# What's in your Operation Pollinator seed mix?

### Alsike clover



A perennial featuring pink and white flowers that appear similar to white clover. This flower provides abundant nectar and pollen and is attractive to a variety of bee species. Honey bees, bumble bees, and solitary bees are known to visit alsike clover for its nectar and pollen.

# Birdsfoot trefoil

#### Phacelia



and bumble bees are the most common foragers on birdsfoot trefoil. Birdsfoot trefoil requires welldrained soils to thrive. It can be slow to establish, so controlling weed pressure through the introduction of a grass species, such as timothy, can be beneficial to fill in the seedbed instead of alternative weeds.



A perennial with vibrant yellow flowers. Honey bees An annual that features purple-blue flowers. It is wellknown for being attractive to bees and provides both nectar and pollen. Phacelia blooms for a lengthy period during the summer, providing abundant forage. The pollen of phacelia is an excellent source of protein, which can benefit developing bee larvae.

## Red clover



bees due to its nectar quality. By incorporating cover to discourage weed establishment, while timely mowing, red clover can bloom multiple times throughout the season, supporting bumble bee colonies as they grow and develop.

## Timothy



This perennial is particularly attractive to bumble A fast-growing grass that provides quick ground slower-growing plants, such as legumes, establish. Timothy also creates shelter and habitat for other beneficial insects, including predatory ground beetles, and ladybird beetles.

# Yellow & white sweet clover



Attractive to a variety of bees. Mowing sweet clover after flowering has ended encourages re-growth, providing additional forage for pollinators later in the season.

Legumes, including birdsfoot trefoil, red clover, alsike clover, and sweet clover, require rhizobium bacteria for inoculation. This seed mix has been pre-inoculated.

All of these plants (except timothy) are known to bloom for lengthy periods, and the perennials will continue to bloom throughout the season with good management practices.

Photo credits: Robyn McCallum and Nancy McLean Dalhousie University

References: Delaplane, K. S. and Mayer, D. F. 2000. Crop Pollination by Bees. CABI Publishing, New York. Free, J. B. 1990. Insect Pollination of Crops. Academic Press, San Diego McGregor, S. E. 1976. Insect Pollination of Cultivated Crop Plants. USDA





# Pollinator seed mix blooming timeline



# Establishing an Operation Pollinator site

#### Site preparation:

- Mow the area. If vegetative residues are excessive, they should be removed
- Control weeds with a burn-down herbicide (with no residual soil activity)
- Some light tillage may be necessary to ensure an adequate seedbed and that the seed is in direct contact with the soil

#### Seeding:

- Seed the mix either with a broadcast spreader or drill (set to  $\frac{1}{2}$ " deep or less)
- Seeding rate for this seed mix is 22 lb/ac (25 kg/ha)
- If broadcasting, set to half seeding rate 11 lb/ac

(12.5 kg/ha) and decrease spreading width to half of normal to ensure good coverage

#### Site maintenance:

- Irrigation may be beneficial but is not a requirement
- Fertilization is not required
- If possible, mow the perennial plants (such as red clover and alsike clover) after flowering has finished to encourage re-growth and re-flowering
- If mowing is not possible, consider multiple plantings staggered throughout the season to ensure a constant supply of flowers for pollinators
- Mowing one-to-two months after planting will help reduce weed competition

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