Superior agricultural fertilizer and exceptional service make Crop Performance unique in the industry and that’s important, but just one part of the equation. There are many other factors that need to be considered and they include:

**ADVANCED soil testing**

Utilizing our independent 3rd party labs we provide you with a complete and accurate analysis of your growing environment both graphed and by the numbers. Utilizing both chemical and paste extraction, we can tell you exactly what’s in the soil make-up and what is actually available to the plant. You see what the plant sees and what nutrients are available for its use and what is required to enhance crop yield and quality.
Years of real world EXPERIENCE

An experienced staff made up of Agronomists, Chemists, AG economists and Crop Consultants make our team unique. We have years of real world experience in the field, not just the classroom. Our agricultural expertise provides growers, dealers and independent regional partners with the competitive edge required to win in the field and succeed in today’s complex and challenging marketplace.

OUR TEAM looks at all the angles

We start by looking at the agronomics, then the economics of a solution. We understand the cost to bring in a crop, what the actual value of the crop is in the marketplace and tailor solutions to ensure you have a high quality, enhanced crop yield, and the best possible return on your investment of time and money.

Custom SOLUTIONS

Our solutions are tailored to your specific needs so you can be assured our responsible recommendations will apply nutrients at the right rate, at the right place, at the right time, using the right source.

Proprietary products for MAXIMUM POTENTIAL

Our industry leading product portfolio includes proprietary products designed to assist our customers manage complex agronomic issues and ensure their crop reaches its maximum genetic potential by helping the plant grow through the ever-present stresses it encounters.
Our greenhouse trials this year were very specific in nature. We planted and grew Corn, Winter Wheat, Spring Wheat, Canola and Oats to observe and measure root growth using Root Driver and Carbon versus traditional starter fertilizer applications plus any other additional visual observations.

### Spring Wheat

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-furrow rate of 2 lbs per acre.</td>
<td>in-furrow rate of 2 lbs per acre of Root Driver + 1 lb per acre of Carbon.</td>
<td>In-furrow rate of 80 lbs per acre.</td>
<td></td>
</tr>
<tr>
<td>Results</td>
<td>weight of harvested and dried roots.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,206 mg</td>
<td>1,302 mg</td>
<td>950 mg</td>
<td></td>
</tr>
</tbody>
</table>

### Winter Wheat

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-furrow rate of 2 lbs per acre.</td>
<td>in-furrow rate of 2 lbs per acre of Root Driver + 1 lb per acre of Carbon.</td>
<td>In-furrow rate of 80 lbs per acre.</td>
<td></td>
</tr>
<tr>
<td>Results</td>
<td>weight of harvested and dried roots.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>882 mg</td>
<td>1056 mg</td>
<td>590 mg</td>
<td></td>
</tr>
</tbody>
</table>
From theory to the lab, to the greenhouse, to replicated trials and the field—we examine all results and feedback to continuously re-assess and improve our technology, to bring the best possible value to our customers.

### Soybeans

<table>
<thead>
<tr>
<th>Soybeans</th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatments</strong></td>
<td>in-furrow rate of 2 lbs per acre.</td>
<td>in-furrow rate of 2 lbs per acre of Root Driver and 1 lb per acre of Carbon.</td>
<td>in-furrow rate of 80 lbs per acre.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>weight of harvested and dried roots.</td>
<td>4,017 mg</td>
<td>4,162 mg</td>
</tr>
</tbody>
</table>

**Compatibility Results on Inoculants**

On replicated trials it was concluded that Root Driver has no affect on the Soybean inoculants. Compared to all checks, it was observed to be neutral.

### Corn

<table>
<thead>
<tr>
<th>Corn</th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatments</strong></td>
<td>in-furrow rate of 2 lbs per acre.</td>
<td>in-furrow rate of 2 lbs per acre of Root Driver and 1 lb per acre of Carbon.</td>
<td>in-furrow rate of 80 lbs per acre.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>weight of harvested and dried roots.</td>
<td>811 mg</td>
<td>650 mg</td>
</tr>
</tbody>
</table>

Two studies were performed on Soybeans.

