

SALFORD

VALMAR

COVER CROPS

SALFORD



UNMATCHED VERSATILITY OF SALFORD COVER CROPS.

Salford has a reputation for developing equipment that helps growers maximize yield potential, while sustaining and improving their land.

Our high-quality applicators are versatile and accurate enough to handle seed, fertilizer, and other crop protection products. That versatility makes Salford's application, and tillage technology ideal for managing cover crops.

Cover crops that generate healthier, nutrient-rich soil, protect from erosion, and improve soil structure while reducing compaction.

TABLE OF CONTENTS

COVER CROPS ECONOMICS	3
.....	
BENEFITS & SEEDING	4
.....	
56 SERIES	8
.....	
246	12
.....	
ST-SERIES	14
.....	

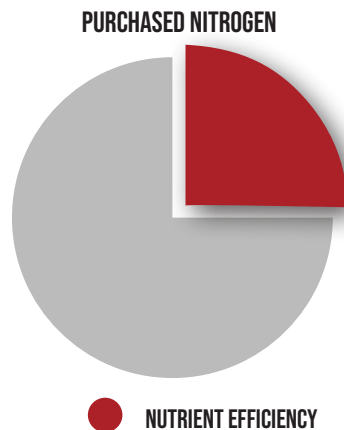
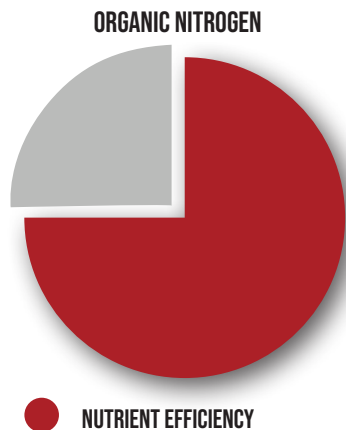


COVER CROP ECONOMICS

Studies value topsoil between \$10 and \$20 per ton. Valuations can be based on the price of land or estimated value of the nutrients in the land. If four to five ton of topsoil is lost that is between \$40 and \$100 per acre. Four to five ton of topsoil is just two to three tenths of an inch per acre.

Soil nitrogen and phosphorus efficiency improves when you increase soil organic matter.

- Organic nitrogen has 73% efficiency for uptake availability
- Commercially purchased nitrogen has roughly 26% efficiency



Nitrogen fixing cover crops provide economic benefits to a variety of commercial crops. Nitrogen depleting crops such as corn see exceptional benefits from atmospheric nitrogen added to the soil.

*Economic figures from independent sources. Salford does not guarantee specific economic advantages from cover crop seeding.

THE PROOF

Fall cover crop seeded with Salford equipment in central Illinois

Cover Crop Field Rain absorbing & reducing erosion



Water Runoff Cover Crop field vs. Fall tillage bare field



Collected Water Cover Crop field vs. bare field





BENEFITS OF COVER CROPS

- ✓ **CUT FERTILIZER COSTS**

Cover crops prevent runoff of nutrients like nitrogen and phosphorus. They also increase soil fertility by fixing nutrients and returning them to the soil as the crop decomposes. Nitrogen fixing cover crops, like vetch and clover, provide exceptional benefits to commercial crops like corn. These crops can be inter-seeded between established rows to add atmospheric nitrogen to the soil in season.
- ✓ **PREVENT EROSION AND IMPROVE WATER QUALITY**

Cover crops provide a natural barrier to wind and water erosion. The standing cover crop shields the soil from the impact of rain drops while the crop's root systems anchor the soil to prevent run off. The cover crop can keep soil in place while adding nutrients and organic matter to the soil.
- ✓ **CONSERVE SOIL MOISTURE**

Rotated cover crops or inter-seeded cover crops help the soil hold more moisture and significantly reduce water runoff. As the cover crop canopies it reduces moisture evaporation by shading the soil surface. The crop will improve soil structure and add organic matter to increase the soil's moisture storage capacity.
- ✓ **BETTER WEED CONTROL**

