

Test of traps for turnip moth (*Agrotis segetum*) in carrots

Objective:

To test funnel traps from UK for turnip moth in carrots.

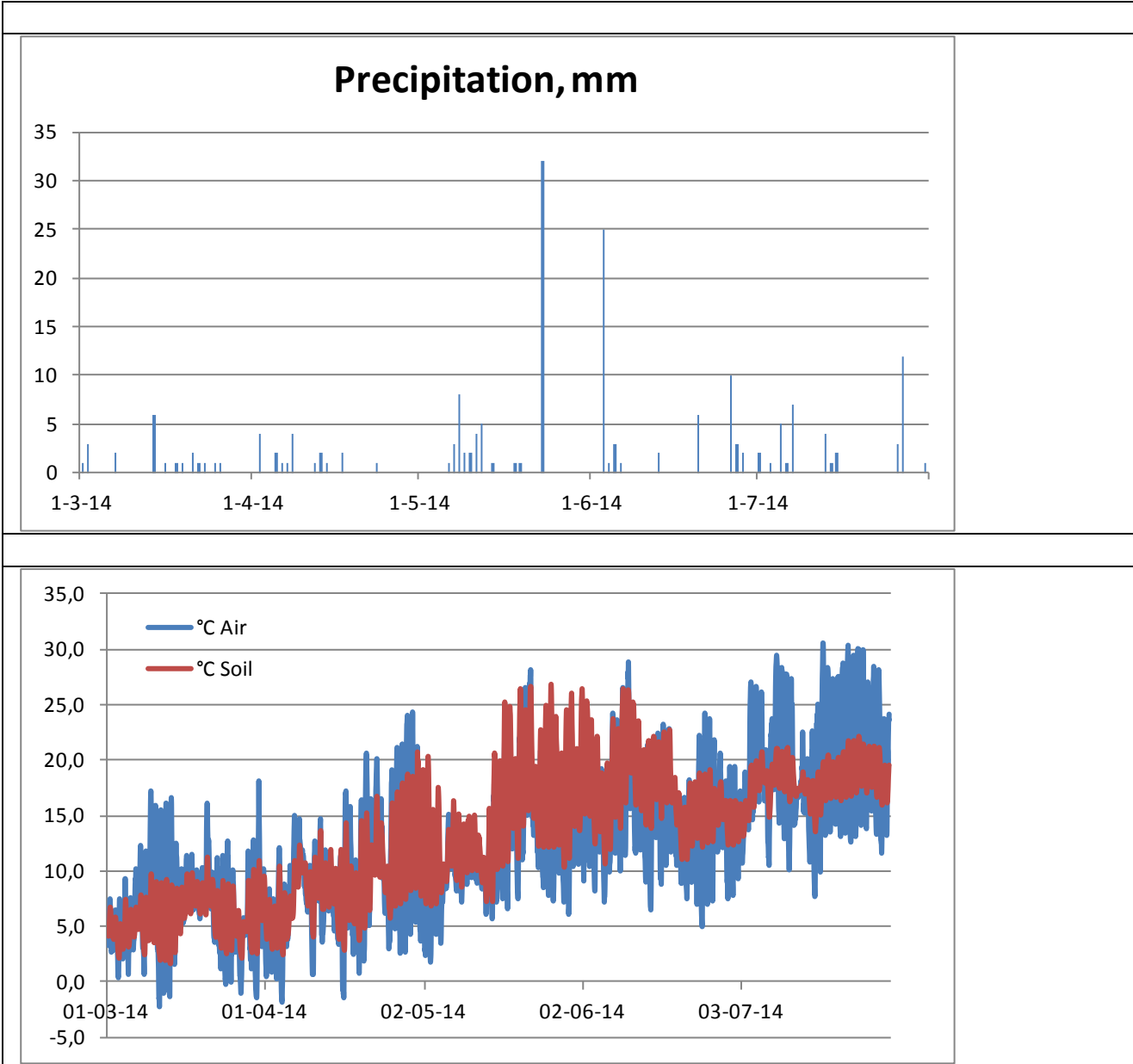
Background:

In UK a special designed funnel trap is used for monitoring turnip moths and warning of attack of cutworms in root crops like carrots. The traps called funnel traps are designed, so they are easy to maintain and empty for moths compared to the house traps with sticky floorboards traditionally used in Denmark. The traps traditionally used in DK are a little bit sensitive to rain and uncomfortable when changing the sticky floorboards.

Description:

In a carrot field in central Jutland three UK-traps and three DK-traps were set up with lures for turnip moths. The traps were placed 50 to 70 meter apart and alternated in between each other – see the map. The field was 25 ha, with the variety Norwich seeded on the 17th of April. The traps were set up on the 5th of May and taken down again on the 14th of July. Traps were emptied and moths counted once a week. The carrots were sprayed against carrot flies with 0.4 l/ha Karate on the 30th of May and again on the 15th of August. The soil type is sandy loam with no irrigation. There have been carrots, root parsley and parsnips in the fields around the test field for the last five years. A weather station was placed in the field in February with rain gauge and thermometer 1.5 meters above ground and 6 cm in soil.





The season 2014 was fairly dry during June and beginning of July but with rain showers in the critical 1st and 2nd larval stages of the turnip moth in middle of July. Number of carrots with damage of cutworm ended up being very low, even though the threshold was exceeded during three weeks.

Results:

Weekly counts of turnip moths at the location from two different types of traps are shown in table below.

Weekly counts of turnip moths caught in two different types of traps

Date for counting	No of moths on tree traps		Feromon type
	DK-trap	UK-trap	
12-maj	0	0	DK lures in both traps
19-maj	0	0	DK lures in both traps
26-maj	0	0	DK lures in both traps
02-jun	6	4	DK lures in both traps
09-jun	21	2	DK lures in both traps
16-jun	31	10	UK lures in UK traps
23-jun	32	20	UK lures in UK traps
30-jun	28	8	UK lures in UK traps
07-jul	43	22	UK og DK lures i UK traps
14-jul	7	5	UK og DK lures i UK traps

Feromon lures were changed on the 9th of June.

Preliminary conclusions:

The funnel traps were tested with both lures used in Denmark, with lures used in UK and with both types of lures in the funnel traps. In all cases there were caught more turnip moths in the DK traps than the funnel traps. This might be explained by the narrow entrance of the funnel trap. According to studies done in Denmark in the past, when the Danish traps were designed, showed that it's important that the entrance to the trap has a very wide gap to let the moth fly directly to the lures. With the narrower gap on the funnel traps, the moth tends to land on the lid next to the opening without entering.

The test needs to be repeated with new traps and lures one more year before drawing any final conclusions and recommendations.



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