

# Seed Selection

## PLANNING



01

### WHAT IS YOUR BUDGET?

Think about the following:

- How much area do you have to work with?
- What people/equipment can you recruit to be involved with planting, monitoring and ongoing maintenance?

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### SCHEDULING

Consider what kind of soil your area has:

- Clay Soil
  - Spring is the best time to seed using either broadcast or drill seeding techniques
- Loam Soil
  - Fall or spring are good times to seed using broadcast or drill seeding techniques
- Fall seeding
  - Provides winter stratification and better germination in the first growing season afterwards
- Spring Seeding
  - Can lead to fewer species coming up until second year

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### SEEDING TECHNIQUES

#### Broadcast Seeders or Hand Broadcasting

- Pros
  - Inexpensive
  - Easy to use
  - Commonly available equipment
  - Useful for species with fine seeds
- Cons
  - Difficult to spread evenly over a site
  - Seed bed must be smooth

#### Drill Seeding (using a native seed drill)

- Pros
  - Convenient for planting large level areas
  - Can plant into areas with light stubble
  - Seed does not need to be pressed into the soil
  - Can control depth at which the seeds are planted
- Cons
  - Expensive
  - Not readily available in some areas
  - Requires an experienced operator
  - Does not work well on slopes

#### Hydroseeding

Spraying with a mix of water, mulch, and seed

- Pros
  - Useful for bridge approaches, slopes, culverts, and wet areas
  - Reduces soil erosion
  - Project can be seeded from the shoulder
  - Coloured mulch can keep the public happy while plants establish
- Cons
  - Time consuming
  - Hydromulch is expensive
  - Seeding rate is hard to control



# Seed Selection GUIDE

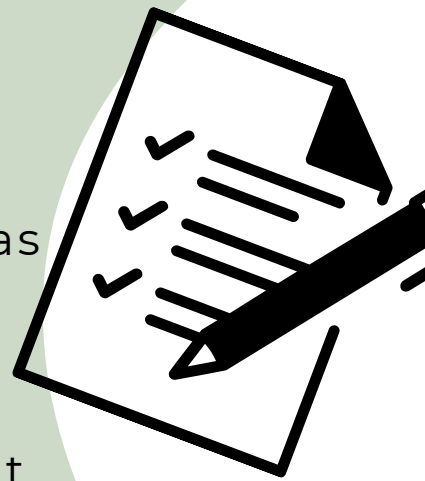
## 04 SEED GUIDELINES

### Choosing a Species

- Native to your region (if possible)
- Sourced from local growers as much as possible
- Blooms early, mid, and late season
- Avoid non-native and weeds
- Use pure live seed when you can get it
- Consider thinner/nurse crop species, such as millet, or oats, or can add wood chips to soil

### Calculating

- 75% forbs to 25% grass
  - At least 30 species of forbs
- Use a seed calculator whenever possible
- Don't forget that species have different weights and thus species % composition can be misleading



## 05 PURE LIVE SEED

### Pure Live Seed (PLS)

- Refers to the amount of pure, live, viable seed in a lot of bulk seed.
  - It indicates the amount of seed in the lot that is capable of developing into seedlings.
- $PLS = \% \text{ that can germinate} \times \text{the \% of the purity of the seed}$ 
  - For example  $PLS = 0.95\% \text{ of seed can germinate,} \times 0.75\% \text{ purity of the seed mix (weeds, other species)} = 0.7125 \text{ or } 71\% \text{ PLS.}$
- If your PLS is low you will need more seed, if it is high you will need less



## 06 SEED MIX

### What to do

- Order your mix as soon as possible to give growers a lot of notice
- Ask suppliers about where seed comes from, if they have any data on germination/seed certificates, how they clean it.
- Include common milkweed and one other species if possible (avoid tropical milkweed)

### Rate

- A good rate is between 5-10kg/ha
- Lower rate for drill seeding
- Hydroseeding higher rate

### Keep in Mind

- You want some gaps for plants, and bare ground (nesting for bees)



# Seed Selection COSTS

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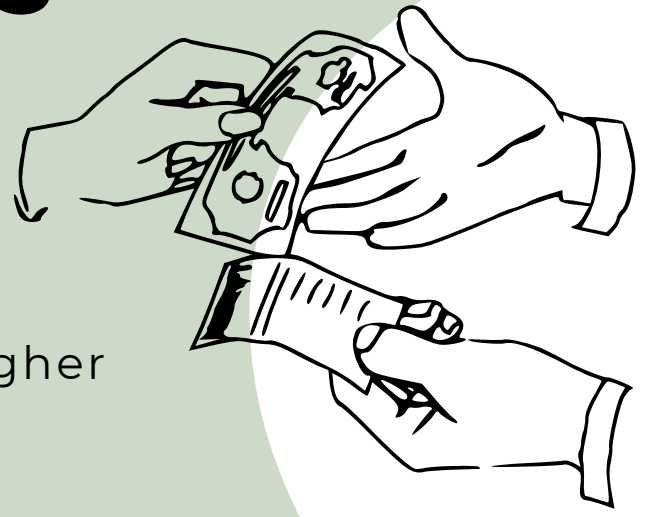
## PRICING

### Costs Can Vary

- Depends on the species
- Potentially cheaper in higher volume orders

### Planning for cost

- Plan for \$165 to \$300 per kg
- Price per kg has to be multiplied by the seeding rate (ex. 7kg/ha)
- Can be up to 20% more than standard grass mix



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## SAVING MONEY

### Volunteers

- Volunteer broadcast seeding
- Volunteer collecting and cleaning seed
- Volunteers to grow forb plugs to plan

### Site

- Start with a small pilot site first
- Invest in site prep heavily

### Seed Mix

- Add more species into your mix instead of volume of seed
- Reduce your seeding rate
- Plan to add species in subsequent years
- Ensure your pure live seed is high

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## RESOURCES

### Xerces Society

- Conservation Guides, Recommended Plants and Seeding Rates. Case Studies and Best Management Practices
- <https://xerces.org>

### Pollinator Partnership

- Guides specific to your postal code (ecoregion)
- <https://pollinatorpartnership.ca/en/>

### Native Seed Vendors for Ontario

- Society for Ecological Restoration, Ontario Chapter.
- <https://chapter.ser.org/ontario/files/2012/08/SERO-6th-Ed.-Growers-List-Only.pdf>

### Canadian Wildlife Federation

- ROW Guide
- <https://cwf-fcf.org/en/explore/gardening-for-wildlife/plants/buy/native-plant-suppliers/native-plant-suppliers/on/>

### Conservation Blueprint

- USA based
- <https://www.youtube.com/channel/UCAWj3BMbw5xfW4Y8vtpJfDQ>

### Plants of Lanark County

- <https://www.lanarkflora.com/>

### Society for Ecological Restoration

- Growers guide
- <https://chapter.ser.org/ontario/files/2012/08/SERO-6th-Ed.-Growers-List-Only.pdf>

