Great Plains
“Harvest Starts Here.”

NUTRIENT SPRAYING SYSTEMS
APPLICATION

TSF-1290 Sprayer
SEEDBED PREPARATION
Managing the soil profile to maximize water uptake and prepping your seedbed are critical. Regardless of your farming practices, Great Plains literally has every piece of tillage equipment you need, including our new Turbo-Max™. Turbo-Max is tearing up the competition with its innovative design and features.

NUTRIENT APPLICATION
For maximum plant benefit, precise placement of High Value Nutrients is a must. By applying nutrients at the right time, you can virtually eliminate leaching and denitrification. The Great Plains Nutri-Pro® and sprayer lines are the perfect solution to help you increase utilization while reducing costs.

SEED PLACEMENT
To maximize yield, three things must be done well: seed spacing, seed depth, and seed-to-soil contact without sidewall compaction. Great Plains Drills and Planters are designed and built using these principles. Again, no matter what your farming practices, we have the right seeding configuration to achieve a uniform stand in a variety of crops. We are the seed placement specialists!
Spraying Systems

All Great Plains Spraying Systems are engineered using the latest 3D solid modeling software before being subjected to our torture track and extensive field testing so you can be assured of a safe, reliable machine that will perform as expected for years to come.

CONTENTS

04 SPECS, BOOM & PLUMBING DESIGN
06 WHIRLFILTER® & METERCONE® NOZZLES
08 3-POINT MOUNTED
10 650-GALLON PULL-TYPE
12 1000-GALLON PULL-TYPE
14 1250-GALLON PULL-TYPE
16 OPTIONS & ACCESSORIES
18 COMPANY INFO
20 GPAC FINANCING
## BOOM DESIGN

### HYDRAULIC ELEVATOR VS. PARALLEL ARMS

Great Plains utilizes a spring-cushioned hydraulic elevator to raise and lower our spray boom. This type of lift mechanism minimizes the distance between the trailer tires and the boom ("A"). Many competitive machines use a parallel linkage system which increases the distance the boom is away from the trailer tires ("B"). The further the boom is away from the rear tires, the more contour changes and sloshing liquid affect boom height and stability.

Great Plains hydraulic elevator systems hold booms tighter, eliminating the excessive movement associated with parallel linkage, which also adds to greater boom stability and increased accuracy.

### BOOM SUSPENSION

Great Plains booms feature spring-over-shock design that provides suspension and unmatched boom stability.

### BOOM CONSTRUCTION

Great Plains booms utilize two bottom tubes with bracing welded between the tubes, not on the top or bottom of the tubes. Many competitive booms weld across the top of one main tube, concentrating stress and effectively weakening the boom.

### AUTOMATIC BOOM LOCKS

All Great Plains booms have automatic boom locks that engage when either side is raised to clear obstacles or when the boom fold sequence is started. Boom locks make the boom rigid so weight is not transferred to the other end of the boom.
### 1250-Gallon Pull-Type (pg 14-15)

<table>
<thead>
<tr>
<th>Model</th>
<th>Boom Width</th>
<th>Nozzle Spacing</th>
<th>Wheels &amp; Tires</th>
<th>Wheel Spacing</th>
<th>Pump</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSF-1260</td>
<td>50'</td>
<td>20&quot; or 30&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>Ace Hydraulic/PTO</td>
<td>12'3&quot;</td>
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<tr>
<td>TSF-1280</td>
<td>60'</td>
<td>20&quot; or 30&quot;</td>
<td>320/85R38</td>
<td>80&quot; to 120&quot;</td>
<td>Ace Hydraulic/PTO</td>
<td>13'1&quot;</td>
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<tr>
<td>TSF-1290</td>
<td>60'</td>
<td>20&quot; or 30&quot;</td>
<td>320/85R38 (14.9 R46 opt)</td>
<td>80&quot; to 120&quot;</td>
<td>Ace Hydraulic/PTO</td>
<td>13'6&quot;</td>
</tr>
<tr>
<td></td>
<td>60'/80'</td>
<td>20&quot; or 30&quot;</td>
<td>14.9 x 46 Radial</td>
<td>80&quot; to 120&quot;</td>
<td>Ace Hydraulic/PTO</td>
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<tr>
<td></td>
<td>22 5&quot;</td>
<td>20&quot; or 30&quot;</td>
<td>14.9 x 46 Radial</td>
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<td>28&quot;</td>
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<td>80&quot; to 120&quot;</td>
<td>Ace Hydraulic/PTO</td>
<td>28&quot;</td>
</tr>
</tbody>
</table>

- **Sprayer Capacity**: 1250 gallons
- **Pump Capacity**: 90 GPM @ 30 PSI
- **Flush & Rinse**: 100 gallon
- **Foam Marker**: 25 gallon (optional)

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**Note:** All specifications subject to change without notice.

