



# PRODUCT GUIDE

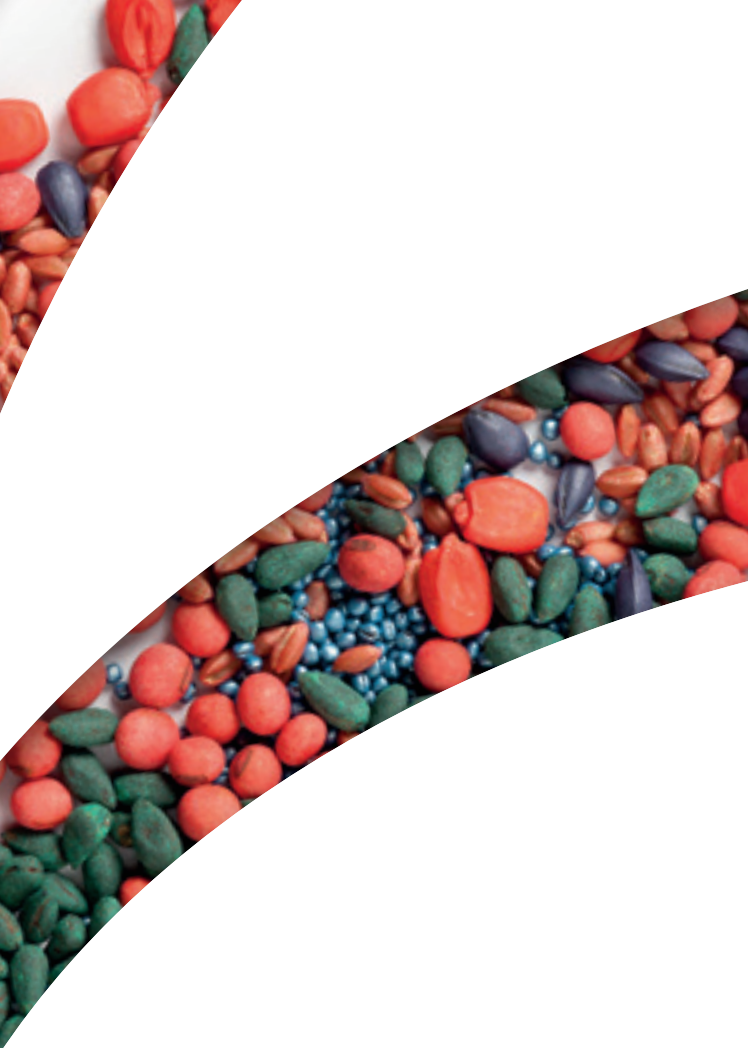
Beyond  
Seed  
Protection™



**Seedcare™**

syngenta.





## INTRODUCTION

3-5

### Syngenta Seedcare Institute Network and services

- Global network with local access 6-11
- Stewardship 12
- Best Management Practices 13

### SYNGENTA SEEDCARE TECHNOLOGY: COMPLETE OFFER

- Root Health 14-15

#### LATEST TECHNOLOGIES

- VIBRANCE™ Seed Treatment Fungicide 16-17
- EPIVIO™ Seed Treatment Abiotic Stress Management 18-25
- VISIVIO™ Seed Treatment Insecticide 26-27
- CLARIVA™ Seed Treatment Nematicide 28-29
- PLENARIS™ Seed Treatment Fungicide 30-31
- BION® 375FS Seed Treatment Fungicide 32

#### Seed Treatment Fungicides:

- APRON® XL 33
- CELEST® 34-35
- DIVIDEND® 36
- DYNASTY® 37
- MAXIM® 38-39

#### Seed Treatment Insecticides:

- CRUISER® 40-41
- FORCE® 20CS 42-43
- FORTENZA® Duo 44-45

#### Seed Treatment Nematicides:

- AVICTA® 46-47

#### Vegetable Seed Treatment Solution:

- FarMore® Technology 48-49

### Tailored to crops

- Cereals 50-51
- Corn 52-53
- Soybeans 54-55
- Rice 56-57

#### Diverse Field Crops and Vegetables

- Canola and Oil Seed Rape 58-59
- Sunflower 60-61
- Sugar Beet 62-63
- Vegetables 64-65

## LEADING TECHNOLOGIES

### SOLUTIONS FOR FIELD CROPS

#### Seed Treatment Abiotic Stress Management:



#### Seed Treatment Fungicides:



#### Seed Treatment Insecticides:



#### Seed Treatment Nematicides:



### SOLUTIONS FOR VEGETABLES

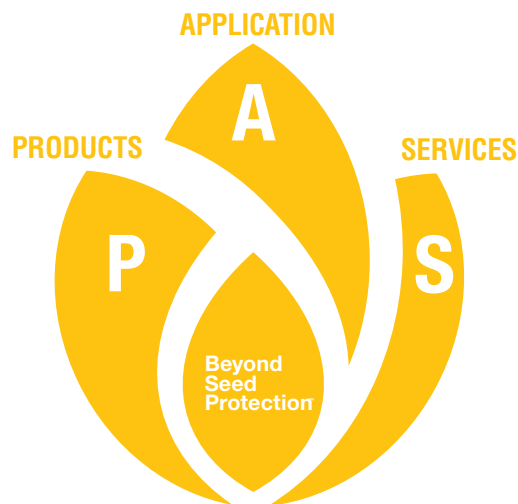


## INTRODUCTION

Successful crop production starts with seeds, the essence of life. Today's seeds offer a broad spectrum of varieties and traits that give undisputed advantages to the growers. Seed breeders and growers invest significant amounts of money into these technologies. This investment is best protected while exposed in soil to diseases, insect pests, nematodes or abiotic stresses (eg. drought), seed treatments are critical to protect the genetic potential of high value seeds.

To address these challenges, Syngenta Seedcare offers an industry leading product portfolio based on its world-class research, product development and support capabilities. We call it a three-pillar offer **P.A.S. (Products – Application – Services)** which delivers value to our customers **BEYOND SEED PROTECTION™**:

\* As of this printing, CLARIVA™ is only registered for sale and use in the USA and Brazil, and other products may not be registered in all countries. Please check with your local representatives to ensure product registration status



### 01 Products – Broad range and innovative pipeline

Our innovative product range features combinations of multiple active ingredients, addressing the needs of growers as well as of seed companies, seed multipliers or retailers around the globe in nearly all crops. Seeds and seed treatment technologies come together before planting to form an integrated solution that is conveniently supplied in the seed bag to offer several benefits: protecting against early disease and pests, protecting genetic yield potential, applying treatments at lower use rates, complementing the genetic resistance or tolerance against diseases or pests and protecting genes from resistance breaking. This helps to ensure a healthier, higher yielding plant while a targeted and low-rate application provides minimal environmental impact.

### 02 Application - In-depth advice and support in application technology

A treated seed is the combination of genetics and seed-applied technologies. Only a high-quality application onto the seed helps to ensure the desired in-field performance, while the impact to the seed company's plant operations should be minimal. Syngenta Seedcare has incorporated these needs into Seedcare specific formulations and recommends customers with individual recipes that fulfill highest quality standards. Seedcare will help customers to assess and manage application quality, select the best application technology, provide seed biology and safety, conduct stewardship and training and provide product marketing support.

