

HYDRAULIC SEEDING

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Originally developed for establishing vegetation on difficult-to- seed erosion control projects, hydraulic seeding, or what is commonly called hydroseeding, has become an accepted procedure for seeding sports fields.

The process is analogous to spray painting the prepared surface with a water slurry of seed, fertilizer, mulch, and possibly a tackifier. The process is rapid - a half day will seed a sports field. The distribution of the seed is good and emergence is enhanced where a mulch is used.

The hydraulic seeder consists of a mixing tank, a pump, a motor to drive the pump, an agitating system and hose. The agitating system, which may be a recirculating system or rotating paddles in the tank, is required to keep the seed and mulch in suspension. The paddle system is preferred as less damage may be done to the seed, however, the machines using this system are more expensive.

Tank capacities of 50 to 6,000 gallons are available and the machines range in cost from \$2,500 to \$15,000. Transportation equipment - truck, trailer, etc. - is extra.

The process involves mixing seed, fertilizer, mulch material and a tackifier with water and spraying the slurry on the prepared surface. Application to sports field may be made from the side lines as the machines can throw the slurry over 100 feet. Hence the final grade of the field will not be disturbed by the wheels of the applicator.

Hydroseeding may be used to overseed worn areas on sports fields. The secret is to get the seed into contact with the soil. Before overseeding by this technique it is a good plan to cut the grass as low as possible. The hydroseeding mixture is then made thinner so that it will slide around the established grass and lay on the soil surface. Removing the mulch from the mixture or greatly reducing the amount will aid in getting the seed to the



soil. A top dressing operation immediately following the hydroseeding may aid in covering the seed and improving germination.

Where hydroseeding is practiced on bare soil, the mulch is a critical part of the mix. The mulch-seed-water mix can be projected greater distances than water and seed alone. The mulch acts as a cover to hold the seed in place by preventing water and wind erosion. It also keeps the soil surface from drying, enhances germination and gives a more uniform cover.

Mulch materials can be paper mill sludge, chopped newspaper, straw, wood fibre, or combinations of these. To a degree the more mulch applied, the better the results; although a level will be reached where emergence of the new seedlings through the mulch is impaired.

Tackifiers are water-soluble, biodegradable organic materials which aid in binding the mulch together so the mulch is not removed from the site by wind or water. Early hydroseeding operators use asphalt as a tackifier.

Water soluble fertilizers are often incorporated into the mix. Danger of salt damage to the seed can occur if high rates containing urea or ammonium nitrogen compounds and muriate of potash are included in the mix. Generally it is wise to add the fertilizer salts to the mix just

before application. A preferred system is to broadcast any fertilizer materials and incorporate them during the final working and smoothing of the field before seeding.

Pregermination of the seed may be practiced with hydroseeding. The pregermination may be the simple wetting of the seed overnight in the tank before seeding or a more elaborate pregermination where the non-dried product is transferred directly to the hydroseeder tank.

Hydroseeding is an alternative to sodding or mechanical seeding. While faster than either of the other systems, it is intermediate in cost. It is worthy of consideration for your sports field.

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