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**PLUMBING DESIGN**

1. Has no protruding parts to restrict flow.
2. Uses hard polypropylene tubing to eliminate sagging between nozzle bodies. Polypropylene tubing is resistant to all chemicals.
3. Uses flexible tubing which sags and traps chemicals.
4. Reduces the size of the tubing which also reduces pressure and flow.
5. Has multiple joints creating more possibilities for leaks.

FLOW CONTROL VALVES - Worm gear flow control valves on Great Plains sprayers allow higher volume flow-thru. These state-of-the-art shutoff valves are faster and more reliable.
WHIRLFILTER® - Servicing the WhirlFilter® is safe and easy. Simply open the cleanout valve to flush away captured debris without ever having to touch the chemicals.

COMPETITIVE CANISTER/T-LINE FILTERS - Can plug or bypass, creating application problems. Safety is another concern.

The WhirlFilter® from Great Plains utilizes a continuous swirling motion around a stainless steel screen filter that dissolves or removes large particles before they enter the spraying system. Particles that won’t break down are removed from the system automatically, and you never have to touch the disposed particles or liquid. Used in combination with the MeterCone® nozzle, the system is virtually plug-free. No more in-the-field quick fixes as you try to unplug your sprayer, and no more streaks in your field from plugged nozzles.

Fluid enters here.
The solution in the MeterCone® nozzle is spun in a whirl chamber to create a 120° hollow cone pattern with 100% overlap. Flat fans are recommended to have 30% overlap (right). The overlap created by the MeterCone's conical pattern enhances canopy penetration, hitting its target from four sides, not just from one side like flat fan nozzles. If a large plant is shielding a weed from the leading edge of the MeterCone® nozzle, the nozzle spray pattern has three more angles to strike the target.

- The exclusive spray pattern of MeterCone® nozzles delivers superior results by providing more uniform droplet size.
- Chemical drift is minimized by delivering 90% of spray droplets within the “ideal range”.
- When MeterCone® nozzles are compared to conventional flat fan nozzles, they have less than half the driftable particles*...the key to accurate application. (*Source: Ohio State University)
- MeterCone® nozzle orifices are 98% larger than their flat fan counterparts, making it easier for larger particles to pass through, enhancing their ability not to plug.

**MeterCone® Nozzles**

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**UNIFORM COVERAGE FROM TOP TO BOTTOM**

**COMBAT AGAINST ASIAN SOYBEAN RUST** - Recent independent studies prove MeterCone® nozzles outperform Twin Flat Fan nozzles at penetrating all levels of soybean canopy. (See actual water-sensitive data to the right.)
Great Plains 3-Point Sprayers and Hydraulic Fold Booms are designed to float over rough, undulating terrain. These booms feature our Level-Float design for top-of-the-line coverage with less gouging and skipping than our competitors.

50’ and 60’ Cross-Fold Booms (CF500, CF600) combined with our 300-Gallon 3-Point Sprayers (3P300) are an economical solution for achieving unmatched application accuracy. If your tractor is already equipped with tanks, add a CF600 to the 3-point hitch for all of your post-application needs.

Unlike most 3-point sprayers, the Great Plains 3P300 Sprayer has a capacity to hold up to 300 gallons of spray solution, allowing you to cover more acres in a day. The unique close couple design and elliptical shape enable you to lift larger quantities of solution with less lift capacity.

Features & Benefits

- **WET BOOM PLUMBING** - Keeps pressure equal to all nozzles and minimizes trapped chemicals.
- **36” SPRING-CUSHIONED ELEVATOR** - Elevator holds boom tighter, eliminating the excess movement associated with parallel linkage.
- **BREAK-AWAY BOOMS** - If an obstacle is hit, boom breaks up and away, minimizing or eliminating damage.
- **PARKING STANDS** - Wide parking stands add safety for storage of sprayer or boom.