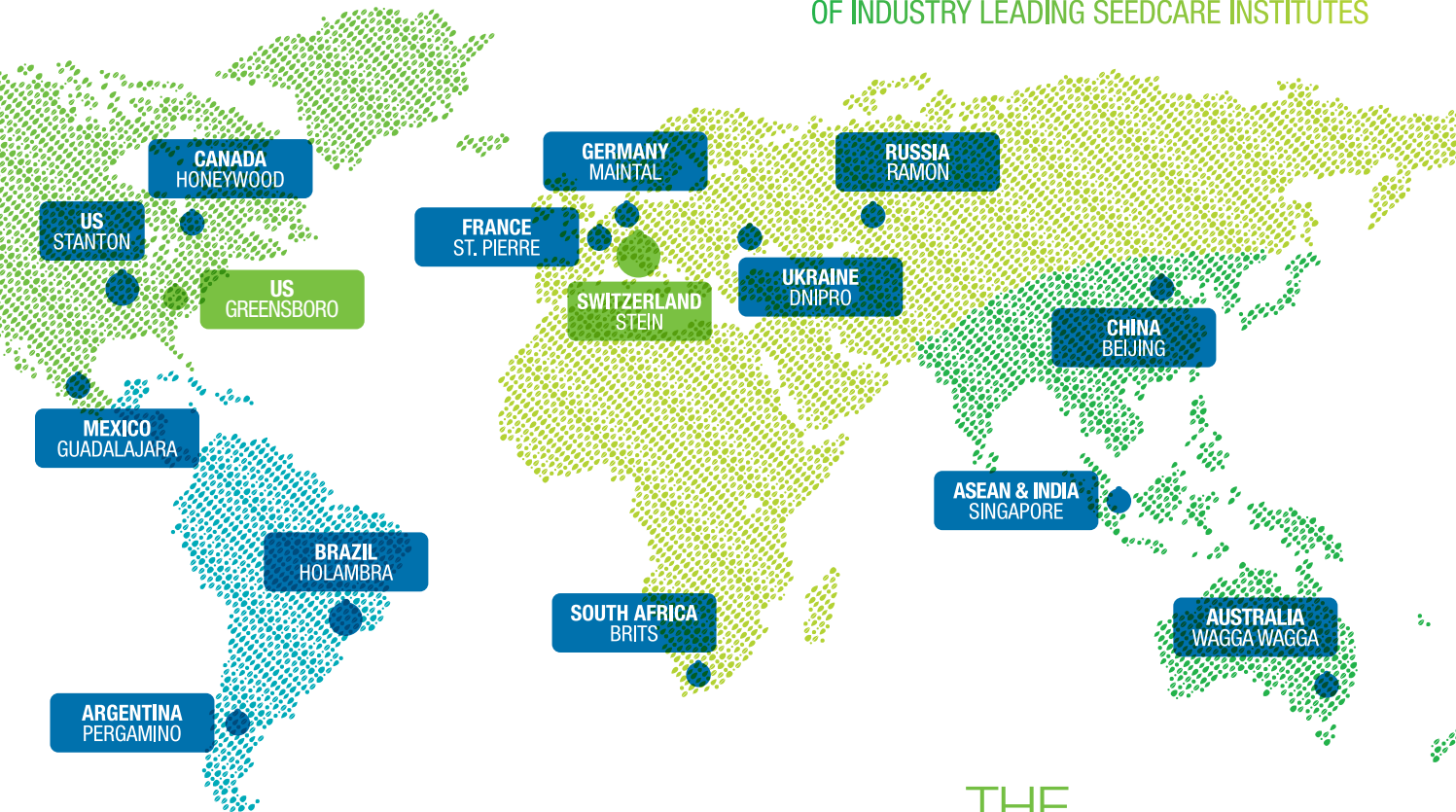
### 03 Services - Tailored customer-centric product marketing services

The seed business is a very time-sensitive operation, allowing little time between harvest, processing and treatment. Hence, we provide flexibility to our customers in planning and procurement processes. Our supply chain is set up for in-season response to customer demands. We also provide agronomic know-how and co-marketing support to help create demand for the brands and their value towards growers.

# OUR GLOBAL KNOWLEDGE

# LOCAL DELIVERY

DISCOVER OUR GLOBAL NETWORK OF INDUSTRY LEADING SEEDCARE INSTITUTES



● GLOBAL SCI ● LOCAL SCI

THE  
**SEEDCARE**  
INSTITUTE™

In a global environment with increasingly complex business operations, simplifying processes, applying know-how, using data efficiently and setting standards is imperative. At *The Seedcare Institute* of Syngenta Seedcare, a team of highly-skilled experts at the Stein headquarters in Switzerland strives for excellence in defining standards in the six key categories of application support:

1. Recipe Development
2. Application, Quality Assessment & Engineering
3. Stewardship
4. Training
5. Seed Safety and Biology
6. Product Marketing Support

Syngenta Seedcare invests heavily in *The Seedcare Institute*, setting up facilities around the world to deliver these services in several countries and all regions.

*The Seedcare Institute* is made up of 14 fully functional facilities where experts make sure global service standards are met and implemented based on local market needs and customer requests.

Syngenta sells seed treatment formulations to customers, who apply slurries based on recipes which describe the composition and the application process settings. A slurry consists of different components, such as a seed treatment product, a colorant and seed coating additive. Global standards ensure that specific procedures are used in the design and documentation of a recipe and a set of quality

parameters are fulfilled to meet customer, grower and regulatory needs around the globe.

Similar processes in defining standards and protocols are applied for the five other service categories, locally: In application technology and engineering, our experts work with market leading equipment manufacturers to stay at the forefront of innovation and engineering capabilities. We listen to our customers and assist them in selecting the right equipment and placing it in the best configuration for their plant, tailoring our recommendations to our customers' unique circumstances.

In seed safety, we follow ISTA (International Seed Testing Association) standards and have established a network of partner seed testing laboratories locally, covering all continents, to deliver seed safety data on our customers' preferred seed varieties. In seed treatment stewardship, we apply best practice methods according to internationally recognized standards in crop protection.

We also provide product marketing support, to help customers demonstrate the benefits and value of our seed treatment brands. We have established testing protocols in the lab and the field to investigate the performance of our seed-applied technologies on customers' crop varieties. Tests include root and shoot development, yield and quality improvement and many more.