1. **Compatibility Study of Root Driver on various biological growth additives.**
2. **Root Growth Study to determine the effectiveness of Root Driver 2 treatments plus a check.**

All seed plus the check were pre-inoculated with Optimize Plus liquid and in-furrow granular Tag-Team. All seed treated with a fungicide.

**As a percentage of the 11-52-0 check**

![Graph showing results for corn](image)

L to R: Root Driver/Carbon, 11-52-0 and Root Driver.

![Early stages of Nodule development](image)

L to R: 11-52-0, Root Driver, Root Driver/Carbon.

![Graph showing results for soybeans](image)

As a percentage of the 11-52-0 check

L to R: Root Driver, Root Driver/Carbon and the Check.
Canola Plants just prior to harvest. L to R: Root Driver/Carbon, Root Driver and 11-52-0 check.


<table>
<thead>
<tr>
<th>Treatments</th>
<th>Canola</th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-furrow rate of 2 lbs per acre.</td>
<td>in-furrow rate of 2 lbs per acre of Root Driver + 1 lb per acre of Carbon.</td>
<td>in-furrow rate of 40 lbs per acre.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results: weight of harvested and dried roots.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>302 mg</td>
<td>324 mg</td>
<td>194 mg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As a percentage of the 11-52-0 check

Canola

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Oats</th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-furrow rate of 2 lbs per acre.</td>
<td>in-furrow rate of 2 lbs per acre of Root Driver + 1 lb per acre of Carbon.</td>
<td>in-furrow rate of 80 lbs per acre.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results: weight of harvested and dried roots.

<table>
<thead>
<tr>
<th></th>
<th>Root Driver</th>
<th>Root Driver/Carbon</th>
<th>11-52-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1268 mg</td>
<td>1164 mg</td>
<td>974 mg</td>
<td></td>
</tr>
</tbody>
</table>

As a percentage of the 11-52-0 check

Oats
Independent 3rd Party Trials and Results

Based on impressive rooting results by Root Driver and the Root Driver/Carbon mixture in potted trials in the fall of 2013 and spring 2014, *Independent Third Party Replicated Trials were conducted on Soybeans, Corn, Spring Wheat, Oats and Canola for the 2014 growing season to harvest/yield. Assessments were taken throughout the growing season. 4 replicates of each treatment were performed.

**Spring Wheat – Treatments**

- 46-0-0 & Root Driver
- 46-0-0 & 11-52-0
- 46-0-0 & Root Driver/Carbon & Ultimate
- 46-0-0 (80% rate) & Root Driver/Carbon & Ultimate

**Oats – Treatments**

- 46-0-0 & Root Driver
- 46-0-0 & 11-52-0
- 46-0-0 (80% rate) & Root Driver/Carbon & Ultimate

* Independent third party trials conducted by ICMS, Portage La Prairie, MB

** On calculated LSD, did not statistically differ.
**Canola – Treatments**

46-0-0 & Root Driver
46-0-0 & 11-52-0
46-0-0 & Root Driver & Ultimate
46-0-0 (80% rate) & Root Driver/Carbon & Ultimate

**Soybeans – Treatments**

Root Driver 2 Lbs /ac
11-52-0 45 Lbs/ac

**Corn – Treatments**

46-0-0 & Root Driver
46-0-0 & 11-52-0
46-0-0 & Root Driver/Carbon and Ultimate
46-0-0 (80% rate) & Root Driver/Carbon & Ultimate

* Independent third party trials conducted by ICMS, Portage La Prairie, MB
** On calculated LSD, did not statistically differ.
Fertilizer Products

All Products are engineered for ultra-low use rates and designed to address the specific needs of crops, providing complete protected nutrition, exactly as the plant requires them. Our solutions deliver proven agronomic results, the industry’s highest uptake efficiency and reduction in environmental impact.

Key to all Products is the Carbon–Complex Protection System used in the manufacturing in order to prevent tie-up reactions from happening in the soil for an extended period of time. All of our Carbon based fertilizers include the right balance of L-amino acids, Humic acids, Fulvic acid and soluble Carbon.

