIED NEMATODES
  - STEINERNEMA FELTIAE ONLY
  - MIX HETEORHABIDTIS MEGIDIS/STEINERNEMA FELTIAE

HELLINGMAN

TRIAL AT GOLFCOURSE 2002

- RESULTS AFTER 3X COLLECTING GRUBS :
  - MORTALITY OF LARGE WHITE GRUBS
  - STEINERNEMA FELTIAE GAVE 25%
  - THE MIX H. MEGIDIS/S. FELTIAE 38,6%

HELLINGMAN

COMMUNITY OF VORDEN

- SPORT FIELDS = HIGH INFECTION OF :
  - P. HORTICOLA
  - A. SOLSTITIALIS
  - M. MELOLONTHA

COMMUNITY OF VORDEN

- MIX APPLIED IN 3RD WEEK OF JULY 2002
  H. BACTERIOPHORA / S. FELTIAE
- 3 WEEKS AFTER:
  - MANY DEAD/DYING LARGE WHITE GRUBS
- SAMPLES SEND TO SIMON PIGGOTT FOR RESEARCH
- CONCLUSION SIMON PIGGOTT:
  - AMAZING 2 SPECIES OF NEMATODES INSIDE ONE GRUB

HELLINGMAN

COMMUNITY OF VORDEN

- MAY 2ND 2003 FEED BACK SPORTFIELD MANAGER VORDEN:
  - NO LIVING MELOLONTHA GRUB
  - ONLY 2 BROWN COLOURED ONES
  - AFTER MANY YEARS DAMAGE THE FIRST TIME WITHOUT DAMAGE

HELLINGMAN

3 YEARS EFFORTS TO CONTROL LARGE WHITE GRUBS

- LAST 3 YEARS INVESTING A LOT OF MONEY
- TRYING TO CONTROL THE LARGE WHITE GRUBS.
- DIIRECTLY RELATIONSHIP WITH E-NEMA EASIER
- NEMATODES CHEAPER PRICE
- IN RETURN FEED BACK ABOUT RESULTS

HELLINGMAN

WINTERSWIJK
VISITORS GARDEN

- 2002 500M2 TREATED WITH THE MIX
- 2003 THE REST OF THE GARDEN ALSO WITH MIX
- FEED BACK ABOUT RESULTS EXPECT END OF THIS MONTH

HELLINGMAN

Garden

THIS GARDEN
TREATED WITH
THE MIX
H.BACTERIOPHORA /
S. FELTIAE

HELLINGMAN

M.MELOLONTHA TRIALS IN 2004

- THIS YEAR THE FOLLOWING MIXES:
- H. BACTERIOPHORA- S. FELTIAE – S. CARPOCAPSE
- IF POSSIBLE S. SCARABEI IF IT WILL BE AVAILABLE

HELLINGMAN

AFTER TREATMENT

- GRUBS TO E-NEMA
- MY CONCLUSION ALSO
- YOUNG M. MELOLONTHA GRUBS IN THE SPRING AND LATE SUMMER
- THE GREAT ONES REMAINS DIFFICULT TO CONTROL
- BUT NOT IMPOSSIBLE
- I STILL BELIEVE IN THE MIX

HELLINGMAN


THANK YOU ALL!