Carrot *Sclerotinia* Monitoring

23 June 2015

Overview

Post emergence herbicides are being applied to control broad leaved weeds and volunteer potatoes. Fungicide applications will begin soon on the more advanced main crop fields in Nottinghamshire just before the crops start to touch across the rows, in around 7 days depending on the row width.

There is still no germination recorded for sclerotia of the pathogen *Sclerotinia sclerotiorum* at the two BASF carrot monitor fields. Sclerotia germination results in fruiting bodies (apothecia) that release airborne spores which can infect carrot plants. Where soil surfaces remain moist, sclerotial germination will occur in winter cereals and other arable crops as well as carrots. Germination of sclerotia in carrot fields can occur a month from sowing, provided soil surfaces stay moist. The current risks of sclerotinia infection in carrots are low.

Weather conditions and carrot growth stages

Later this week, the weather will be mixed and variable, with spells of rain likely to spread across the UK. Temperatures will be close to normal or slightly below average. Rain is predicted to be above average in the south of England, Wales and Northern Ireland, but sunshine is likely to be a little below average. In other regions, weather conditions are expected to be more or less average.

In general, main crop carrots have at last started to increase their canopy size. Soil temperatures are warm enough for germination of sclerotia but many soils are dry, but rain is predicted in many areas in the next week. Germination requires soil surfaces to be moist for a few consecutive days.

Regions

Cambridgeshire and East Anglia

The Cambridgeshire monitoring site has dry soil this week, and the carrots are at the 4 leaf stage with ground cover about 10%. There is no germination yet of sclerotia buried on 11 May in the crop sown on 1 May. Temperatures are warm enough, so sclerotia could start to germinate now but only if soil surfaces become moist for several days. There is no germination yet in the nearby sclerotia grid in winter cereals (sclerotia buried December 2014). Fig 1 shows the field on 23 June, and Fig 2 is a close-up showing the 4 leaf stage on that date.

Nottinghamshire and E. Midlands

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The carrots in this monitor field are still behind most other fields drilled at the same date because of the wind damage a few weeks ago. The crop is now at the 4-5 leaf stage. Last week was again cool and mainly dry, so there is no germination yet of sclerotia buried on 8 May in the crop (sown 21 April). There is also no germination in the nearby sclerotia grid in winter cereals (sclerotia buried December 2014). Fig 3 shows the crop on 22 June; Fig 4 is a close-up photo on this date, showing carrot plants with 4-5 leaves.

Photos



Fig. 1. 23 June, Cambridgeshire site carrot growth, cv. Nairobi sown 1 May 2015: 4 leaf stage.



Fig. 2. 23 June, Cambridgeshire site carrot growth, cv. Nairobi sown 1 May 2015: 4 leaf stage.

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Fig. 3. 22 June, Nottinghamshire site carrot growth, cv. Nairobi sown 21 April 2015. Carrots are at the 4-5 leaf stage.

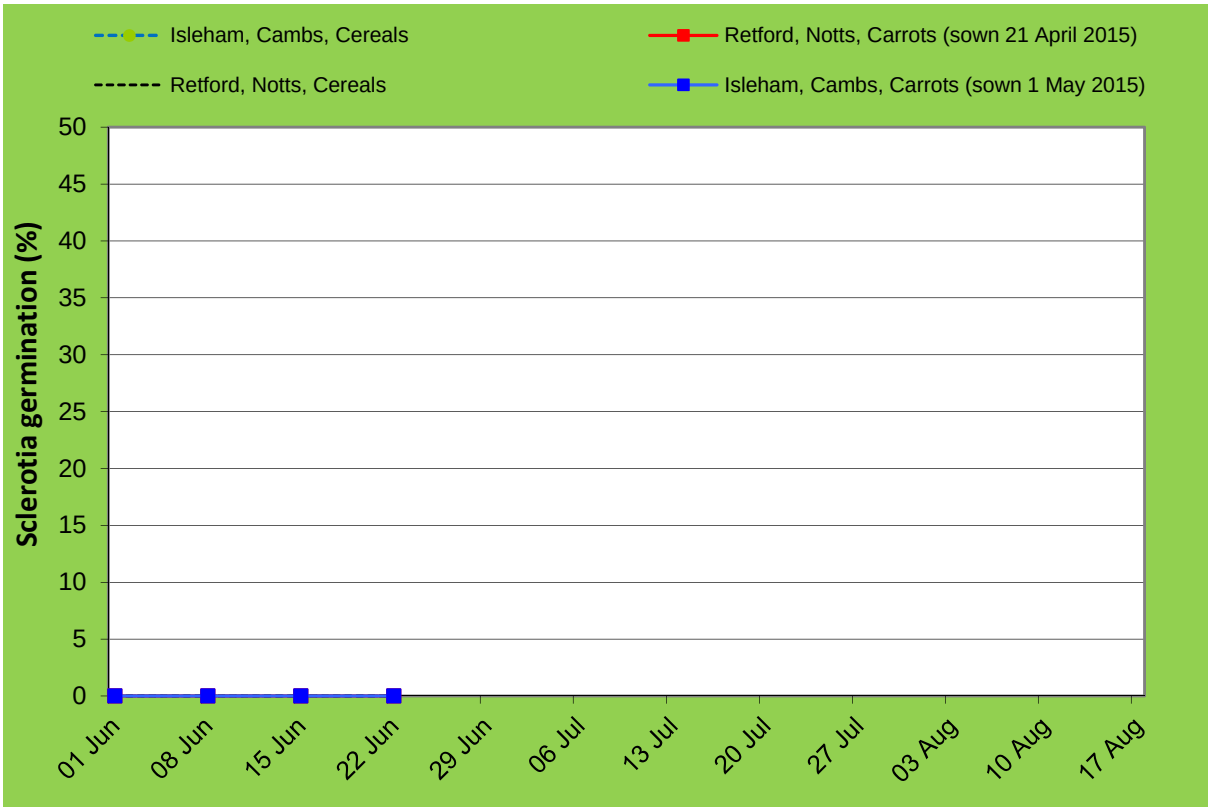


Fig. 4. 22 June, Nottinghamshire site carrot growth, cv. Nairobi sown 21 April 2015: carrots are at the 4-5 leaf stage.

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Sclerotia Germination (refer to website map for exact locations)

Depots of carrot sclerotia are being monitored near Retford, Notts and Isleham, Cambs. At both of the sites, depots of carrot sclerotia are being monitored in winter cereals and in main crop carrots. This allows the effect of spring cultivations on sclerotial germination timing to be taken into account.



Key points

No germination of carrot sclerotia is evident in winter cereals or carrots. There is sclerotinia activity in winter oilseed rape at the moment in some regions, but infection risk to carrot crops is currently low.

Actions

Most main crops are still at the 4-5 leaf stage with low ground cover. No fungicides are required at this early stage, unless cavity spot is present.

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