Improve herbicide effectiveness by out competing weeds for light, moisture, nutrients and space. Cover crop mulch will blanket the ground and decompose while the commercial crop establishes itself. This can help smother weeds attempting to grow between the seed rows. Various cover crop varieties also release compounds that will chemically inhibit weed growth which can lead to increased yields.
- ✓ **IMPROVE YIELDS WITH SOIL HEALTH**

The roots from cover crops improve soil tilth and decomposing plant material increases soil organic matter. Specific cover crops like brassica produce a large, deep root that can generate pressure up to 240 pounds per square inch to break up compacted soil. Living cover crops interact with soil biology to create aggregates that build soil structure. This improves soil permeability, aeration, water infiltration, and holding capacity, which factor into ease of emergence and root growth for the commercial crop.

SEEDING TIMES

SPRING PLANTING



Spring cover crops are commonly used to reinvigorate soil biology after the winter months. In areas like the western Great Plains, they can also serve as a fallow replacement, providing additional soil cover and enhancing biodiversity. These crops help retain moisture, which is often regained through improved water infiltration later in the season.

Seeding: Plant when soil temperatures reach 40°F and field conditions are dry enough to support machinery.

Tip for Success: Delaying seeding until closer to the frost-free date allows for greater species diversity, which can improve soil health and nutrient cycling.

EARLY SUMMER PLANTING



Early summer is an ideal time for cover crops that serve as livestock forage, particularly when cool-season grasses start to lose productivity. These crops also benefit fields with prevented planting, providing weed suppression and nutrient cycling while increasing biological activity.

Seeding: Ensure soil temperatures are between 55-60°F, with no risk of frost.

Species: Warm-season species dominate this period, offering good forage options while also improving soil structure and nitrogen production.

LATE SUMMER PLANTING



Late summer offers an opportunity to plant a diverse mix after harvesting cereal crops. These cover crops capitalize on remaining heat and sunlight, converting them into organic matter that improves soil biology.

Seeding: Warm-season species should form the bulk of the mix, as they thrive in the heat. Cool-season species can also be included but will generally make up a smaller portion of the mix.

Tip for Success: August and September plantings can combine warm- and cool-season species. Warm-season species will decline after the first frost, leaving cool-season species to thrive in the cooler weather.

FALL PLANTING



Fall cover crops protect and improve soil health heading into the winter months. Timing is critical in this season to get the most out of limited heat and light before the frost sets in.

4-5 weeks before first frost: You can plant fast-growing warm-season species alongside cool-season crops for good biomass production.

2-3 weeks before first frost: Focus on cool-season species that will either winter-kill or overwinter and resume growth in the spring.

At or after first frost: With fewer heat units available, stick to overwintering species like hardy cereal grasses. These species will establish slowly but contribute to soil health throughout the winter.



ESTABLISHING CROP

Cover crops establish like any other commercial crop. Factors that affect the establishment of cover crops are seeding date, temperature and moisture, seedbed conditions, available nutrients, previous crop residues, planting depth, seed soil contact, seeding rate, seed quality, time of freeze after seeding, insects and diseases. A cover crop should have at least 4 weeks to get established before frost. Crop rotation and seeding date will determine what cover crop seeding method will work best for you. According to the University of Maryland seeding methods that incorporate the cover crop will consistently have greater germination, produce more biomass and absorb the most nitrogen, and establish quickly.



SEED DRILL

Drills are considered to be one of the most cost-effective cover crop seeding methods because many producers already have a seed drill. Seed drills have good seed to soil contact compared to some broadcast methods, which allows cover crop germination and establishment to be consistently favorable. The previous crop has to be off in order for seed drills to work, so this method is often best after wheat or crops that are harvested earlier in the year. As crop residue can be a challenge for a drill, no-till drills are the best option. Depending on your equipment, drills are often one of the slower methods for cover crop seeding.

VALMAR 56 SERIES



AIR DELIVERY TOOLS

Air delivery tools like Salford's Valmar granular applicators are an accurate method of cover crop application. Air delivery tools can be combined with many implements to seed cover crops. Most commonly, these would be combined with tillage equipment, which provides a degree of residue management and seed incorporation to improve cover crop germination. Air delivery tools, combined with tillage tools, are often faster than no-till drills. And, can also be added to combines, sprayers and many other implements that will be crossing the field. Air delivery tools have a variety of different capacities, working widths and drive options.