Seedcare Institute,  
Stein, Switzerland

# THE SEEDCARE INSTITUTE™

## TASKS AND SERVICES

### RECIPE DEVELOPMENT

- Recipe recommendations customized for your local needs
- Choice of film coating polymer and color optimized for quality
- Recipe calculators and digital tools to support operations

### APPLICATION, QUALITY ASSESSMENT & ENGINEERING

- Recommendations and support with independent industry partners selecting the most suitable and adapted equipment
- Full sets of treated seeds and quality assessment data for new product introduction
- Engineering and design of seed treating monitoring and controls improvement

### STEWARDSHIP

- Educational program modules for safe use of seed treatment products
- Coordinated assessments of sites and plants for safety, engineering and efficiency
- Regulatory compliance and improvement programs for the end-to-end value chain

### TRAINING

- Customer operators trained in fundamental knowledge of seed treatment operation and use
- Train-the-trainer sessions for continuous refreshment and improvement on sites
- Tailored training solutions in agronomics, technologies and marketing

### SEED SAFETY & BIOLOGY

- Industry standard advanced and independent seed safety information on all our products
- Peace of mind for our customers, quality assurance for their growers
- Continuously improved test methods and seed quality through cross-industry and customer collaborations

### PRODUCT MARKETING SUPPORT

- Tools to visualize the unseen additional beneficial effects of our active ingredients
- Support in field testing designs and platforms at demonstration events
- Expertise in combinations and their effects on root development with rhizotrones and root technology

## STEWARDSHIP

Stewardship is a shared responsibility along the supply chain, especially regarding the safe use of seed-applied technologies. Comprehensive quality assurance programs, established with our customers, help ensure that high-quality treated seeds are delivered to farmers' fields. All the necessary steps that constitute Best Product Stewardship are highlighted by Syngenta training programs for both employees and customers.

## BEST MANAGEMENT PRACTICES

The seed treatment process, including the handling and use of treated seeds, should be managed responsibly and sustainably to maximize the benefits of seed treatment. Establishing and executing Best Management Practices for professional application of seed-applied technologies, safe handling and proper planting of treated seeds contributes substantially to sustainable, intensive agriculture.

Syngenta provides training programs and promotional material for Best Management Practices that address the safe use of treated seed on: (i) landscapes with areas of high biodiversity and habitats for pollinators, such as bumblebees, honeybees, butterflies, birds and small mammals; (ii) water bodies containing water organisms; (iii) other non-target insects and animals on fields and/or in the vicinity of fields sown with treated seed; and (iv) fields close to rural populations/towns/plants.



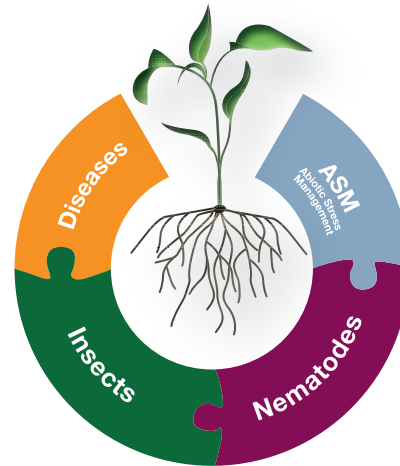


## ROOT HEALTH

More and more research points to the crucial role of healthy roots in ensuring better crop productivity.

Roots matter! Experts say that 80% of all plant problems start with soil/root problems.\* But because they are out of the sight, roots are often out of mind.

We see Root Health as a key breakthrough to crop productivity improvements and an important source of innovation.



Roots are crucial because healthy roots enable plants to maximize their genetic potential. Our ambition is to translate these complex underground challenges into new technologies and effective solutions that promote Root Health for higher, more robust yields. As we want to make a difference in helping the modern agriculture and the growers, we rely on a comprehensive set of root technologies and we are working with a worldwide Root Health research community.



**RootingPower™ is the link between healthy roots and better crop productivity.**

Worldwide field trials demonstrate the powerful link between Root Health and increased stress tolerance, resulting in high yields under a broad range of conditions.

Key research scientists from all regions have been analyzing interactions between roots, diseases, moisture efficiency, nutrient utilization and rhizosphere. They found that some new-generation seed treatment solutions such as VIBRANCE™ and EPIVIO™ can effectively enhance Root Health for many crops.





## VIBRANCE™ – New Seedcare Compound for Root Health

VIBRANCE™ is the first Syngenta molecule developed specifically for seed treatment. In addition to broad spectrum disease control, it offers unique RootingPower™ that results in stronger, healthier roots for higher crop productivity – right from the start. Worldwide field trials show higher and more consistent yields for all major crops.

### Root Health: A key to better crop productivity

Changes in agriculture worldwide – including increased demand for food and biofuel – drive new research directions such as Root Health. This research increasingly focuses on the ability of roots to efficiently use water and nutrients as a key to further improvements in crop productivity. VIBRANCE is a major step toward integrated Root Health solutions.

### Protecting and enhancing root systems for key crops worldwide

With the newest mode of action for the seed treatment market, VIBRANCE defends roots against a wide range of diseases carried in soil, air and on the seed. It provides long-lasting protection of the entire plant root system through critical crop development stages and under a wide range of environmental conditions. The VIBRANCE root stimulating effect results in better biotic and abiotic stress management – the foundation for higher and more consistent yield.

Syngenta won the 2011 Agrow Award for Best New Crop Protection Product for VIBRANCE, underscoring the value of this innovation.

<b>Additional brands</b>	VIBRANCE™ Duo, VIBRANCE™ Trio, VIBRANCE™ SB, VIBRANCE™ Maxx, VIBRANCE™ Integral, VIBRANCE™ Gold, CRUISERMAXX® VIBRANCE™ Beans, VIBRANCE™ CST, CRUISERMAXX VIBRANCE™ Cereals, CRUISER® VIBRANCE™ Quattro, Helix® VIBRANCE™, VIBRANCE™ XL, VIBRANCE™ Extreme and VIBRANCE™ Star.
<b>Active Ingredient</b>	Sedaxane
<b>Mode of action</b>	Belongs to the SDHI (succinate dehydrogenase inhibitor) class of fungicides.

<b>Targets</b>	Long-lasting protection against difficult-to-control seed-, soil-, and air-borne pathogens such as: <i>Rhizoctonia spp.</i> , <i>Ustilago spp.</i> (on cereals), <i>Tilletia caries</i> , <i>Urocystis occulta</i> , <i>Pyrenophora graminea</i> , <i>Microdochium nivale</i> , <i>Typhula spp.</i> , <i>Sphacelotheca reiliana</i> , <i>Macrophomina</i> , <i>Sclerotium spp.</i> and also some activity on <i>Verticillium</i> , <i>Phoma</i> , <i>Helminthosporium solani</i> , <i>Phakopsora</i> , <i>Cochliobolus sativus</i> .
<b>Main crops</b>	Cereals, soybeans, canola/oilseed rape, corn, potatoes, rice, sugar beets, cotton and pulses.
<b>Geography</b>	VIBRANCE products are approved for use in countries around the world including Argentina, Australia, Belgium, Bolivia, Canada, Czech Republic, Chile, China, Dominican Republic, France, Hungary, Italy, Latvia, Lithuania, Mexico, the Netherlands, Paraguay, Poland, Russia, Sweden, the U.K, Ukraine, Uruguay and the U.S. Please check with your local regulatory authority for further information.
<b>Date of first launch</b>	2011
<b>Advantages and Main Benefits</b>	<p>Broad spectrum disease control for all major crops, including best-in-class protection against <i>Rhizoctonia spp.</i></p> <p>Long-lasting protection of the roots throughout critical crop development stages.</p> <p>Increased water and nutrient uptake through healthier, more robust root systems – for stronger plants with improved stress tolerance.</p> <p>Higher performance under abiotic stress: VIBRANCE shows biostimulant effect for optimized root performance under a wide range of conditions. Specifically increases photosynthetic efficiency under drought stress.</p> <p>Protection of crop genetics and improved yield potential.</p> <p>Support of sustainable agriculture by helping crops take better advantage of available water and soil resources.</p> <p>Higher and more robust yields.</p>