Root Driver

Granular, Soluble Crystal and Liquid

Overwhelming research proves that plants require an available supply of Phosphorous in the beginning stages of development to reach their growth potential. Most inadequately protected Phosphorous is wasted, forming solids in the soil (becomes tied up). Our Process protects the Phosphorous, giving your crops the nutrients they need, when they need it.

Root Driver is the most plant available, lowest input Phosphorous source in the industry. Input rates at only 1 – 3 lbs per acre are possible because of the Carbon-Complex Protection of the nutrient. Most of the traditional Phosphorous inputs are subject to soil tie-up and are eroded into the ground and surface water.

K+P flowable

Liquid

Proper Potassium nutrition is critical in plants for water movement, energy production and the activation of enzymes that promote overall plant strength and productivity.

The combination of ionic Potassium with Phosphorous in K+P provides the optimum solution for strong and high yielding crops.
Ultimate

Liquid
At crop set, plants are at their greatest need of proteins for development and nutrients that counter-balance the external and internal stresses of development.

The combination of complexed and chelated ionic nutrients in Ultimate provides the optimum solution for strong plants and high-yield crops.

Propel Ca

Liquid
Growers frequently encounter two types of soil construction problems: soils that are “dispersed,” that is, allow too much water, essentially drowning the roots – or soils that are “compacted,” keeping water out of the micropores where nutrients are taken up by the plant.

Calcium has been proven to be an essential ingredient for maintaining critical pore space for root development and nutrient uptake.

Propel Ca adds an important surfactant to carry the Calcium where it is most needed, while also lowering surface tension for better water movement.

Carbon

Liquid or Soluble Powder
Certain levels of microbial activity in the soil are critical to efficient plant uptake of nutrients and ultimately, optimum growth and yields.

The basic building blocks of all life forms is Carbon, and with the proper mix of both Carbon and Proteins, all crops – in any region – can benefit from an effective application that provides plant-available nutrients. Additionally, Humic and Fulvic acids act as natural complexing agents for greater Nitrogen efficiency.

The soluble carbon within Carbon provide the “food” that the soil microbes seek out.
Macro Micro

*Liquid or Soluble Powder*

For Growers, the right balance of micronutrients, provided in a reacted form for ready plant uptake is paramount. Macro/Micro is the answer. Macro/Micro provides just the right mix of Zinc, Manganese, Copper and Boron.

Max Amino-N

*Soluble Powder*

Amino acids are the building blocks of proteins, which are converted by plants into new growth. Some Amino acids also play a critical role in phytosynthesis, the process by which carbohydrates are converted into both energy and new proteins. Humic acid is a common treatment, but Amino acids are often neglected at the expense of potential plant productivity and plant resistance to environmental stresses. Max Amino-N is a water soluble organic nitrogen fertilizer containing 18 L-Amino acids and is derived exclusively from vegetable proteins.

Stubble Muncher

*Soluble Powder*

Today’s corn hybrids leave virtual tree trunks in a combine’s wake. Managing crop residue is one of the major challenges faced by farmers today. Applying SM improves planting, seed placement and germination for the following crop year by accelerating residue breakdown, adding to and increasing soil biology. The addition of plant available calcium aids in the reduction of soil compaction and allows the soil biology to thrive deeper in the soil structure.
My Experience with Root Driver

In Spring 2014 we applied at seeding, Root Driver on Wheat, Soybeans and Peas. In the wheat there was an over-all yield gain of 2 bu/acre over our regular fertilizer program. On Soybeans we had a yield increase of 4 bu/acre versus regular fertilizer program. For Peas the Root Driver applied area had a yield advantage of 4 bu/acre than not using Root Driver.

- **Ease of application.** With the set-up on our farm we found Root Driver went into solution easy and stayed in solution.

- **The low application rates** of Root Driver makes it a very simple product to use. We brought our Root Driver to the field in a pick-up.

- Root Driver **does not corrode equipment.**

- Most importantly, Root Driver increased the yields across each crop we used it on.

In 2015, we will continue to use Root Driver on our farm.

Laurent Ponsin, St. Eustache, Manitoba