VALMAR 56 SERIES

INTER-SEEDING

Inter-seeding is a method of cover cropping that is gaining popularity. One inter-seeding option is to use a narrow row planter to seed alternating rows of commercial crops and cover crops. There are also high-clearance, dedicated inter-seeder tools being developed for post emergence cover crop seeding. This equipment allows the commercial crop to get established before the cover crop comes in. It is best to check with an agronomist before starting this practice as well as understanding if this seeding method can impact your crop insurance. There are crops that will thrive together but also crops that can compete and cause a yield drag on your primary commercial crop.

VALMAR ST & Pathfinders



INTER-SEEDING HIGH-CLEARANCE BOOMS

High-clearance equipment can go into the crop post-emergence and broadcast cover crop between rows. High-clearance equipment can be used early in the season to achieve results similar to inter-seeder equipment. High-clearance tools can also be used later in the season as the commercial crop is reaching maturity. As the commercial crop matures and its leaves begin to drop there will be sufficient light to germinate the cover crop. As high clearance equipment usually will not have a method of incorporating the seed selecting the right cover crop and increasing your seeding rates 10 to 15% is important.

AB200 SERIES



INTER-SEEDING AIR PLANE

Aerial application of cover crops is an option when other equipment is not available or the season is deemed too short to establish the cover crop after the commercial crop has been harvested. Aerial application will require higher seeding rates than other cover crop seeding methods to achieve the desired stand. Although broadcasting with no incorporation is the least effective method of establishing a cover crop it can be the difference between having some cover crop and having no cover crop at all.



56 & 56N SERIES

GRANULAR APPLICATORS



THE MOST VERSATILE MACHINE FOR **GRANULAR APPLICATION**

Salford's Valmar granular applicators can be paired with virtually any implement between 16-feet and 90-feet. The highly accurate Valmar metering system gently delivers seed, fertilizer or herbicide.

56 SERIES MODELS can be ground drive or hydraulic drive. Mounting options for the Valmar 56 Series applicators include a pull-type cart and 3-point hitch mount. These options make the applicators easy to fill and calibrate while keeping the applicator lower to the ground for safer operation.

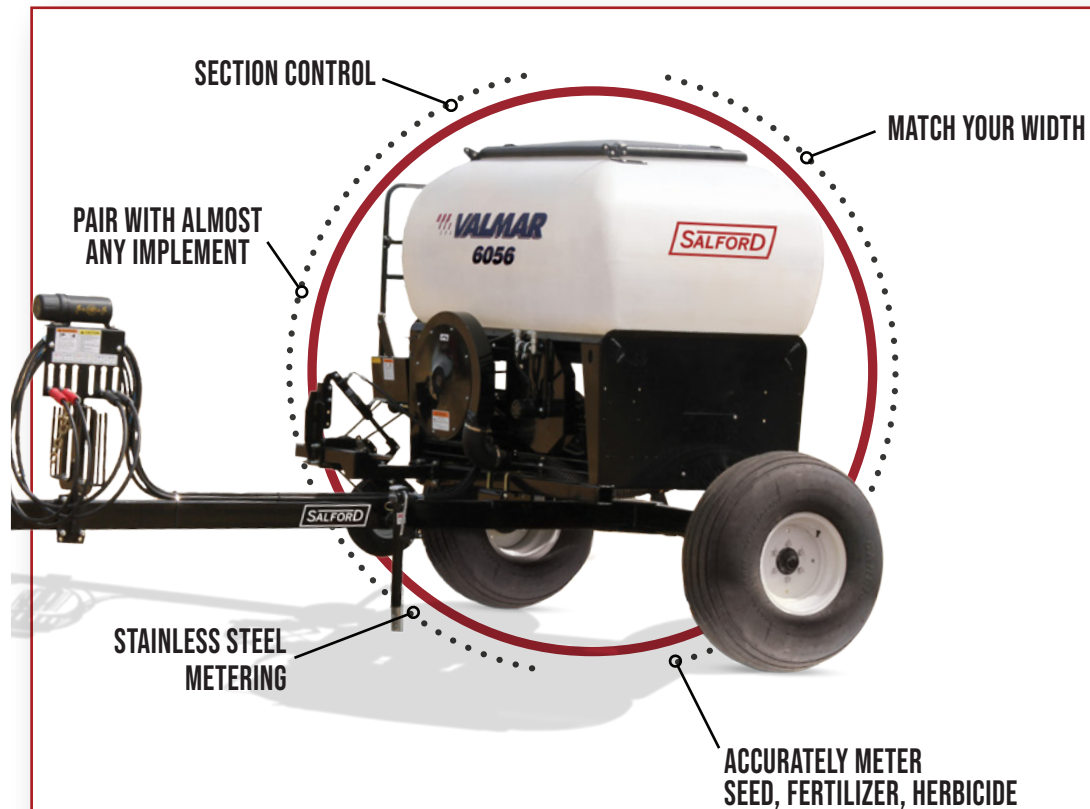
56N MODELS are equipped with the same great Valmar metering and are purpose built for cover crop application on narrow folding tillage implements. The 56N is hydraulically driven and designed for ISOBUS control.