## New Seedcare stress management and crop enhancement solutions for the industrial market

In combination with current Seedcare solutions

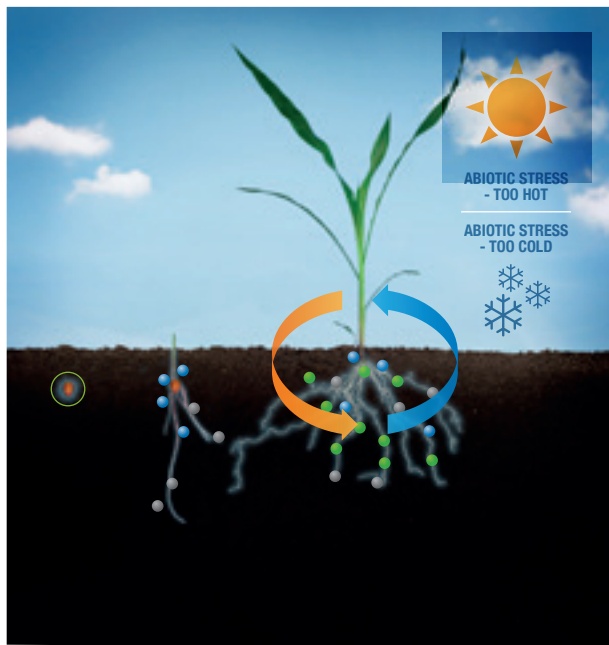
- The EPIVIO™ family of products brings innovation to the growing category of stress management and crop enhancement
- It consistently demonstrates improved plant growth and establishment.

### • Enables stronger plant growth

The EPIVIO family helps seedlings get the most from the soil, **enabling recovery from stresses and stimulating early plant vigor and growth.**

As strong seedlings grow, these young plants in return provide nutrients to the soil microflora, initiating a natural symbiotic cycle centered around the rhizosphere.

This cycle benefits both the plant and the surrounding soil and, ultimately, contributes to yield potential.



### • Works together with other Seedcare products

Syngenta ensures that EPIVIO products are **compatible and mixable with other Seedcare offers.**

Combined with current Syngenta Seedcare products, the innovative solutions with EPIVIO improve conditions for seedling growth while addressing difficult-to-control pathogens, insects and nematodes, resulting in stronger plants.

### Tested on local varieties, with their specific soil and climate conditions, the EPIVIO family of products

consistently demonstrates improved plant growth and establishment, which benefits yield.

### • Acts as intended; stable with excellent seed safety

The easy to apply, industrial formulations activate once the seed is planted in soil – and are especially effective under stress conditions.

The EPIVIO family complements the Syngenta Seedcare portfolio.

For more information, please contact your local Syngenta representative or email us at [chbs.seedcare@syngenta.com](mailto:chbs.seedcare@syngenta.com).

# Epivio™ Vigor

- **Enables stronger plant growth**

**Tested on local varieties**, with their specific soil and climate conditions, EPIVIO™ Vigor solution enables **seedling stress tolerance and improves plant growth and establishment.**



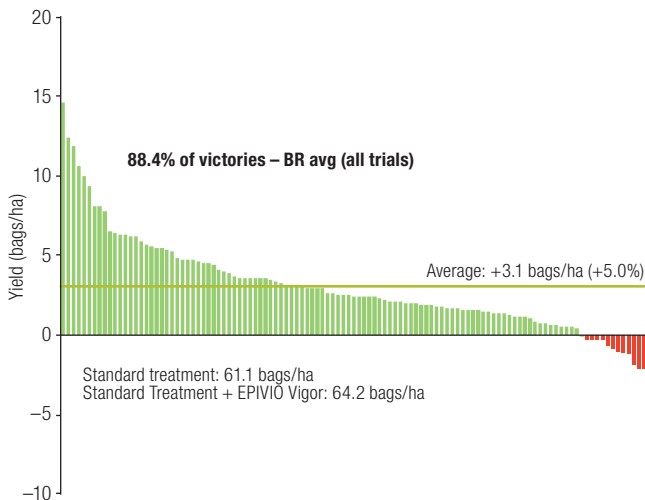
Standard treatment

EPIVIO Vigor solution

- **Works in harmony with other Seedcare products**

Applied as a seed treatment together with other Syngenta Seedcare products, **EPIVIO Vigor consistently demonstrates benefits to yield.**

## EPIVIO Vigor delivers yield increase with consistency in soybeans



112 Trials (seasons: 12/13; 13/14; 14/15; 15/16 and 16/17)  
BR 5 season average

- **Acts as intended; stable with excellent seed safety**

**Supported by Syngenta research**, the easy to apply, industrial formulations are stable on the seed, activate when planted in soil.

### Upcoming launches

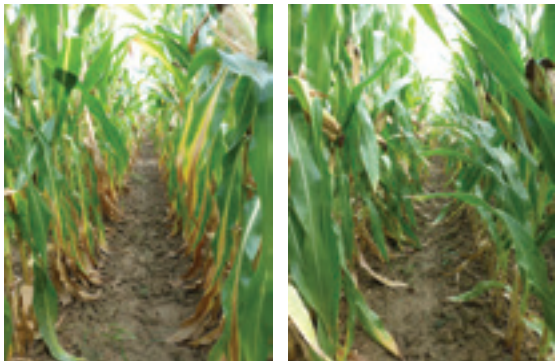
- **First launched for soybean in Brazil in 2016**
- **Further crops and geographies to be added**

For more information, please contact your local Syngenta representative or email us at [chbs.seedcare@syngenta.com](mailto:chbs.seedcare@syngenta.com).

# Epivio™ Energy

- **Enables stronger plant growth**

**Tested on local varieties**, with their specific soil and climate conditions, EPIVIO™ Energy solutions enables **seedling stress tolerance and improves plant growth and establishment.**



Standard treatment

EPIVIO Energy solution

- **Works in harmony with other Seedcare products**

Applied as a seed treatment together with other Syngenta Seedcare products, **EPIVIO Energy enhances soil microflora activity, initiating a natural symbiotic cycle around the rhizosphere that benefits plant performance.**



- **Acts as intended; stable with excellent seed safety**

**Supported by Syngenta research**, the easy to apply, industrial formulations are stable on the seed, activate when planted in soil.

### Upcoming launches

- **First launches in India in 2018 for corn**
- **First launches in Europe in 2018 for corn and sunflower**

For more information, please contact your local Syngenta representative or email us at [chbs.seedcare@syngenta.com](mailto:chbs.seedcare@syngenta.com).



