Sugar beet nematodes

Beet cyst nematode. The presence of patches of stunted plants in the field may indicate damage by beet cyst nematode, *Heterodera schactii*. Affected plants wilt easily in dry weather and often have bearded root systems i.e. a profusion of lateral roots. From late May onwards it is possible to find cysts, which are mature female nematodes full of eggs, on the roots. The cysts are initially white but turn brown when the adult nematodes die. They then become detached from the root. The presence of host plants in the soil later stimulates the eggs to hatch and juvenile nematodes escape from the cysts into the soil.

Close up of cyst

Decreasing the frequency of sugar beet and other host crops (brassicas) in the rotation is the usual method of control. If a host crop is grown one year in six, or less often, the population of the pest will decline. If host crops are grown more frequently populations may build up.

Root of plant infested with **beet cyst nematode**

Alternatively, some growers have had success with ‘catch cropping’, using nematode-resistant crops, such as white mustard or oilseed radish, to stimulate egg-hatch. The juvenile nematodes cannot complete their life cycle on the catch crop, which is usually sown in August / September, prior to the beet crop in the following spring. After a few months it is ploughed in and any nematodes which have hatched then starve.

Cysts on roots

No nematicides are recommended for use against beet cyst nematode, but some benefits have been seen where they have been used.

Free living nematodes. Damage by free living nematodes (*Trichodorus* spp. and *Longidorus* spp.) is often widespread in fields with sandy soils, and characteristically displays the ‘chick and hen’ effect i.e. stunted plants interspersed with healthy-looking ones. It is referred to as Docking Disorder.

Roots of plants damaged by ***Longidorus*** nematodes

The stunted plants usually have poorly-developed root systems. The lateral roots are short and unhealthy-looking, and may eventually turn black and die, though some plants produce new white ones to replace them. As the plant grows, the tap root is likely to become branched (‘fangy’). Damage is more severe in wet springs as the high soil moisture content allows the nematodes to be more mobile and aggregate around the roots.

The recommended method of control is by nematicides (Vydate, Oncol, Posse) applied as granules in the seed furrow. Free-living nematodes have a wide host range, including cereals, so crop rotation is ineffective at reducing their population.