HYDROSPRIGGING & PC PUMP INFORMATION

In many segments of our industry, the demand for applications that require the pumping of heavy, dense slurry materials has driven the developments of various pump alternatives. Projects that are requiring these intense applications are golf course turf establishment, spray-on erosion control, landfill covering and sod field establishment. The materials that are used on these jobsites can be as unique and variable as the applications themselves.

The most popular of these turf related applications involves Hydro Stolonization, also known as HydroSprigging. Hydrosprigging is the method of vegetating prepared soil by applying cut stolons or sprigs of Bermuda or other warm climate grasses. By mixing the grass sprigs (pieces of grass with roots) with mulch, fertilizer, tacifier, and water you can spray the mix through a HydroSeeder machine, with a special pumping system, to form a uniform application.

The standard FINN HydroSeeders use a centrifugal pump which is outstanding for hydraulic mulching due to its ability to project slurry over great distances, however this type of pump is not appropriate for live sprigs. The tight clearance at the impeller and wear plate can crush the delicate grass plants. For this reason, FINN created a progressive cavity pump, or PC pump, for sprigging applications. The PC pump is made up of a long pump housing containing a rotor and stator that creates pressure, moving a high volume of slurry without risk of damage to the plant. This pump is especially effective when long lengths of hose are required. Some contractors have used over 1000 ft. of hose on extreme sites to accomplish the planting process.

The Hydrosprigging process does require special attention and irrigation measures. Since the projects are located in warm climates, the sprigs are very vulnerable and require the protection of the fiber mulch material along with plenty of moisture to survive. For best results, the sprigs should be planted immediately after harvesting and be kept cool and moist until application. A strict watering schedule must be adhered to after planting to ensure the utmost results, and prevent the sprigs from drying out.

Some of the biggest benefits of HydroSprigging are quick establishment of turf, reduction of costs and results on uneven terrain. HydroSprigging greatly reduces the establishment time when compared to conventional planting methods. Because you are using actual piece of grass, you have growth the same day it is applied. Hydrosprigging also allows you to plant grasses that otherwise you would have to pay the high price of sod. In the past, mechanical planters were used with limited access due to uneven terrain, but the introduction of hydroseeding has eliminated the need for excess labor or machines. HydroSprigging is quickly becoming the preferred method of installing warm season grasses.

The following are facts and general rates for HydroSprigging:

HYDROSPRIGGING FACTS

SPRIGS

1 Bushel	=	Yield of one square yard of turf prior to harvest (Approximately 8 lbs.)
Length	=	Approximately 2"
Coverage	=	8-10 bushels (Approximately 1000 square feet)

TYPICAL APPLICATION RATES			*LOADING*
Sprigs	=	300-435 bushels per acre	50-70 bushels per 1000 gallons
Mulch	=	1500 lbs. per acre	250 lbs. per 1000 gallons
Fertilizer	=	300-600 lbs. per acre	50-100 lbs. per 1000 gallons
Stik Plus	=	20 lbs. tac / 10 lbs. fiber per acre	6.5 lbs. tac / 3.5 lbs. fiber per 1000 gallons

COVERAGE	COVERAGE AREA (SQ. FT)	LOADS PER ACRE
T90	5,808	7.5
T120	7,260	6.0
T170	10,890	4.0
T280	17,424	2.5
T330	21,780	2.0