- **Enables stronger plant growth**

**Tested on local varieties**, with their specific soil and climate conditions, EPIVIO™ C solution enables **seedling stress tolerance and improves plant growth and establishment.**



Standard treatment

EPIVIO C solution

- **Works in harmony with other Seedcare products**

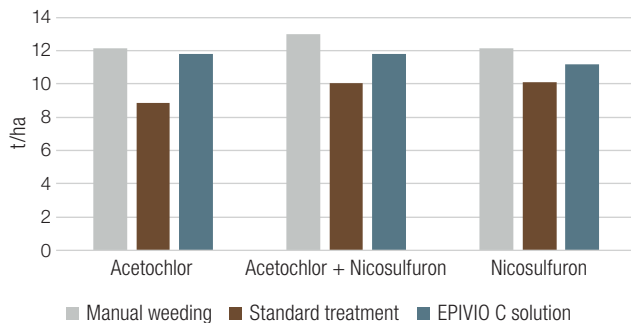
Applied as a seed treatment together with other Syngenta Seedcare products, **EPIVIO C enhances herbicide tolerance and demonstrates benefits to yield.**

- **Acts as intended; stable with excellent seed safety**

**Supported by Syngenta research**, the easy to apply, industrial formulations are stable on the seed, activate when planted in soil.

#### Yield increases by EPIVIO C solution

Corn trials in Heilongjiang, China 2015



#### Upcoming launches

- **First launched for corn in China in 2016**
- **Further crops and geographies to be added**

For more information, please contact your local Syngenta representative or email us at [chbs.seedcare@syngenta.com](mailto:chbs.seedcare@syngenta.com).



**VISIVIO™ seed treatment is a combination of the insecticides thiamethoxam and sulfoxaflor and the fungicides difenoconazole, metalaxyl-M, fludioxonil and sedaxane. VISIVIO is registered in canola, rapeseed and oilseed mustard and controls insects including striped and crucifer flea beetles, and diseases such as seed-borne blackleg, seed-borne *Alternaria*, and the seedling disease complex (damping-off, seedling blight, seed rot and root rot) caused by *Pythium spp.*, *Fusarium spp.* as well as offers best in class *Rhizoctonia* protection.**

<b>Active Ingredient</b>	Sulfoxaflor, thiamethoxam, difenoconazole, metalaxyl-M, fludioxonil and sedaxane
<b>Mode of action</b>	VISIVIO contains the active ingredients sulfoxaflor, thiamethoxam, difenoconazole, metalaxyl-M, sedaxane and fludioxonil. This product controls a broad spectrum of seed and soil-borne diseases as well as early-season insects through multiple modes of action.
<b>Crops</b>	Canola; Oilseed Mustard; Rapeseed
<b>Geography</b>	Canada
<b>First launch</b>	Fall
<b>Product benefits</b>	<ul style="list-style-type: none"> <li>• Offers enhanced early-season protection from both striped and crucifer flea beetles</li> <li>• Helps keep insect threshold levels low and gives growers the opportunity to save time and potentially spraying during a very busy time</li> <li>• Four fungicides and two powerful insecticides deliver stronger roots that take full advantage of soil nutrients and can better defend against soil diseases</li> <li>• Industry-leading, broad-spectrum pest control that includes <i>Rhizoctonia</i> and flea beetles</li> <li>• Quick-acting, long lasting protection with proven seed safety</li> <li>• Earlier flowering and pod set</li> </ul>

#### Product benefits

- Consistent performance under a wide range of growing conditions
- Combined systemic movement with ideal soil mobility

VISIVIO contains sulfoxaflor which is licensed from Dow AgroSciences



**CLARIVA™ pn is a seed treatment nematicide that offers soybean growers revolutionary control of soybean cyst nematode (SCN). Through its active ingredient *Pasteuria nishizawae*, an obligate parasite of the nematode, CLARIVA pn delivers a direct mode of action that is lethal to SCN.**

#### Product Scope

- Provides season-long activity
- Works under variable environmental conditions and is independent of soil pH, temperature and moisture
- Viable from day one
- Does not harm non-target organisms
- Works across all known *Heterodera glycines* (HG) types
- Complements crop rotation and resistant varieties

<b>Additional brands</b>	CLARIVA Elite Beans and CLARIVA pn
<b>Active Ingredient</b>	From day one, CLARIVA pn manages SCN through its active ingredient <i>Pasteuria nishizawae</i> , an endospore-forming bacterium that is a natural enemy to SCN. <i>Pasteuria nishizawae</i> offers immediate infection, stops SCN feeding and reproduction, ultimately killing the nematode.
<b>Mode of action</b>	Once treated seed is planted, <i>P. nishizawae</i> spores are released into the soil. The spores attach to the outer layer, or cuticle, of second-stage juvenile SCN as they pass through the soil. Once attached, the spores produce a germ tube that penetrates and infects the nematode's interior body with <i>P. nishizawae</i> . The internal proliferation of cells and sporulating structures of <i>P. nishizawae</i> reduce reproduction and lead to the expansion and death of the female nematode. As the remnants of the infected nematode decompose, the <i>P. nishizawae</i> spores are again released into the soil.

<b>Targets</b>	CLARIVA pn will be recommended for application in combination with CRUISERMAXX® and VIBRANCE™ seed treatment products, not as a stand-alone seed treatment. The offering is called CLARIVA Elite Beans, a powerful seed treatment combination that provides growers with the most comprehensive pest protection against SCN, insects and diseases through the active ingredients <i>P. nishizawae</i> , thiamethoxam, mfenoxam and sedaxane. The broad spectrum of protection optimizes soybean root heath, improves emergence and enhances plant stands, and protects the genetic potential of high-value seed from day one.
<b>Main crops</b>	Soybeans and sugarbeets
<b>Geography</b>	North and South America
<b>Date of first launch</b>	2013 in the USA
<b>Advantages and Main Benefits</b>	<p><b>CLARIVA Elite Beans</b></p> <ul style="list-style-type: none"> <li>• Offers triple protection in the form of a nematicide, an insecticide and three fungicides</li> <li>• Provides protection from a broad-spectrum of early-season diseases, insects and season-long control of SCN</li> <li>• Promotes healthier roots; delivers better nutrient uptake and water usage and improves emergence, plant stand and vigor</li> <li>• Enhances agronomic practice of crop rotation, bolsters performance of resistant varieties and helps manage resistance</li> <li>• Excellent seed safety</li> </ul>

\* CLARIVA is currently only registered for sale and use in the USA, Canada and Brazil. Please check with your local representative on the actual registration status.





**PLENARIS™ is a powerful technology from Syngenta Seedcare for downy mildew control in sunflowers. PLENARIS uses the most advanced seed applied technology, and is the latest addition to the most comprehensive seed treatment portfolio in the industry. Syngenta Seedcare contributes to sustainable downy mildew resistance management which combines multiple modes of action with the best genetics. PLENARIS has a new mode of action and controls all races of the genetically variable pathogen, *Plasmopara halstedii*.**

<b>Active Ingredient</b>	PLENARIS contains Oxathiapiprolin which belongs to the novel chemical group of piperidiny-thiazole—isoxazolines inhibiting the oxysterol binding homologue (FRAC Code List ©*2017).
<b>Mode of action</b>	When applied as a seed treatment, PLENARIS is released from the seed and dispersed into the surrounding soil which creates a protective zone around the seedling and emerging roots. Due to the high potency of PLENARIS, the seedling is protected from the mobile zoospores of the downy mildew pathogen, and the source of primary infection is controlled. PLENARIS is systemic, and a small amount of active ingredient moves upwards in the stem via the xylem. This action protects against the early stages of secondary infection.
<b>Symptoms</b>	Initially, symptoms of the primary infection are observed in seedling damping-off. If infected plants survive, they will appear stunted and chlorotic mottling is observed on the leaves. Primary infection contributes to economic loss due to the reduction in stand and the development of unproductive heads. If left untreated, the downy mildew will produce zoosporangia, which contributes to secondary infection and survival of the pathogen long-term.
<b>Target</b>	Downy mildew on sunflower.

