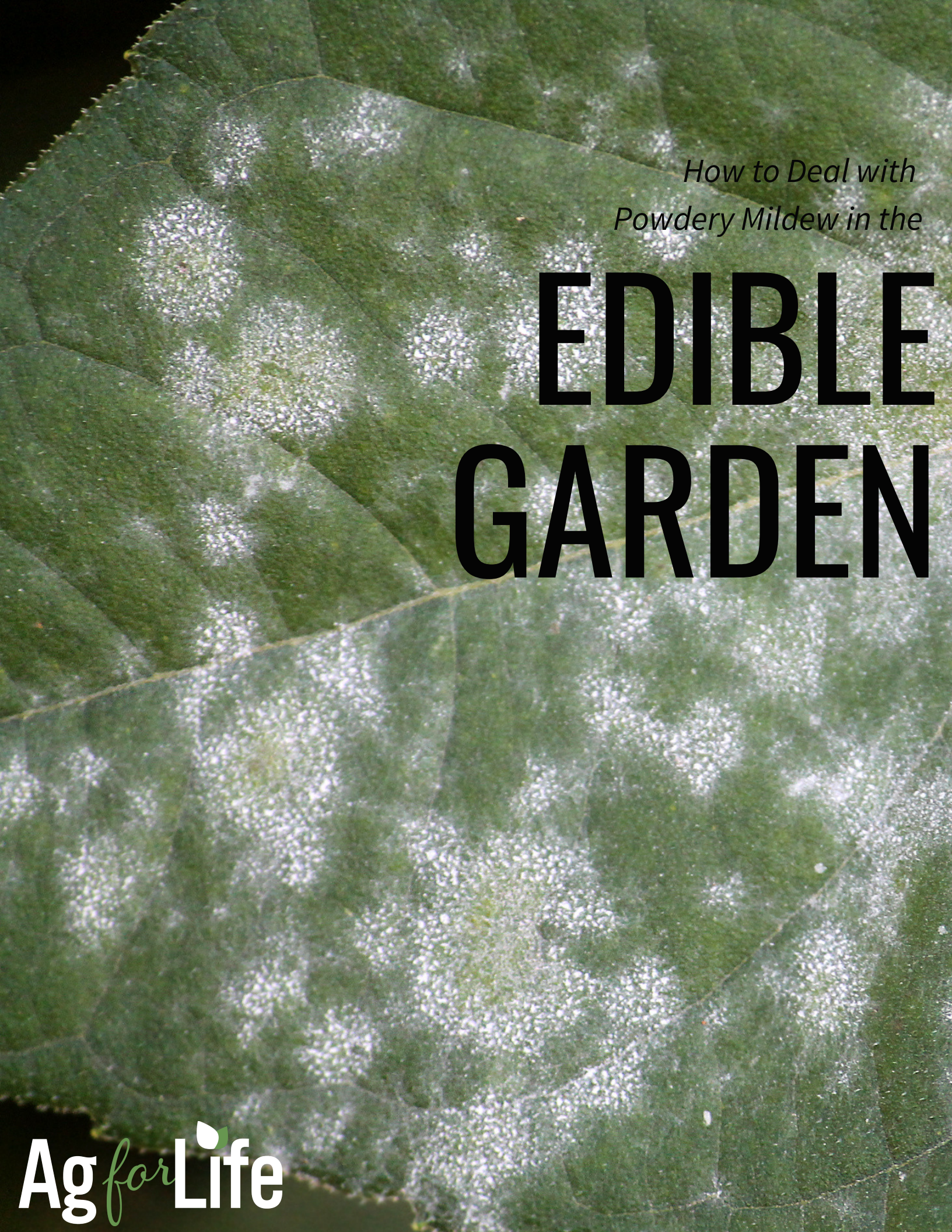

How to Deal with Powdery Mildew in the

EDIBLE GARDEN

Ag for Life

What is powdery mildew?

Powdery mildew is a common fungal disease that may be encountered in the edible garden. If you've ever grown squash or cucumbers, you've likely seen powdery mildew. These plants are particularly susceptible to the disease, although it has the potential to occur in many other plants as well.

There are many types of fungi that cause powdery mildew, but they each only affect a specific host plant. For example, Podosphaera xanthii is the fungus that typically attacks pumpkins. Regardless of the fungus responsible, they all produce easily identifiable effects in plants. Irregular, dry, grey or white patches will appear on the leaves (and sometimes the stems, flowers, and fruit) of affected plants. The blotches will be slightly raised. If you wipe the surface of the leaves with your finger, you'll remove a powdery substance. Both the upper and lower surfaces of the leaves may become infected, and the fungus particularly favours new, tender growth. Over time, the affected plant parts may turn brown and crispy. Most cases of powdery mildew do not prove fatal for plants, but if a significant portion of the plant is infected, this can possibly spell trouble for flower and fruit production.

When does powdery mildew occur?

Ideal conditions for the fungus to take hold include warm temperatures, dry plant foliage, and consistently humid air, such as during the hot, muggy days of summer. If plants are located in shady sites, they may also be more susceptible to the fungus. Heavy rainfall and cool weather do not contribute to the occurrence of powdery mildew.

Treatment of powdery mildew

If only a small amount of the plant is affected by powdery mildew, cut those parts away and throw them in the garbage. Do not compost plant parts that have powdery mildew on them. Make sure you wash your pruning tools with hot water and soap, then rinse them with rubbing alcohol and dry them well. If you are wearing gardening gloves, throw them in the laundry to wash the fungus off. Never prune away more than one third of the total plant growth, as the plant needs its leaves for photosynthesis! Even if some of the remaining leaves have powdery mildew on them, it's best to leave them so they can do their job of manufacturing food for the plant.

If you're looking for a homemade remedy to use in the fight against powdery mildew, it is believed that there is a protein in dairy milk that may be effective. Mix one part milk (any fat content) with two parts water and spray the affected plant parts. This treatment should be applied once per week for as long as the plants show evidence of the fungus. If it rains, you will need to reapply the solution.

Be very careful when watering the plants. Try not to splash water up into the foliage, as this may spread the fungal spores and create a larger outbreak of powdery mildew. Drip irrigation is a highly recommended watering method.

Do not fertilize plants that have been infected with powdery mildew. Slowing the production of new growth can help prevent the fungus from taking over.

Prevention of powdery mildew

When you purchase seeds, look for cultivars that are powdery mildew resistant. For example, if you're interested in growing zucchini, try the cultivar 'Mutabile'. Such plants have been bred to be less susceptible to this particular fungal disease.

Site your edible garden in a sunny location. Powdery mildew tends to proliferate in the shade.

As fungal spores can overwinter in leaf litter, be sure to keep your garden tidy. Regularly clean up any plant debris near plants affected by powdery mildew and bag it for disposal. Do not compost it.

Make sure your plants have excellent air circulation. If the growth is dense and very bushy, consider pruning away a few branches to allow more air to pass through. For the same reason, do not pack plants too tightly into a garden bed – overcrowding can make conditions more favourable for powdery mildew to infect and spread.

Water in the morning, as this offers plants a chance to dry out in the sun during the day.
This may reduce the amount of humidity surrounding the plants overnight.

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