

SeedSet™

Composite Seeding Technology (SCST)

Technology Overview

General Description

SeedSet™ is a composite-aggregate material consisting of a dense aggregate core and viable upland seeds held in place with clay or clay-sized material and organic polymers (Figure 1). The technology provides an alternative to traditional means of plant propagation in terrestrial settings by providing a reliable delivery mechanism that can not only allow for accurate and premeditated placement of valuable grass and flowering forbe seeds, but also better ensure the consistent seed-to-seed contact that is so crucial to successful seedling establishment and development.

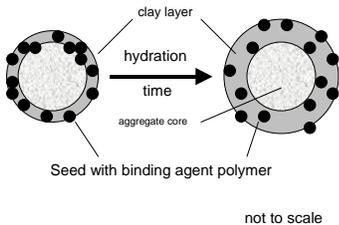


Figure 1. Configuration of Typical SeedSet™ Particle.

The typical formulation of dry product relies on the nutrients available in the underlying soil to support germination and nourish sustained growth. However, fertilizer-amended product formulations can also be made available when nutrient availability is limited or accelerated growth is a must.

Typical Product Usage

For most projects, SeedSet use involves broadcasting dry masses of product across the surface of soil using commonly available equipment. Typically for larger scale projects (i.e. > 1 acre), product can be most efficiently dispersed using an inexpensive, tow-behind spreader pulled by a 4-wheel ATV or standard tractor. In smaller-scale installations, the product can simply be dispersed by hand or with a hand-held broadcast spreader. Due to the weight built into the material, additional rolling or raking should not be necessary to ensure necessary contact between the seed and the soil.

Product coverage rates will vary depending on the species composition to be sown and the site-specific requirements for the project. However, due to the high bulk density of the material, a rate of 500 to 1,000 pounds of dry product per acre (0.01 – 0.02 lbs/SF) is a reasonable approximation of the quantity of material needed for a typical upland application.



Big Bluestem
Andropogon gerardii

SeedSet Advantages Over Existing Propagation Methods

SeedSet can out-perform vegetative plug installation (the planting of seedlings, cuttings, or other established plant materials) through cost savings in both materials and labor. The competitive advantage of SCST is particularly striking when costing large-scale (> 1 acre) installation projects. Additionally, contrary to plug installation, SCST readily allows for both the introduction of a single species or a suite of desired species (a "mix") without additional labor in the field.

The technical advantages of SeedSet are perhaps even more striking when compared to traditional seeding techniques (broadcasting, drilling, hydro-seeding, etc.). Because SeedSet is formulated in species-specific batches (e.g. each particle only contains a single species), individual particles serve as carriers to a calculated number of even the smallest and most difficult seed types to handle.

While this single-species method of manufacturing allows for both accurate mix compositions and even spatial distribution of all seed types, it also allows the flexibility to reliably sow specific areas with a single species or suite of species with accuracy.

SeedSet also shines in that very little is needed in the way of application equipment – no expensive or cumbersome drills, sprayers, or rollers . . . just a simple tow-behind broadcast spreader is all that is needed!

Species Selection

While current product development efforts have placed emphasis on warm season grasses and flowering forbes known to improve habitat use and function, a multitude of seed species could be incorporated into SeedSet, based on the particular seed's physical morphology (size and shape).

NOTE: The technology also has application in saturated and even **inundated settings** where seeding has historically not been feasible. The aquatic companion product – called **SubmerSeed®** – provides the same accurate and reliable seed delivery, but also reduces the risk of seed loss or unwanted dispersal by buoyancy, wave action, currents, or tidal forces by anchoring the valuable seed to the substrate until the seedling can become established.

Potential Applications

Possible uses of the SeedSet technology are numerous and include:

- Prairie Creation, Restoration, & Enhancement Projects
- Riparian Buffer or Filter Zones
- Stream Bank Stabilization Projects
- Highway and Roadside Plantings
- Habitat Reclamation Areas
- Invasive Species Eradication Areas
- Passive Treatment Plantings (Phytoremediation)
- Waste Disposal Vegetative Covers
- Golf Courses
- Native Nurseries
- Hunting and Fishing Clubs
- Commercial & Residential Landscaping

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For more information, including a list of available species, performance reports, and field pilot studies, please call AquaBlok, Ltd. at **(800) 688-2649** or fax us at **(419) 385-2990**

You can also email us at: services@aquablokinfo.com or visit us at our web site at: www.aquablokinfo.com