<b>Main crop</b>	Sunflower
<b>Geography</b>	PLENARIS is registered on sunflowers in the United States, Argentina and Canada. Future registrations will include EU-28 (e.g. France, Spain, Hungary, Romania, Bulgaria, Germany, Switzerland), Turkey, Serbia, Russia, Ukraine and other sunflower producing countries.
<b>Date of first launch</b>	United States 2017
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• Highly active against all races of the pathogen <i>Plasmopara halstedii</i></li> <li>• Contact and moderate systemic fungicide</li> <li>• New mode of action</li> <li>• Effective downy mildew control, including the control of APRON® resistant strains</li> <li>• Liquid formulation</li> <li>• Long lasting activity for efficient seedling protection</li> <li>• Proven disease control</li> <li>• Resistance management tool</li> <li>• Consistency in all conditions</li> <li>• Confidence and security in control</li> <li>• COMPLEMENTS GENETIC RESISTANCE</li> </ul>

\* Oxathiapiprolin is licensed from Dupont



<b>Active Ingredient</b>	BION® 375FS contains Acibenzolar-S-Methyl which belongs to the novel chemical class of Benzothiadiazoles
<b>Mode of action</b>	ASM induces or activates the natural defense mechanism (SAR = Systemic Acquired Resistance) in the plant by simulating salicylic acid, a key component in the SAR pathway
<b>Portfolio Fit</b>	Enhances and complements the performance of APRON® XL (Mefenoxam), DYNASTY® (Azoxystrobin Technology) and PLENARIS™; offers a novel resistance management tool by acting not on the pathogen but inducing the natural resistance
<b>Targets</b>	Downy Mildew of Sunflower caused by <i>Plasmopara halstedii</i>
<b>Symptoms</b>	Initially, symptoms of the primary infection are observed in seedling damping-off. If infected plants survive, they will appear stunted and chlorotic mottling is observed on the leaves. Primary infection contributes to economic loss due to the reduction in stand and the development of unproductive heads. If left untreated, downy mildew will produce zoosporangia, which contributes to secondary infection and long-term survival of the pathogen.
<b>Main Crops</b>	Sunflower
<b>Geography</b>	BION 375FS is registered in US. Future registrations will include EU-27 (e.g. France, Spain, Hungary, Romania, Bulgaria, Germany, Serbia etc.), Turkey, Russia, Ukraine and many other sunflower producing countries
<b>Date of first launch</b>	2018/2020 treatment season in US
<b>Advantages and main benefits</b>	<ul style="list-style-type: none"> <li>• BION 375FS has no direct anti-microbial activity</li> <li>• BION stimulates reactions in the plant, similar to what occurs during natural disease infection (unique mode of action)</li> <li>• Seed treatment is the perfect application technology as BION 375FS must be applied before the onset of disease</li> <li>• BION 375FS should be used as part of an Integrated Disease control strategy</li> <li>• Excellent compatibility with other downy mildew technologies</li> <li>• Complements genetic resistance</li> <li>• Suppresses both primary and secondary infection</li> </ul>



**Excellent control of seed, soil borne and early season foliar diseases caused by downy mildews or *Pythium* species.** Only APRON® XL family contains the active ingredient metalaxyl-M resulting in fast and uniform emergence at ultra-low rates. To the APRON XL family belong easy-to-use products optimized to the target crops and designed to fulfill different customer needs.

<b>Additional brands</b>	WAKIL® XL is the premium product for the pea market and APRONMAXX® is a major innovation for soybean growers. APRON® STAR® is a great product for smallholders.
<b>Active Ingredient</b>	The active ingredient in APRON XL is mefenoxam (ISO-name: metalaxyl-M).
<b>Mode of action</b>	Systemic activity at ultralow application rates. In fungal cells it interferes selectively with the synthesis of ribosomal DNA, thus inhibiting mycelial growth and spore formation.
<b>Targets</b>	Seed and soil-borne diseases caused by fungi such as <i>Pythium</i> , <i>Phytophthora</i> , <i>Peronospora</i> , <i>Plasmopara</i> and other downy mildews.
<b>Main crops</b>	Cotton, sunflowers, peas, beans, corn and soybeans
<b>Geography</b>	APRON XL has a very broad registration in all major agricultural markets on a wide range of crops. Key markets are cotton and sunflowers worldwide, tropical corn for downy mildew control in APAC, peas in Western Europe (WAKIL XL) and soybeans in the Americas (APRONMAXX). Registration in a variety of countries helps enable free movement of treated seeds.
<b>Date of first launch</b>	Launch in all key markets between 1999 and 2002.
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• Outstanding activity against <i>Pythium</i> damping off and early downy mildew infections</li> <li>• Fast and uniform crop establishment</li> <li>• Excellent crop safety</li> <li>• Flexible in terms of application rates and tank-mix compatibility to adopt to disease and pest situations</li> </ul> <p>Favorable toxicology profile – APRON XL has a very low use rate.</p>



**Unique mode of action with broad spectrum seed and soil borne disease control securing uniform, healthy crop establishment as foundation for yield and quality in small grain cereals.**

The CELEST® product family contains the broad-spectrum seed treatment fungicide fludioxonil as its active ingredient. Fludioxonil is a contact fungicide that penetrates the seed surface and concentrates around the seed, thus providing a long-lasting protection zone around the young seedling. Its excellent crop safety combined with exceptional activity at low use rates against fungi – such as snow mold, seedborne and soilborne *Fusarium*, seedling blights or bunts – make fludioxonil a leading seed treatment molecule.

<b>Additional brands</b>	CELEST® Extra, CELEST® Trio, CELEST® Top, CELEST® Orge net, BERET® Gold, LANDOR® CT, AUSTRAL® Plus
<b>Active Ingredient</b>	The CELEST product family contains broad-spectrum fludioxonil which belongs to the chemical class of phenylpyrroles.  Fludioxonil is the only molecule of this chemical class and is used as a seed treatment on various crops, such as cereals.
<b>Mode of action</b>	The unique mode of action of fludioxonil interferes with protein kinase in fungal cells interacting at various points in the life cycle of the fungus. Contact activity.
<b>Targets</b>	CELEST offers the best available control of <i>Microdochium nivale</i> and <i>Fusarium</i> , two major seedling diseases in cereals, as well as excellent control of other seed borne diseases such as bunt and <i>Septoria</i> .
<b>Main Crops</b>	CELEST is applied to wheat, barley, rye, oats or triticale.

<b>Geography</b>	CELEST is most commonly used in European cereals. The active ingredient has registrations in many crops worldwide and is also used in numerous combination products.
<b>Date of first launch</b>	1993
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• The best available control of <i>Microdochium</i>, <i>Fusarium</i> and bunts resulting in better crop establishment and overwintering and building the foundation for yield and quality.</li> <li>• Unique mode of action and ideal partner for sustainable disease control via seed treatment.</li> <li>• High intrinsic activity and low use rate with favorable regulatory profile.</li> </ul> <p>High quality formulations optimized for cereals with low dust off and excellent handling properties.</p>



**Foundation seed treatment combining high performance with exceptional crop safety in extensive cereals. Unique dwarf bunt activity.**

DIVIDEND® shields wheat and barley from seedborne and soilborne fungi. It is a seed treatment that protects wheat and barley seeds from yield-robbing diseases such as bunt, smut, seedling blight and root rot.