56 SERIES **FEATURES**

- Poly tanks and stainless steel metering to boost fertilizer application capacity for planters and other implements
- Pair with any implement - Unit mount, pull-type or 3-point mount
- Fit implements from 16 to 90 feet wide
- ISOBUS compatible and optional hydraulic drive available
- Ground driven meter has 60 speed gearbox capable of changing rates in 5% increments

56N **FEATURES**

- Designed to pair with narrow folding implements for cover crop seeding
- Fit implements from 20-40 feet wide
- ISOBUS compatible hydraulic drive
- Ladder and platform for easy access to the hopper
- Fan and metering runs on a single hydraulic remote



	4056	6056	5056N	7056N
CAPACITY (cu.ft.)	40	60	50	70
HOPPER MATERIAL	Plastic	Plastic	Carbon Steel	Carbon Steel
METERING DRIVE	• Mechanical • Hydraulic	• Mechanical • Hydraulic	• Hydraulic	• Hydraulic
OUTLETS	16	24 or 32	16	24
APPLICATION WIDTH (ft.)	24 - 60	32 - 90	20-30	35-40
HYDRAULIC FAN DRIVE	8 gpm	8 gpm	13 gpm	13 gpm
MOUNTING OPTIONS	• Pull Type • 3-Point • Direct	• Pull Type • 3-Point • Direct	• Direct	• Direct
HOPPER	<ul style="list-style-type: none"> • Weathertight lid • Hopper bottom shut-off slide gates 			
METERING SYSTEM	<ul style="list-style-type: none"> • Air manifold and venturi system disengage for easy cleaning • 2 Magnetic clutches for LH/RH section control • 28 groove plastic fluted metering rollers OR 12 groove available for more coarse material or higher rates • 304 stainless steel metering 			
EXTRA OPTIONS	<ul style="list-style-type: none"> • Foot pedal for manual on/off control • Operator platform with 4 step ladder • Delivery hose quick coupler kits • 1.25-inch ID flexible PVC hose • Broadcast deflectors mount individually to the implement frame • Air diffusers for in-row application • Calibration kit 			

4056 & 6056 METERING OPTIONS

HYDRAULIC DRIVE OPTION	<ul style="list-style-type: none"> • Hydraulic metering, motor only • Hydraulic metering, Rate Control Ready. Includes motor, flow control valve, meter encoder, fan speed and bin level sensors. Does not include ECU, harness or cab display. • Hydraulic metering, with granular rate control. Includes motor, ISOBUS compatible ECU and harness, flow control valve, meter encoder, fan speed and bin level sensors. Does not include display.
GROUND DRIVE OPTION	<ul style="list-style-type: none"> • 60 speed gearbox with 5% between settings • In-cab electric clutch control and air manifold monitor • Optional hydraulic engage/disengage

56 SERIES

OPERATOR-FRIENDLY AND FLEXIBLE DESIGN

The 56 Series applicators are built for seamless integration with a wide range of implements, simplifying setup and enhancing operational versatility. Compatible with virtually any 3-point hitch mount or tow-behind cart, these applicators eliminate the need for implement-specific hardware, offering a streamlined, turn-key solution. Designed with operator convenience in mind, the 56 Series provides easy hopper access for filling and calibration without climbing over equipment.