Profitable Spraying
3-Point Mounted

MODELS
CF500
CF600
3P300
Best-in-Class
Our TSF-660 Trailer Sprayer’s compact, efficient design enhances maneuverability on terraces and contours in comparison to larger units. Whether in the field or on the road, the weight balance of the TSF-660 makes it a perfect fit for smaller tractors. In the field, the TSF-660 utilizes large 320/85R38 diameter tires to maximize flotation and enhance stability. The 60’ boom folds to a narrow 108” wide, making it safer and easier to transport than larger models. The 60’ front fold boom has all the strength and features of the larger model booms, including wet boom plumbing, break-away sections, and incredible balance and strength. Its 60” to 120” adjustable axle allows tires to be spaced to match any row width while maintaining superior stability.

### Features & Benefits

- **650-GALLON POLY TANK**
  - Can use a smaller tractor to pull; also creates less compaction in the field.

- **CENTRAL CONTROL PANEL**
  - Puts all major sprayer operations at one location.

- **42” CUSHIONED ELEVATOR**
  - Elevator holds boom tighter, eliminating the excess movement associated with parallel linkage.

- **FLUSH AND RINSE TURRETS**
  - 50-gallon fresh water tank with two turret nozzles in main tank for quick and complete cleanout.
Our TSF-1000 Series Sprayers provide a higher level of field efficiency while remaining light on their feet. The TSF-1080 and TSF-1090 models feature 80’ or 90’ booms that can be used full width in big fields or outer wings fold inward to operate as a 60’ boom in smaller fields or challenging terrain. While having the same tank and rugged frame, axle, and boom construction as the larger models, the TSF-1060 has a 60’ boom to meet your sprayer needs. All of these models are field-proven to provide years of accurate application, while enhancing your pesticide performance and crop safety.
MODELS
TSF-1060
TSF-1080
TSF-1090

1000-Gallon Pull-Type
The TSF-1260, TSF-1280, and TSF-1290 are our Highest Capacity Sprayers with 1250-gallons of onboard spraying capacity. The TSF-1260 is fitted with our rugged 60’ boom for maneuverability and affordability. The TSF-1280 is equipped with an 80’ boom that is convertible to 60’ for spraying in hard to reach areas or rough terrain. The TSF-1290 is a 90’ version that is also convertible to 60’. All 1250-gallon sprayers are equipped with super tall 14.9x46 radial tires for maximum flotation, yet maintain a narrow tread width for improved clearance between rows.

**1250-GALLON POLY TANK** - High capacity for maximum field efficiency.

**14.9x46 RADIAL TIRES** - Provide maximum flotation and low compaction in the field.

**42” CUSHIONED ELEVATOR** - Elevator holds boom tighter, eliminating the excess movement associated with parallel linkage.

**It's All About Capacity**
1250-Gallon Pull-Type

MODELS
TSF-1260
TSF-1280
TSF-1290
Nozzle Selection

Put on three of your favorite nozzles to get optimum precision for each application. Triple nozzle bodies make changing from one nozzle to the next as easy as twisting the nozzle head to the desired one. Indents give a positive feel when the selected nozzle is in perfect alignment.

Nozzle Selection Guide
(Calculated at 8 mph)

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>20&quot; Spacing</th>
<th>30&quot; Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 1.25</td>
<td>7-10 GPA</td>
<td>5-7 GPA</td>
</tr>
<tr>
<td>MC 1.875</td>
<td>10-16 GPA</td>
<td>7-11 GPA</td>
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<tr>
<td>MC 2.50</td>
<td>15-21 GPA</td>
<td>10-14 GPA</td>
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<tr>
<td>MC 3.75</td>
<td>21-32 GPA</td>
<td>14-21 GPA</td>
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<tr>
<td>MC 5.00</td>
<td>26-37 GPA</td>
<td>15-25 GPA</td>
</tr>
<tr>
<td>MC 7.50</td>
<td>39-55 GPA</td>
<td>26-37 GPA</td>
</tr>
<tr>
<td>MC 10.00</td>
<td>52-74 GPA</td>
<td>35-50 GPA</td>
</tr>
</tbody>
</table>

Nozzle Tip Calculator

Valuable tool used to determine:
• Type of nozzle to use
• Miles per hour
• Spray width per nozzle
• Gallons per acre
• Spray pressure
• Spray volume cross reference

(Standard with each sprayer.)

Sprayer Controllers

SCS 450 Console (6-Sections)

Raven's SCS 450 Sprayer Controller provides precise automatic rate control for up to six (6) boom section inputs. Two separate application rates can be pre-programmed and selected “on the go” with a simple flip of a switch. The SCS 450 is compatible with variable rate applications and data logging.