<b>Additional brands</b>	DIVIDEND® Extreme, DIVIDEND® Star, DIVIDEND® XL
<b>Active Ingredient</b>	The DIVIDEND product family contains difenoconazole.
<b>Mode of action</b>	DIVIDEND is a high-performance, broad spectrum seed treatment. It acts by preventing formation of ergosterol in fungous cells. As a result the growth and development of pathogenic fungi is rapidly and permanently halted.
<b>Targets</b>	Difenoconazole is used to control a broad spectrum of important seedborne and soilborne diseases and some early foliar pathogens of cereals, including <i>Tilletia caries</i> , <i>Tilletia controversa</i> , <i>Rhizoctonia</i> , <i>Septoria</i> , <i>Fusarium</i> , <i>Ustilago</i> and many others.
<b>Main crops</b>	Outstanding performance and crop safety has made DIVIDEND the leading wheat seed treatment product in extensive cereals.
<b>Geography</b>	DIVIDEND products are approved for use in countries around the world, including Canada, the U.S., Brazil, Argentina, Eastern Europe and South Africa or EU countries.
<b>Date of first launch</b>	1992
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• Outstanding efficacy against major cereal seedborne and soilborne diseases.</li> <li>• Unique activity against dwarf bunt in wheat.</li> <li>• Excellent crop safety.</li> <li>• Range of mixture products to target specific disease problems and growing conditions.</li> </ul>



**DYNASTY® is an innovative, systemic seed treatment fungicide, with particular strengths against a broad range of damping-off and seedling blight diseases.**

<b>Additional brands</b>	DYNASTY® 100FS, DYNASTY CST® and DYNASTY® PD.
<b>Active Ingredient</b>	The DYNASTY product family contains azoxystrobin.
<b>Mode of action</b>	DYNASTY is a high-performance, systemic seed treatment that controls important seedborne and soilborne diseases and adds a different mode of action to the Syngenta Seedcare portfolio.
<b>Targets</b>	Azoxystrobin is used to control a broad spectrum of seed and seedling diseases, including <i>Rhizoctonia</i> seedling blight, <i>Pythium</i> damping-off, <i>Fusarium</i> , <i>Aspergillus</i> and others.
<b>Main crops</b>	Corn, cotton, peanuts and soybean
<b>Geography</b>	DYNASTY products are approved for use in U.S., Canada, Argentina and Australia.
<b>Date of first launch</b>	1993
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• Novel, systemic mode of action in seed treatment.</li> <li>• Activity on all four fungal groups – Deuteromycetes, Oomycetes, Ascomycetes and Basidiomycetes.</li> <li>• Improved control of <i>Rhizoctonia</i> – a hidden threat for many crops.</li> <li>• Complementary activity to fludioxonil and mefenoxam through enhanced performance against <i>Pythium</i> species and other important soilborne diseases.</li> </ul>



**MAXIM® brands are optimized and developed for use in crops, such as maize, soybeans, cotton and potatoes.**

Fludioxonil is the only molecule of this chemical class and is used as a seed treatment on various crops, such as maize (corn), soybean, potato or cotton. Fludioxonil is a contact fungicide that penetrates the seed surface and concentrates around the seed, thus providing a long-lasting protection zone around the young seedling. Its excellent crop safety combined with exceptional activity at a low use rate against targeted fungi, such as snow mold, seedborne and soilborne *Fusarium*, seedling blights or bunts, make fludioxonil a leading seed treatment molecule.

<b>Additional brands</b>	MAXIM® XL, MAXIM® 100, MAXIM® Quattro, MAXIM® Advanced, INFLUX® XL and CELEST® XL.
<b>Active Ingredient</b>	The MAXIM product family contains the broad-spectrum seed treatment fungicide fludioxonil as its active ingredient. Fludioxonil belongs to the chemical class of phenylpyrazoles.
<b>Mode of action</b>	Broad activity with unique mode of action. Interferes with protein kinase in fungal cells interacting at various points in the life cycle of the fungus.
<b>Targets</b>	MAXIM XL, a combination of fludioxonil with mefenoxam in corn. MAXIM 100 FS controls <i>Rhizoctonia solani</i> , <i>Fusarium</i> or <i>Helminthosporium</i> in potato. MAXIM QUATTRO, used on maize, is a mixture of four active ingredients providing four different modes of action including improved <i>Pythium</i> and <i>Rhizoctonia</i> activity and control of <i>Fusarium verticillioides</i> .
<b>Main crops</b>	Corn, soybean, potato, cotton, sunflower and vegetables.
<b>Geography</b>	Registered in multiple countries and use of straight or primarily mixture products.
<b>Date of first launch</b>	1993

**Advantages and Main Benefits**

- MAXIM stands for a modern seed treatment that protects the genetic potential of high-value seeds.
- Excellent seed safety combined with broad spectrum, reliable disease control for an optimum start of the crop.
- Good formulation properties and compatibility with binders, colorants and other service products.
- Range of global products optimized to meet local crop and customer needs



**For 20 years, CRUISER® seed treatment insecticide has been at the forefront of the industry. It gives growers broad-spectrum protection against early-season insects and a unique vigor effect that improves plant health and contributes to higher yields.**

The success of CRUISER is its best-in-class insect control, which is enhanced by the **Thiamethoxam Vigor Effect**. **Around the globe, CRUISER has demonstrated the ability to protect seeds and plants from a broad spectrum of sucking, chewing and soil pests, while providing a positive impact to plant health in more than 20 crops.** The active ingredient, thiamethoxam, protects plants against pests during the plants' most vulnerable period – up to the first 30 to 40 days of growth. The active ingredient also gives plants the ability to overcome both biological and physiological stresses, which has been demonstrated even during challenging environmental conditions.

#### **Additional benefits that deliver healthier plants**

Apart from blocking pest attacks at an early stage, CRUISER maximizes yield potential by enabling plant vigor. Plants treated with CRUISER grow more vigorously even under sub-optimal conditions. The result is that crops have thicker and stronger stems, and enhanced root systems. This Thiamethoxam Vigor Effect helps counter possible negative field conditions that expose plants to various stress factors, such as drought and floods, which reduce the plant's ability to reach its genetic yield potential.

<b>Additional brands</b>	CRUISER® 5FS, CRUISER® 350FS, CRUISER® 600FS, CRUISER® Force, CRUISERMAXX®, CRUISER® OSR, CRUISER® Advanced, CRUISER® Plus, CELEST® Top, CELEST® Maxx, HelixXtra®
<b>Active Ingredient</b>	Thiamethoxam, belongs to a subclass of neonicotinoid chemistry.

