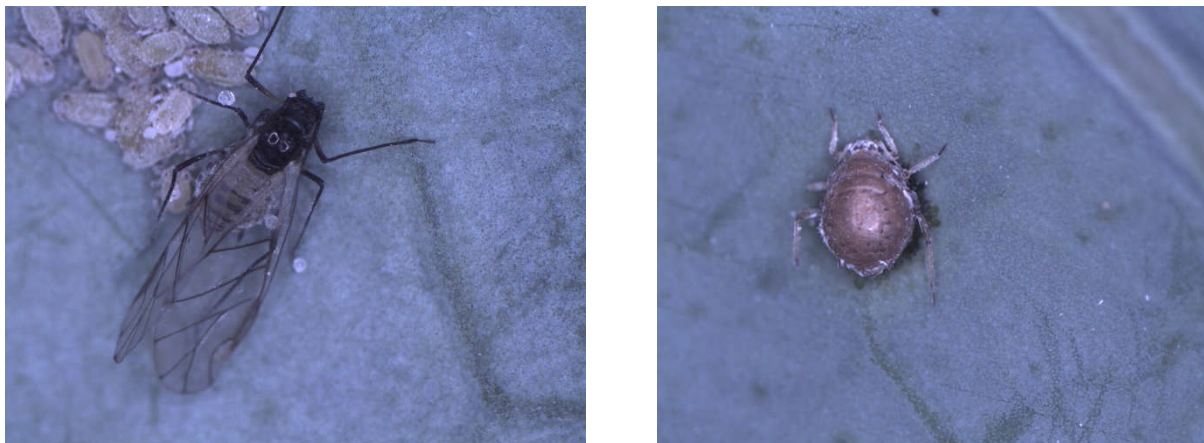


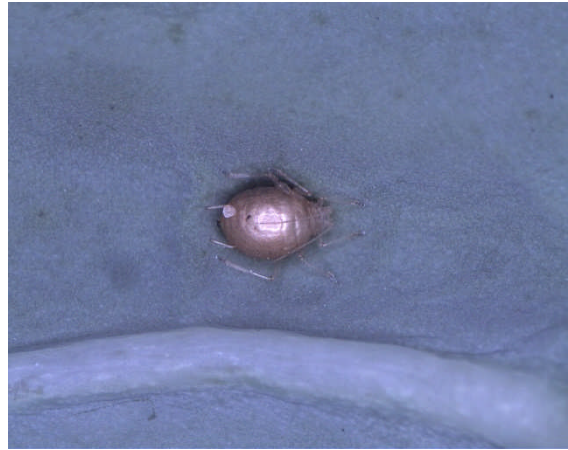
Identifying natural enemies of Aphid in Brassica Crops

Aphid infestations on brassica crops are reduced by a range of different parasitoids and predators which naturally occur in the environment. The importance of the contribution these insects to reducing aphid numbers should always be considered when applying plant protection products. The prevalence of these species can be promoted by using selective insecticides and by providing flowering plants adjacent which provide sources of food and shelter. Other Integrated Pest Management approaches to aphid control in brassica crops have been shown to have significant limitations such as the use of population thresholds, protective netting and under cropping to increase the plant diversity in the field.



Picture 1: Cabbage Aphid on the LHS and a parasitized cabbage aphid on the RHS

There are various species of parasitic wasps in Irish fields that parasitize aphids. Indeed in many Glasshouse and Polytunnel crops they similar species are introduced and used effectively to control aphid populations. You can observe the impact of parasitic wasps in your field by monitoring for the presence of “mummified” aphids on the underside of leaves. The parasitic wasp uses its ovipositor to lay an egg inside the aphid, this egg hatches and the wasp larva feeds on the aphid and eventually leaves by using its jaws to cut a circular hole on the aphid. Therefore it is common to see these mummified aphids with circular holes in their abdomen. The two most important aphid pests of Brassicas are the cabbage aphid (*Brevicoryne brassicae*) and the peach-potato aphid (*Myzus persicae*). The difference between a cabbage aphid and a parasitized cabbage aphid is illustrated above. Note the brown colour and papery/leathery look of the parasitized aphid. A similar comparison for peach-potato aphid is shown below.



Picture 2: Peach-Potato Aphid on the LHS and a parasitized peach potato-aphid on the RHS

An aphid predator common in Brassica crops are Hoverfly larva. The adult flies look very similar to wasps or bees however they cannot sting. This mimicry is the hoverflies method of protection from its own predators, such as birds. Not all hoverfly species feed on aphids and some can feed on plant material. Adult hoverflies feed on pollen and nectar and are efficient pollinators. The larval life stage is when they eat aphids, usually they feed at night, sucking larger aphids empty or eating smaller aphids whole. You will often see the tear drop shaped pupae of this insect on the underside of leaves.



Picture 3: Hoverfly larvae on the LHS and a Hoverfly pupae on the RHS

The above two species are just an example of the array of naturally occurring insect species which actively contribute to lowering aphid populations. Growers should learn to identify the signs of parasitism and to identify predators to ensure, that where possible populations are maintained and encouraged.