

Revegetation Equipment Catalog

Descriptions, applications, pictures, and sources for equipment used on rangelands.

Fertilizing and Mulching

Dry fertilizer, manure, granular and pelletized chemicals, lime, or fiber mulches are sometimes used to enhance plant establishment in revegetation projects. Equipment to distribute these products is listed in this section. Application equipment for liquid fertilizer and aerially applied products is listed in the chapter on [Chemical Control](#) of plants. Fertilizer provides increased nutrients for plant growth, and should be applied based on a soil test. Manure also provides soil nutrients. Granular and pelletized herbicides and insecticides control weeds and harmful insects. Lime is applied to reduce soil acidity. Mulches are used to retain soil moisture for seed germination and to provide protection for seedlings. They are also helpful in reducing soil erosion.

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Fertilizer Spreaders



Description

Fertilizer spreaders dispense dry materials over an area. They use a moving conveyor belt at the base of a large hopper to move product out the rear of the hopper and onto one or two spinners or a boom. The belt and spinners are powered hydraulically on self-propelled units and ground driven or tractor PTO driven on pull-type units. An adjustable gate at the rear of the hopper controls the amount of product flowing to the spinners or boom. Self-propelled spreaders are either mounted on truck chassis or large, three- or four-wheel floaters. These units carry 250 to 350 cubic foot hoppers and are powered by 275 to 400 horsepower engines. Pull-type spreaders have 50 to 250 cubic foot hoppers. Swath width will vary between 25 and 100 feet. Small, drill-type, drop spreaders are available in widths of 6 to 12 feet. Individual row dispensers are available for planters. Many of the self-propelled spreaders can be adapted to distribute manure or biosolids.

Application

Dry material spreaders are widely used to apply fertilizer or lime. A wide range of application rates are possible. Changes in the gate opening, conveyor belt speed, and vehicle speed influence the rate. Controllers and GPS guidance units are available to monitor application rates and location on self-propelled units. Fertilizer spreaders are not suited to brushy, rough, or steep landscapes.

Sources

The manufacturers' websites list information on equipment sizes, accessories, dealers, and contact information.

[Adams Fertilizer Equipment](#)

DeWitt, AR 72042

[AGCO Corporation](#)

Duluth, GA 30096

[Case IH](#)

Racine, WI 53404

[Gandy Company](#)

Owatonna, MN 55060-0528

[AgCo](#)

Bloomington, MN 55420

[Stahly](#)

Bloomington, IL 61702

Manure Spreaders



Description

Manure spreaders are open trailers with a conveyor belt in the bed that moves heavy solids to the rear of the trailer. Beaters, paddles, or flails at the rear of the trailer spread the solids in swaths up to 10-feet wide. Capacities of these units vary from 15 to 480 cubic feet. Commercial units with side delivery systems can dispense up to 50-foot wide swaths, and have capacities of 150 to 425 cubic feet or more on special order. Units are powered by the tractor PTO or hydraulically while some very small units are ground driven. Self-propelled units are listed with fertilizer units and dispense manure or biosolids.

Application

Manure spreaders are designed to effectively spread manure, manure-straw mix, or biosolids over selected areas. These materials will increase the amount of organic matter in the soil. This can be very useful in reclaiming disturbed land from mining or other operations. Manure spreading is limited to level or moderately sloping land. In some situations it is helpful to turn under the manure by disking to reduce odors and trap more of the nutrients in the soil.

Sources

The manufacturers' websites list information on equipment sizes, accessories, dealers, and contact information.

[Deere & Company](#)
Moline, IL 61265

[Gehl Company](#)
West Bend, WI 53095

[Meyer Mfg. Corp.](#)
Dorchester, WI 54425

[New Idea Products](#)
Duluth, GA 30096

Power Mulchers & Straw Crimpers



Description

Power mulchers, often called straw blowers, blow straw or hay onto seeded areas to increase soil water holding capacity for enhanced seed germination and growth and to reduce erosion. Straw crimpers force straw fibers into the soil to prevent wind and rainfall from removing the mulch from the treated area. Most blowers are designed to handle standard square bales, however, some large-capacity units will accept large, square bales or round bales. Bales are manually placed on a loading chute and then conveyed into the beater chamber. A chain flail or other device breaks-up the compressed bales and a blower forces the straw out of a nozzle that directs the straw to the target area. Straw fibers can be blown 50 to 100 feet. Small mulchers spread 2 to 3 bales/minute using 18 to 20 horsepower engines. Trailer or truck units spread 7 to 30 tons/hour using engines up to 185 horsepower. A nozzle attachment is available to apply an adhesive to the straw during application. Crimpers are 6 to 8 feet wide and use 20-inch notched coulter blades on 8-inch spacing.

Application

Power mulchers are used to place straw on sensitive areas such as disturbed soil on slopes, roadsides, or urban landscapes where users desire a high probability of success in revegetation. An adhesive can be added to the straw as it is blown to the target area to aid in holding the straw fibers to the soil and to each other. Crimpers are used to tack the straw fibers into the soil to hold the straw in place and protect the seedlings. Crimping is very effective in windy areas and the method is very economical. As the crimper's coulter blades roll over the straw they form a small trench and force straw fibers into the trench. They are effective on level to moderately sloping areas and should be operated on the contour. A rotary spreader can be attached to a power mulcher for seeding (see chapter on [Ground Seeding](#)). Long-fiber dry mulches are recommended; sawdust, wood chips and bark does not work well in power mulchers.

Sources

The manufacturers' websites list information on equipment sizes, accessories, dealers, and contact information.

[Big Gale Mulcher](#)
Sugarloaf, PA 18249

[Bowie Industries](#)
Bowie, TX 76230

[Finn Corporation](#)

Fairfield, OH 45014

[Reinco](#)

Plainfield, NJ 07061-0512

[Turbo Technologies, Inc.](#)

Beaver Falls, PA 15010

[Kincaid Equipment Manufacturing](#)

Haven, KS 67543

[TGMI, Inc.](#)

Sycamore, IL 60178

[Vermeer Manufacturing Co.](#)

Palla, IA 50219