With both ground-driven and hydraulic drive options, as well as integrated hydraulic and electrical hookups, these applicators deliver unmatched compatibility. Whether applying starter fertilizer with a planter or seeding cover crops, switching between tasks is fast and hassle-free. Durable draw-bar options and fold-away ladder platforms further enhance usability, making the 56 Series a versatile, efficient choice for any operation.



INTEGRATION SIMPLICITY

56 series is compatible with virtually any implement with the 3-point hitch mount and the tow behind cart which eliminates implement specific mounting brackets and hardware. Providing a turn-key solution for simple setup and operation.



MORE ERGONOMIC

The 56 series platforms are designed with operators in mind and improve access to the hopper. Operators are able to fill and calibrate the Valmar applicator without having to climb over the implement's frame.



GROUND DRIVEN OR HYDRAULIC DRIVE

56 Series mounting options are complete with hydraulic and electrical hookups both compatible with hydraulic drive or ground driven metering making these units almost universal.



CHOOSE YOUR IMPLEMENT

The 3-point hitch mount uses an integrated draw-bar rated for 350 hp. A heavier duty, 600 hp rated version is also available on request. Hitch and unhitch with ease on various implements, allowing the Valmar 56 series granular applicators compatible with multiple implements on the same farm. All hydraulic and electrical hook-ups are transferred to the rear of the unit. Switch between applying starter fertilizer with your planter to seeding cover crops with ease.



EASE OF OPERATION

Platform on applicator provides easy access to the hopper with a ladder that folds away during operation. The 3-point applicator box also has integrated stands for storage or easy hook up and dismount from the tractor linkage.

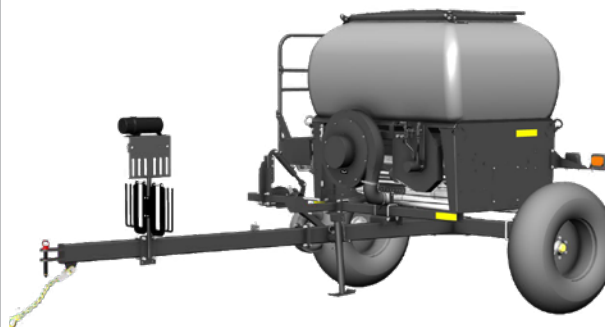


3-POINT HITCH



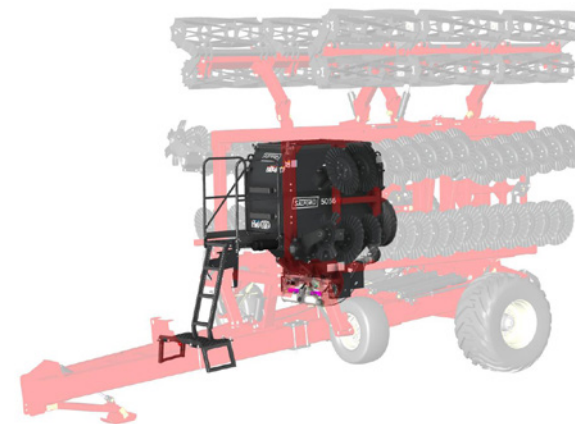
Rating	350 HP	600 HP
Front 3-point	CAT 2/3	CAT 3/4
Rear Implement	Single or double CAT 3	CAT 4

PULL-TYPE TOW BEHIND CART



Pull-Type Tires 14L – 16.1 tires w/6-bolt rims

MOUNTED



Hydraulic Remotes	Two sets of hoses standard Additional hydraulic lines available
Metering Drive	Ground Driven or Hydraulic Metering Drive Hydraulic engage/disengage kit for ground drive



PULL-TYPE GRANULAR APPLICATORS

Valmar 246

Salford's Valmar air boom applicators gently and accurately handle seed, fertilizer and other granular like herbicides. Their rugged construction is sturdy enough to withstand the rigors of commercial use, making it the right choice for a rental fleet, custom applicator, or a farm operation. Moreover, the 246 model incorporates a number of innovative features designed to make material application easier, safer and more precise than ever before.

