



FLOWERING STRIPS FOR ECOSYSTEM SERVICES: *Organic production relies on natural or "Ecosystem services" more than conventional production. Biological control of pests, pollination of crops, and accelerated breakdown of crop residues are examples of services provided by beneficial insects and other invertebrates. However, to maximize benefit from these services habitat must be provided on a year round basis. Flowering mixes are an excellent way to ensure habitat for the "good guys" of the insect world.*

FLOWERING STRIPS

- Flowers provide nectar and pollen for natural enemies and pollinators
- Flower strips provide shelter and food for beneficials when fields are bare
- A grid of flowering strips can provide a habitat network to maximize services



COMMON BENEFICIAL INSECTS

PREDATORS:



Ladybird beetle larva and adults eat aphids, small insects & mites



Lacewing larvae feed on aphids, mites, and other small insects



Syrphid fly (hover flies) larvae eat aphids and adults pollinate flowers.



Predator bugs (big eyed bugs [left] & minute pirate bugs [right]) eat aphids, small caterpillars & other small insects

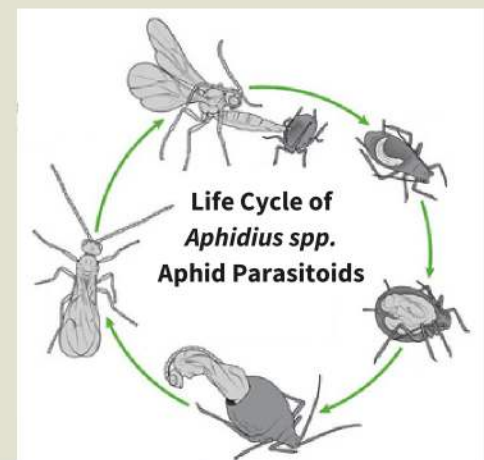
PARASITOIDS:



Diadegma insulare can parasitize up to 85% of diamondback moth larva. Healthy DBM pupae (Center) Parasitized pupae (Right)



A variety of parasitoids attack aphids. Parasitized aphids assume a bronze or brown "mummified" appearance (L)



HOW TO PLANT FLOWERING STRIPS



Choose seeds: A mix of annual and perennial plants with overlapping flowering periods is ideal. Ask your seed supplier to help you on deciding on a good blend. Seed For Bees <https://www.projectapism.org/seeds-for-bees.html> may provide discounted or free seeds. Your certifier or extension specialist may know of similar programs.



Ground Preparation:

Choose locations near field borders. Create a seedbed similar to that for baby greens. Layering compost 1.5" thick after field prep will reduce weed emergence.



Seeding: We use our Schmeiser Series 98 cover crop drill set to a 60" bed width, planting 15-20 lbs per acre. Seeds can also be broadcast or drop seeded.



Irrigation: Overhead sprinklers work well for establishment (4 hrs/wk for 2 wks). Inlay drip or drip line placed directly on top of is good for post establishment (6 hr sets).



Maintenance: Mow the planting occasionally to maintain height. Hand weed as needed. Some growers also place NOP compliant slug baits and rodent traps in or adjacent to plantings.



LESSONS LEARNED

- Choose areas that have easy access to water and equipment access
- Choose the right irrigation methods to help establish and maintain planting --for us it makes sense to water in with overhead and switch to drip post establishment
- Consider planting into compost or layers of compostable materials to reduce weed pressure

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