

SubmerSeed®

Composite Seeding Technology (SCST)



MIX COMPOSITION & SEED SOURCE

The SubmerSeed® General Mix includes seeds of eight species, all of which are native to freshwater, emergent aquatic habitats. The species in the mix include:

- Water Plantain (*Alisma subcordatum*)
- Fox Sedge (*Carex vulpinoidea*)
- American Mannagrass (*Glyceria grandis*)
- Cardinal Flower (*Lobelia cardinalis*)
- Common Arrowhead (*Sagittaria latifolia*)
- Hard-stemmed Bulrush (*Scirpus acutus*)
- Many-leaved Bulrush (*Scirpus polyphyllus*)
- Soft-stemmed Bulrush (*Scirpus validus*)

In addition to the species listed above, up to eight *additional* seed types can be included in the Mix:

- Swamp Milkweed (*Asclepias incarnata*)
- Sweetflag (*Acorus americanus*)
- Marsh Marigold (*Caltha palustris*)
- Buttonbush (*Cephalanthus occidentalis*)
- Blunt Spike Rush (*Eleocharis obtusa*)
- Square-stemmed Monkey Flower (*Mimulus ringens*)
- Eastern Bur-reed (*Sparganium americanum*)
- Blue Vervain (*Verbena hastata*)

Under optimal growing conditions, several of the species (particularly the bulrushes and buttonbush) can grow to heights of more than six feet, but most reach maturity at a height of two to four feet under more typical conditions. All are perennials, meaning that they survive multiple growing seasons and often colonize regional areas through self-seeding. All seed is supplied through Ernst Conservation Seeds, a certified and well-known supplier of wetland and prairie seed in Meadville, PA. None of the species are considered highly aggressive (invasive), and all are native to the Midwestern United States.

STORAGE & PRE-APPLICATION CARE

IMPORTANT! For best results, the product should be applied as soon after receipt as is feasible. However, if short-term storage is necessary, the product should be stored in its shipment container(s) in a cool (60 to 70 degree Fahrenheit), dry location, away from exposure to direct sunlight. Basements and garages are often the most appropriate location for storage, but take care not to place the product in a location that is prone to excessive afternoon heating or potential wetting. Stable conditions are preferable.

If at all possible, ALL MATERIAL SHOULD BE APPLIED IN THE FIELD IN THE SEASON MATERIAL IS RECEIVED.

NOTE: Considering timing of the application and do not anticipate seeing seedlings until the following Spring.

CHOOSING A LOCATION

In contrast to traditional seeding methods and seedling (plug) planting, SubmerSeed® is feasible and appropriate even when a water column exists in the target area to be sown. This versatility makes many different environmental conditions potentially appropriate for SCST. However, some of the most favorable characteristics for a candidate site include:

- Expansive area with gradually sloping bottom substrate
- Partial to full sun exposure during most, if not, all of the day
- Soft sediment below a water column with relatively low turbidity
- Water depths ranging from 0 to a maximum of 12 inches (during much of the growing season)
- Minimal or no existing wetland/aquatic vegetation present or where the existing seed bank is thought to be minimal or absent

APPLICATION RATES & APPLICATION EQUIPMENT

The target application rate for this mix is 5 lbs. of product per 100 square feet. This rate attempts to ensure sufficient coverage over a given area without adding so much material that resulting seedlings struggle from competitive forces with plants from adjacent particles of product. This rate range allows for an average of one particle every two to three inches.

If you are targeting a larger area, try a relatively light application rate (4 lbs./100 sq. ft.). If you are space-limited, apply at a heavier (5½ lbs./100 sq. ft.) rate. As a good rule of thumb, a one-quart Zip-Lock bag typically holds approximately 4 lbs. of product.

In smaller-scale installations (e.g. <1/4 acre), product can simply be dispersed by hand out of a 5-gallon bucket. Commercially available hand broadcast seeders may also be adapted to accommodate the larger size of the SubmerSeed® particles.

GENERAL RECOMMENDATIONS FOR PRODUCT APPLICATION

- Please see attached APPLICATION SCHEMATIC for additional clarification on the do's and don'ts of SubmerSeed® application.
- For more information on SubmerSeed®, please call AquaBlok, Ltd. at (800) 688-2649 or fax us at (419) 385-2990.