SCS 440 Console (3-Sections)

Raven’s SCS 440 Sprayer Controller provides precise automatic rate control for up to three (3) boom section inputs. Two separate application rates can be pre-programmed and selected “on the go” with a simple flip of a switch. The SCS 440 is compatible with variable rate applications and data logging.

Electro/Hydraulic Controls

Electro/Hydraulic Controls provide fingertip control for all boom functions:
• Control three or seven functions with just one tractor hydraulic outlet regardless of type of hydraulic system (open, closed, or PFC).
• A toggle switch box is standard for all models (except the 3P300).
• Functions are easily selected on the Remote Command Stick, giving the operator complete control at his fingertips (3P300 only).
Pump Selection to Fit All Applications

- Whether you’re applying a low-volume herbicide with a 3P300 or high rates of liquid fertilizer with a TSF-1290, we offer a pump to fit your needs.
- Select from a hydraulic-driven pump or a 540 RPM or 1000 RPM PTO Pump.
- All are centrifugal pumps and will give you optimum field performance.

Chemical & Rinse

**Chemical Inductor**

Chemical Inductors are a proven fast and efficient way to get expensive chemicals into the sprayer and well mixed without the personal exposure hazards.

- The 3-gallon “cone bottom” tank ensures all of the chemicals are properly and accurately mixed.
- The unit is designed with operator convenience and, most importantly, safety as the primary concern.

**Flush & Rinse**

All TSF Series Sprayers feature a separate 50- or 100-gallon fresh water tank with 2 or 3 turret nozzles in the main tank for quick and complete cleanout between spraying operations. (Standard Equipment)

Hand Wash Tank

A 5-gallon hand wash tank is built-in on all TSF sprayers, and a 3-gallon tank is used on 300-gallon units. Both are conveniently accessible from ground level.

Quality Foam Even on dry, hot days.

- Can be adjusted to produce anything from foam droplets to a continuous stream of foam...often required in post-emergent operations.
- Dependable design is ideally suited to your most challenging foam marking conditions.
- Large 25-gallon-capacity tank.

Adjustable Wheel Spacing

Infinite axle spacing is easily adjusted from 80” - 120” on all TSF sprayers. (60” - 120” on TSF-660s)
Our Mission

To Be a Company Where Innovation, Teamwork and a Desire to Improve Combine to:
- Delight Our Customers
- Provide a Rewarding Workplace for our Employees
- Generate Profits for Stability and Growth

As agricultural producers, we’re all aware of the increasing pressure to produce more with less. The demand for higher efficiency and increasing productivity on the farm has never been greater. At Great Plains, we listen closely to our customers. We work as a team, continually breaking new ground and innovating new products that position your operation to profit in a changing agricultural environment.

I would like to personally thank you for considering our broad line of Agricultural Products. We look forward to putting our innovation to work in your operation.

Roy Applequist
Owner,
Great Plains Mfg., Inc.

GREAT PLAINS

Founded in 1976 by President and Owner Roy Applequist, Great Plains Manufacturing employs more than 1,300 people in eight Central Kansas communities and Sleaford, England. In addition to its domestic ag equipment division, which manufactures seedbed preparation, nutrient placement, and seeding equipment, Great Plains Manufacturing also includes Great Plains International, Great Plains Trucking, Great Plains Acceptance Corporation, and its Land Pride Division that manufactures grounds maintenance tools such as mowers, tillers, rotary cutters, and snow removal equipment. The company is one of the largest and fastest growing family-owned “short line” implement companies in the United States.
SALINA CAMPUS
SALINA, KS

PRODUCT DEVELOPMENT
ASSARIA, KS
TIPTON PLANT
TIPTON, KS
SIMBA PLANT
SLEAFORD, UK
TRUCKING DIVISION
SALINA, KS

PRODUCT DEVELOPMENT
SALINA, KS
LUCAS PLANT
LUCAS, KS
KIPP PLANT
KIPP, KS
ENTERPRISE PLANT
ENTERPRISE, KS

ELLSWORTH PLANT
ELLSWORTH, KS
CORPORATE OFFICE
SALINA, KS
ABILENE PLANT
ABILENE, KS
Great Plains Acceptance Corporation is an Ag-based lender committed to growth in the Ag industry by offering sound, tailored finance options to potential or existing customers. Quick approvals, competitive rates, and flexible terms are all available through Great Plains and Land Pride dealers.

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