

Successfully growing fruit and nut crops using minimal to no chemicals requires creating a vibrant orchard ecosystem. This requires plants other than your crops and working with beneficial insects: pollinators, predator insects and parasitizing insects. These plants provide food, shelter and overwintering habitat for beneficials and repel pest insects to some degree. Below are the best plants to create a continuous bloom and support beneficial insects for your orchard ecosystem in St. Louis.



Ozark Witch Hazel (*Hamamelis vernalis*): This shrub can reach 10' tall and 15' wide and has the distinction of blooming incredibly early, usually January-April depending on weather. It provides essential pollen and nectar for any beneficials foraging during an early warm up.



False Indigo Shrub (*Amorpha fruticosa*): This nitrogen fixing shrub reaches 12' tall and wide and is perfect to plant amongst fruit trees. St. Louis Giving Grove orchards plant 1 for every 2-3 fruit trees to increase diversity and fix nitrogen. They are a great nectar and pollen source, especially for native bees, during their April-June bloom. It is also favored for egg laying by lacewings and provides parasitoid wasp habitat.



Eastern Beebalm (*Monarda bradburiana*): Although all monarda are great for orchards, bradburiana is our favorite because it's only 1-2' tall and more tolerant of shade than other monarda species. It provides nectar and pollen during its May bloom and is a favored egg laying plant for lacewings. It also has edible leaves and flowers.



Comfrey (Bocking 14**):** Comfrey grows 1-3' tall and provides nectar and pollen during its May-June bloom. It also provides egg laying habitat for lacewings, overwintering habitat, shelter for parasitoid wasps and spiders and habitat for ladybird beetles.

Note: We highly recommend the sterile Bocking 14 variety.



Anise Hyssop (*Agastache foeniculum*): This clumping member of the mint family grows 2-3' tall and is a favorite nectar and pollen source during its long June-August bloom. It also provides egg laying habitat for lacewings and shelter to a wide range of insects. It also has edible leaves and flowers.



Yarrow (*Achillea millefolium*): This 2-3' tall native blooms from June-August and is one of the best plants to promote beneficial insects in your orchard. It provides shelter, overwintering habitat, pollen, and nectar for parasitoid wasps. It's also used by other beneficial insects, including minute pirate bug, big-eyed bug, hoverflies, tachnid flies, spiders, lacewings and ground beetles.



Swamp Milkweed (*Asclepias incarnata*): All milkweeds are great for the orchard, but the 3' tall swamp milkweed is the most available and adaptable. During its July-August bloom, its pollen and nectar feeds beneficial wasps. It also attracts an aphid that will eat it but not orchard plants, which attracts aphid eating insects that will also eat bad aphids if they show up.



Clustered Mountain Mint (*Pycnanthemum muticum*): Although all of mountain mints are great for beneficials we prefer this species because it's only 1-3' tall. During its long July-September bloom this clumping mint is swarmed by pollinators and beneficials and is a preferred egg laying habitat for lacewings.



Aromatic Aster (*Symphyotrichum oblongifolium*): This 1-2' tall aster blooms from August until the first hard frost and is vital to achieving continuous bloom. It provides habitat and is a preferred food source for parasitoid wasps and pollinators.



Common Witch Hazel (*Hamamelis virginiana*): This witch hazel can reach 15' and bookends the bloom calendar, flowering from October-December depending on weather and provides essential food for foraging insects during late warm ups.



Sunflower (*Helianthus annuus*): This annual native ranges from 2-16' tall and blooms from late summer-fall. Sunflowers are a must have for those growing almonds, stone fruit or pome fruit. When left in the orchard over winter, they provide food, shelter, and overwintering habitat for a parasitic wasp that controls the oriental fruit moth, a serious orchard pest.



Chives (*Allium schoenoprasum*) and Garlic Chives (*Allium tuberosum*): These 1-1.5' alliums flowers are loved by beneficials. Chives bloom April-May and garlic chives from August-September. When planted in a ring of 5 plants 6" away from the trunk of apple, stone fruit and almond trees, they help repel trunk borers.

