



Deere Exactrix Wing Injection

High resolution drawings can be accessed at www.exactrix.com/dewi.htm

Meeting the Needs of the Most Advanced Corn, Soybean and Wheat Producers



Corn Pre-Plant, Deere 1690 CCS, dual placement, 42.5 feet, 15 inch band spacing, 2KD Weigh Master-NH3, 2KM-APP/S



Small grains, Deere 1860, dual placement, 42.5 feet, 7.5 inch band spacing, 2KFA-NH3, Delta P-APP/S

Minor crops considered in rotation. Approved for canola, mustard, flax, peas, lentils, chickpeas, edible beans, safflower, oats, barley & alfalfa.

- ___ Exactrix Injector Wings offer ideal positional and chemical access to placed nutrients.
- ___ Get three times the utilization from your original Deere 1850, 1860, 1890, 1690, and 1560/1590. Use your Deere single disc airseeder and no-till drill 3 times per year in pre plant corn, winter wheat or spring wheat fertilization and seeding, and soybean fertilization and seeding.
- ___ Each seed row has a dedicated band of nitrogen, phosphate, potassium, secondary and micronutrients.
- ___ Placement is 1.5" to the side and up to 3" below the seed for radicle and seminal hair root access.
- ___ Weeds never have a chance at placed fertility.
- ___ The seeder requires no mid-row banders for wheat production.
- ___ Mid-row banding can starve the crop and feed the weeds.....A great improvement in fertilizer efficiency and weed control.
- ___ Machine design remains simple.
- ___ Guaranteed safe placement of toxic nutrients in dilute NH3 bands with the Exactrix 2KD and 2KF metering systems. Ideal for corn production.
- ___ Dual placement of APP, 10-34-0 and 11-37-0 with Thiosul and Micronutrients forms tri-ammonium phosphate. The most available form of P.
- ___ Normal yield increases of 10% to 20% in pre-plant corn cropping systems. Band spacings of 7.5", 10" and 15" are now possible.
- ___ Exceptional performance with tap rooted crops such as soybeans and canola.



The yellow tape ruler represents the lateral seed row. The liquid NH3 and APP/Thiosul (10-34-0/Thiosul) is dual placed in a tight concentrated band to the side and below the seed row. A terminal injection orifice is used to drive the NH3 into the soil at least 2 inches below the seed to a 3 to 4 inch soil depth in a vertical band column. The horizontal separation is 1.5 inches to the side of the dedicated seed row.

The APP/Thiosul is released with a terminal-stripping orifice. The terminal stripping orifice organizes the APP/Thiosul into a liquid lateral band column, which chemically combines, with the NH3 to form Tri-Ammonium Polyphosphate Sulfate (TAPPS). The toxic charge is safely located in exact alignment with row and safely away from the germination zone and the seminal/radicle root cap. A 7.5-inch row spacing application of NH3 in wheat production is typical at one pint of liquid NH3 injected in 600 feet of travel. The band of NH3 is extremely dilute and this allows the P and S to be readily absorbed by the plant root system in the first 30 days. The NH3 direct injection system from Exactrix allows this precision plant food placement to be possible.

Ideal For Pre-Plant Corn Production....And Finally Soybean Fertilization



Brice Naber, Albion, NE, reviews irrigated corn crop produced with Exactrix Wing Injection, pre-plant application

In corn production a major yield barrier breakthrough occurs when band spacing is reduced utilizing pre-plant fertilization. The most desirable band spacing for corn is 7.5 inch when dual placing N and P. The synergism of dual placement is amplified by a factor of 4 times. This is because nutrients can be accessed by the corn root system at four locations rather than just one location. This also makes secondary and micronutrients more effective. Corn can be immediately planted behind the Deere 1890 and 1690 because the NH₃ bands have become dilute and non-injurious to the corn root system. Immediate planting after application really adds to the crop productivity. The narrow band spacing approach has been time proven in Ontario as well as Nebraska. This allows for better nitrogen efficiency since now the NH₃ can be applied just before planting. Leaching potential is drastically reduced over fall application of NH₃. No-tillage is required after dual placing. Always dual place nutrients with no following tillage. Always apply the nutrients on narrow bands and then plant.

UNL and Nebraska producers are setting much higher yield goals. Hopefully, yields in the 300 bushel per acre range are repeatable using such techniques as dual placement, narrow band centers, VRT, RTK guidance, selective watering techniques, narrow plant rows, and no-tillage pre-plant placement of nutrients. This picture shows the condition of the corn crop, August 2003, using the Exactrix, dual placement and a Deere 1690 as a pre-plant no-till applicator.

Soybean and Corn Rotation. Double Cropping Soybeans is more attractive.

Finally a pre-plant, narrow band spacing, corn fertilization tool bar that just happens to also seed and fertilize soybeans.....No-till.

Soybeans often starve for nitrogen in the first 60 days. The soybean plant needs 60 pounds of N in the top 2 feet of the soil profile. Less N means a poor start and a yield reduction. This explains why double-cropping soybeans on wheat ground does not prove up to full potential. Placed P and S with secondary and micronutrients is now possible because the tap rooted crop can access fertility through the radicle hair roots. The producer can select blend of solution 32 or 28 with APP/Thiosul.

Small Grains...Single Pass 7.5" Seed Row And Aligned Nutrient Bands

1. The machine becomes more cost effective since an additional \$30,000 to \$35,000 of investment is not required for a separate set of banding units and frame work. __
2. The machine is more maneuverable in tight corners and field entry. __
3. Less weight is required for penetration since the Exactrix Direct Injection System burns NH₃ into the soil 2" deeper with 1.5 HP per injection point. __
4. Opener maintenance is less since an entire set of midrow banding units is not needed. __
5. Yields tend to be greater with Exactrix Wing Injection as compared to mid row banding systems. This is because only the seeded crop can use the placed fertility. Weeds are starved and the crop thrives. Nutrient uptake is rapid.

Neil Power, Langdon, ND, reviews flax crop produced with Exactrix Wing Injection.



Summary: The Deere 1890, 1690 and 1590 seeders can be utilized around the year with Exactrix Injector Wing technology. Up to 3 times better utilization of the machine is possible. Nutrients can now be placed no-till with no seed bed disturbance. Timing of nitrogen and phosphate is critical to top yields. Fall fertilization locks the producer in when changes occur in markets and the federal farm program. NH₃ can now be placed just before planting. When nutrients are placed more timely and more accurately, the actual cost per bushel is reduced. Exactrix systems apply 30% to 40% more crop useable nitrogen. Delta P systems apply 10% to 25% more crop useable phosphate. Crop proteins can be increased. Weed control is enhanced. Tri-ammonium polyphosphate sulfate can be formulated producing most available form of plant food. Biological control can be implemented with co-host trap cropping. Nurse cropping can be implemented. The negative environmental aspects of nitrate leaching and loss of phosphate to the rivers and streams is more manageable.

Cross Row Feeding™, Paired Row 6/9, Double Site Access of Placed Nutrients.
Each seed row will access two bands of placed nutrients in the first 30 days.
Phosphate efficiency is improved.
Weed control is improved.
More consistent yields result by improving nutrient uptake.

