Whitefly!!!!!

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Recently a request came in from a San Luis Obispo Master Gardener asking about some unusual mottling on orange leaves. They didn't follow a typical nutritional deficiency or fungal disease. They actually looked like huanglongbing symptoms, but there was no history of Asian Citrus Psyllid. It looked like it could be a sucking insect, something like a stink bug, whitefly or mite feeding. But the Master Gardener and grower couldn't find any insects or any fecal or other debris, indicating an insect's presence. The symptoms looked familiar, though and I just couldn't put my finger on it. Then we got a call from a Valencia grower in Fillmore, and they had some really good images of similar symptoms with clear feeding sites on the back side of the leaves. And some whitefly colonies, too.

Bingo, it all fell into place. Whitefly feeding in both San Luis Obispo and Fillmore this last spring. The case in SLO was that beneficials had moved in and cleaned up all the whitefly – lacewing , hoverfly larvae, minute pirate bug, etc. – had hoovered up all the living whiteflies, whereas in Fillmore, they were still in the process.

Whiteflies are tiny, flying insects that derive their name from the mealy white wax covering their wings and body. While adult whiteflies are similar in appearance, the immature stages are more distinctive. The pupa and other immature stages of the woolly whitefly are covered with curly, waxy filaments and are exclusively found on the undersides of leaves; pupae of the bayberry whitefly have a clear wax fringe around the body margin; pupae of the citrus whitefly have a distinctive Y-shape on their backs; and pupae of the ash whitefly have a thick band of wax down the back and a fringe of tiny tubes, each with a liquid droplet at the end.

Whiteflies suck phloem sap, which in some cases can cause leaves to wilt and drop when there are high numbers of whiteflies. However, the primary concern with whiteflies is the honeydew they produce. Honeydew excreted by nymphs and adults collects dust and supports the growth of sooty mold; large infestations blacken entire trees, including fruit, as well as attract ants, which interfere with the biological control of whiteflies and other pests. The sooty mold can also affect tree yields by reducing photosynthesis and requiring extra handling time for cleaning.

Applying insecticides for whiteflies is generally not necessary; exceptions are usually limited to where biological control has been severely disrupted. Enhance biological control by avoiding nonselective insecticides for other pests and by controlling sugar-feeding ants, like Argentine Ant.

A nice little blog on identifying citrus leaf symptoms is from Greg Alder:

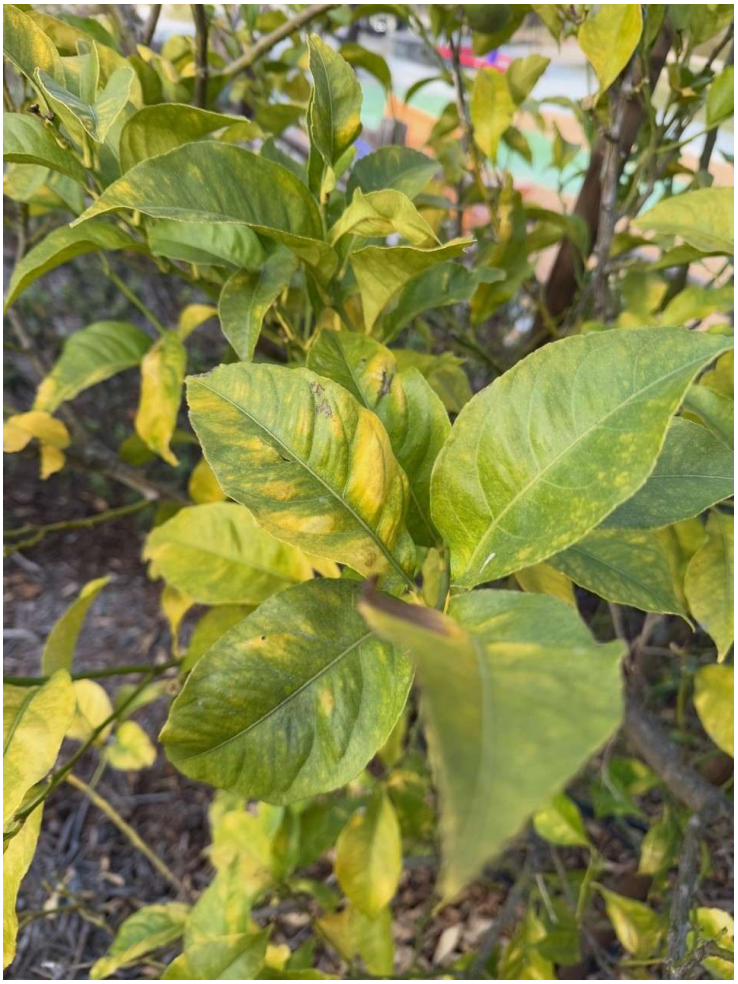
https://gregalder.com/yardposts/reading-citrus-leaves/

And from UC Integrated Pest Management:

Looking for diseases that cause symptoms on fruit, leaves and twigs, and on limbs, trunks, and roots,

Looking for other pests and their damage to fruit or damage to leaves and twigs,

Citrus Whitefly on Back Side of Leaf



Whitefly Symptoms on Top Side of Leaf