

A Growing Kent & Medway funded study demonstrated how wildflowers support arbuscular mycorrhizal fungi (AMF). These beneficial fungi are associated with reduced canker development and increased resilience of apple orchards.

RESEARCH SUMMARY

In newly planted apple orchards AMF can be added at planting, but increasing AMF presence in mature orchards is more challenging.

Certain wildflower species are known to support the growth of naturally occurring and introduced mycorrhiza. Niab’s research confirmed that sowing both wildflowers alone, and with added AMF inoculum on soil with low mycorrhiza presence, increased AMF root colonisation in the alleyways of all three mature orchards included in the project. In the short life of the project, AMF populations did not have time to spread into the apple roots from the wildflower strips.

THE WILDFLOWER MIX AND ESTABLISHMENT

(see table)

Most species were known to support mycorrhizal fungi.

The mix provided flowering throughout the growing season to maximise attraction to pollinators and predatory insects.

The mix was sown in alleys of established orchards in late autumn after the alleys had been treated with herbicide and well cultivated.

The seed mix was sown at 4 g/m². Where AMF was added, it was applied at 2 ml/m². The soil was then pressed with a roller.

Seed supplier: T. Denne & Sons www.tdenneandsons.co.uk
AMF supplier: PlantWorks rgpro@plantworksuk.co.uk

Wildflower common name	Evidence of association with AMF	% in the mix (no grasses included)
Common knapweed	Yes	14
Viper’s bugloss	No reports	6
Birdsfood trefoil	Yes	13
Oxeye daisy	Yes	17
Selfheal	Yes	12
Wild carrot	Yes	11
Rough hawkbit	Yes	9
Wild red clover	Yes	6
Musk mallow	No reports	6
Devil’s-bit scabious	Yes	6



This information has been compiled from the results of a research project funded by Growing Kent & Medway and The East Malling Trust. The research was carried out by Niab with support from Agrovista and AM Fresh.