

Straw sleeves

Why make straw sleeves?

Predatory mites feed on several pests in orchards, including:

- Thrips
- Phytophagous mites such as Two-Spotted Spider Mite (*Tetranychus urticae*), Red Spider Mite (*T. cinnabarinus*), Citrus Red Mite, European Red Mite, Broad Mites, and Silver Mites (*Polyphagotarsonemus latus*)
- Whiteflies
- Aphids
- Mealybugs, and
- Fungus gnats

Making straw sleeves creates a suitable habitat for these predatory mites thereby increasing their chances of becoming a bigger population and being more effective at decreasing a pest population:

- Sunlight and low humidity dry out predatory mite eggs. Straw sleeves offset these by trapping humidity, blocking wind, and creating shade like natural leaf litter or hairy plant structures where females feel comfortable ovipositing.
- Larger insects like earwigs, assassin bugs, and spiders actively eat predatory mites. Straw sleeves provide protection through openings large enough for the mite to rest or moult, but too small for the earwig or spider thereby decreasing mortality rates.

How to make straw sleeves?

You will need:

- Plastic produce netting available from Agrimark – Netlon Produce net, or fine plastic mesh netting (such as tulle, onion bags, or agricultural mesh bags).
- Clean organic straw (wheat, barley, or cereal straw works best).
- Cable ties or string.

Instructions

- Cut the plastic netting to shape – a rectangle of 15 cm x 20 cm.
- Roll the netting into a tube or pouch shape and secure one end with string or a cable tie to form a sleeve.
- Stuff the sleeve with straw. Do not pack it too tightly. Ensure that there are gaps and hollow tunnels. About 40g of straw should work.
- Secure the other end with string or a cable tie.
- Tie the sleeve to a plant stem or tree branch or where pest pressure is high. Ensure that the sleeve is shaded.
- Do not use plastic straws as these do not hold humidity and are not organic.
- Put a waterproof "roof" over the sleeve (like an upside-down plastic cup or a piece of heavy foliage) to prevent heavy rains from completely waterlogging the straw and drowning the eggs.
- Choose banker trees that will host the straw sleeves. These will be every 4th or 5th tree in a row with branches actively touching those of neighbouring trees.
- Add some wheat bran to the straw to provide a temporary, start-up food source.
- These should be permanently stationed. Mites will use the shelter to overwinter.

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