These models' simple calibration ensures proper flow rates, especially when determining the setting for new products, seeds or seed mixtures.

MODEL	246
CAPACITY	60 cu/ft.
BOOM WIDTH	60 ft.
TRANS. WIDTH	8 ft. 4 in.



ACCURACY

Valmar's 246 is designed to with 4 sections to achieve unparalleled accuracy under a variety of ground conditions.



COMMODITY TYPES

With the ability to apply a wide variety of seeds, Valmar's pull types can take on any type of cover crop mixture as well as fertilizer or herbicide.



SECTION CONTROL

Manual Section control features on Valmar's 246 reduce waste.

ST-SERIES

APPLICATION ANYWHERE

Valmar ST-Series applicators bring high-capacity, highly accurate, commodity metering to your strip-till bar, planter, tillage equipment or virtually any other implement you choose. ST-Series models can be mounted directly on an implement or used with Salford's Pathfinder self-steering under carriage to tow the ST-Series applicator behind your implement.

ACCURACY AND SIMPLICITY

Salford's Valmar ST-Series models are equipped with the same accurate, simple, Venturi metering system found on other Valmar models. The ST-Series metering system reliably handles a wide range of application rates up to 650 lbs per tank at 5 mph. The peg metering rolls handle a wide range of material sizes and are gentle enough to handle seed. The peg roller also gently meters fertilizer to prevent crushing the product. This reduces the amount of dust in the air stream and helps to prevent plugging in the air lines. A meter brush system cleans the meter roll during use to prevent fertilizer build up to ensure accurate metering.

SUPERIOR BLENDING AND SECTION CONTROL

ST-10 and ST-12 models are capable of multi-product metering*. With ST-10 split at 60/40 and the ST-12 split 50/50 to blend two products on the fly. Rather than blending the two products down the air stream like some other commodity carts these machines blend right at the meter for maximum accuracy.

*ST-Series models are also capable of ISOBUS compatible section control to help direct fertilizer exactly where it is needed and prevent over application.



GRANULAR FERTILIZER APPLICATION SPECIFICATIONS



	ST-6	ST-10
Hopper Capacity	185 cu ft 6 Tons	305 cu ft (120/185 cu ft) 10 Tons (4/6 ton)
Tank Configuration	Single compartment	Two compartments
Tank Material	High Density Polyethylene	
Metering Sections	Up to four sections (Hydraulic motors per section)	
Tank Features	Air Manifold gauge Hopper Screen Ladder and platform assembly	
Air Manifold	8, 12, 16, 18, 20 and 24 Outlet manifolds (choose at the time of ordering)	
Meter	Plastic peg meters rollers with brush for self cleaning Manual hopper bottom shut-off slide gates PWM Valve Meter encoder, Fan speed sensor, Bin level sensor Low rate rollers available	
Implement Mounting	Skid mounting available *ST-10 does not come standard with mounting hardware	
Fan	Hydraulic fan drive High output fan option for high rates, swaths, or ground speeds Second fan standard on 24 row models	
Options	Air line splitters Low rate peg meter rollers Deflector kit for broadcast application Air diffusers for in-row application PVC flexible air hose	
Hydraulic Requirements	Single Fan (8-20 outlets) 21 gpm @ 2800 psi Dual Fan (24 outlets or high output) 38 gpm @ 2800 psi Case drain required	
Optional Control Packages and Scales	ISOBUS Controls* (includes ECU and harness) Digi-Star Scale Kit (includes one cab display) or available as ISOBUS Raven RCM ready	





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SALFORD FIELD YOUR BEST



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