<b>Mode of action</b>	CRUISER stops pests feeding within hours of ingestion and preventing subsequent crop damage. The fast uptake and distribution of CRUISER provides comprehensive plant protection.
<b>Targets</b>	CRUISER provides broad-spectrum control of a wide range of early-season sucking and chewing, leaf-feeding and soil-dwelling insect pests, including aphids, leafhoppers, beetles, thrips, whiteflies, soil grubs and wireworms. Its high level of systemicity offers long-lasting protection while providing consistent performance.
<b>Main crops</b>	CRUISER is registered on a broad range of crops, such as corn (maize), sunflowers, cotton, cereals, peas, soybeans and sugarbeets.
<b>Geography</b>	CRUISER products are approved for use in most countries around the world.
<b>Date of first launch</b>	1997
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• Long-lasting control of a broad spectrum of insects.</li> <li>• Reliable performance under a wide-range of growing conditions.</li> <li>• Strong crop vigor and density to maximize crop potential.</li> <li>• Fully compatible with genetically enhanced plants.</li> <li>• Commercially applied by the seed company to conveniently replace older chemistry and soil and foliar insecticide applications.</li> <li>• Supported by registration in several countries worldwide to help ensure free movement of treated seed within the global seed market.</li> <li>• High-quality formulations with low use rates for easy-to-handle application.</li> </ul>


**FORCE<sup>®</sup> 20 CS**

**FORCE<sup>®</sup> 20CS provides strong early season protection against all species of wireworms, optimizing crop establishment. FORCE delivers excellent seed safety and high flexibility to combine with other seed treatments.**

<b>Additional brands</b>	FORCE <sup>®</sup> 20CS, FORCE <sup>®</sup> Zea, AUSTRAL <sup>®</sup> Plus, CRUISER <sup>®</sup> Force
<b>Active Ingredient</b>	Tefluthrin is a synthetic pyrethroid; its chemical structure resembles the naturally occurring insecticide pyrethrin. It was designed to be effective against soil pests.
<b>Mode of action</b>	Synthetic pyrethroids (SP) and tefluthrin in particular are chemically modified and optimized molecules resulting as derivatives from naturally-occurring Pyrethrum and belong to the MoA group 3 (IRAC classification). As such, SPs interfere with the sodium transport in insect nerve cells. At the physiological level, SPs lead to a closure of voltage-gated sodium channels in membranes at the axon ends. When the SP keeps the channels open, the nerves cannot be "reset", leading to permanent depolarization. This leads to a feeding stop and Paralyzation of the target pest.
<b>Targets</b>	Soil dwelling insect/arthropod pests such as corn rootworm (larvae only), wireworm, white grubs, seedcorn maggots, some cutworms (during the infestation phase, when they attack seedlings very close to the ground), springtails, Symphylids (centipedes), millipedes, pygmy beetle.
<b>Main Crops</b>	Corn, wheat, barley, triticale, oats, rye, sorghum, sunflower, sugarbeet (and fodder beet), vegetables (such as chicory, beans, peas, peppers), potato, grasses and lupine.

<b>Geography</b>	Registered in most EAME countries across wide range of crops; sugarbeet registration in the US; and mainly vegetables in Australia, Japan, and S. Korea.
<b>Date of first launch</b>	1993
<b>Advantages and Main Benefits</b>	The active ingredient of FORCE 20CS seed treatment, tefluthrin, expresses a strong vapor pressure (unique level of vapor amongst all SPs) in the soil. Therefore, it spreads in the soil and penetrates the insect's cuticle, causing a fast feeding stop and death. In addition, Tefluthrin has a strong repellence effect, giving additional protection to seedlings and even helping repel birds. In combination with systemic insecticides such as CRUISER <sup>®</sup> , tefluthrin is a comprehensive offer for both, underground and above ground feeders.



# Fortenza® Duo

## FORTENZA® Duo is a next-generation seed treatment insecticide that delivers long-lasting insect control both above and below the ground.

This convenient and flexible solution delivers superior results in a variety of climatic conditions – even under high pest pressure. It is designed to optimize the grower's pest control experience, offering best-in-class early season insect protection while promoting improved crop establishment, leading to better yields.

FORTENZA Duo can be applied in both transgenic and conventional crops with excellent benefits in both cases.

<b>Additional brands</b>	FORTENZA®
<b>Active Ingredient</b>	The FORTENZA product family contains cyantraniliprole a Group 28 insecticide, belonging to the diamide class of insecticides.
<b>Mode of action</b>	Applied as a seed treatment, FORTENZA Duo is quickly taken up by the roots and moves upward in the plant through the xylem system, controlling a broad range of above ground insects. The product is also distributed into the soil around the root zone forming a bulb of protection against below ground insects. It is a soil systemic product. Insects are controlled mainly by ingestion but some contact activity can also be observed. FORTENZA Duo provides excellent crop protection resulting from a rapid feeding inhibition and long lasting residual effect.
<b>Targets</b>	FORTENZA is commercialized as FORTENZA Duo brand offers, delivering the best-in-class early season insect spectrum in combination with CRUISER®. FORTENZA will also be available in combination with Syngenta premium fungicide seed treatments in customized ratios for each crop and as part of Syngenta Complete offers, such as AVICTA® Complete offers of separately registered products.
<b>Main Crops</b>	FORTENZA Duo is available for the following crops: corn, soybean, canola/oil-seed rape, sunflower, rice and cotton. Additional crops are expected in the future.

<b>Geography</b>	FORTENZA products are approved in Argentina, Belize, Brazil, Canada, China, Guatemala, India, El Salvador, Honduras, Mexico, Paraguay, Turkey, USA. Future registrations will include: Thailand, Myanmar, Uruguay and other countries: South Africa, Colombia, Bolivia, Philippines, Ecuador, Japan, Vietnam.
<b>Date of first launch</b>	2014
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• Best-in-class early-season insect control, both above and below the ground</li> <li>• Long-lasting residual effect</li> <li>• Dual mode of action with no known cross-resistance</li> <li>• Strong root uptake and highly systemic in the xylem</li> <li>• Complements insect traits and improves yield potential</li> <li>• Help manage insect resistance to chemicals and GM traits.</li> <li>• Robust database of more than 1,000 seed treatment field trials across the globe</li> <li>• Liquid formulations that are specifically designed for seed treatment</li> <li>• Safe to seeds, rhizobium, selective for beneficial arthropods</li> <li>• Efficient movement around and within the plant</li> <li>• Designed to be compatible with the Syngenta portfolio of products</li> <li>• Maximizes return on investment via excellent crop establishment, resulting in greater yield potential</li> </ul>

\* Cyantraniliprole is licensed from DuPont





**AVICTA® is the proven Seed Treatment Nematicide world-wide for use in corn, soybeans and cotton production.**

AVICTA works from the moment the seeds are planted to provide growers with instant, convenient and reliable protection of their crops against a wide spectrum of yield-robbing nematodes.

- Delivers immediate and consistent protection against nematodes
- “In-the-bag” protection, hassle-free and simple system
- Complement to genetic tolerances
- Maximizes yield potential

<b>Active Ingredient</b>	The AVICTA product family contains the broad-spectrum seed treatment nematicide abamectin as its active ingredient. Abamectin belongs to the Avermectin chemical class and has high intrinsic activity against nematodes.
<b>Mode of action</b>	After release from seed coatings, AVICTA moves alongside the growing roots, thereby protecting young plants from nematodes attacking the vital root systems.  AVICTA provides target-specific protection against a broad spectrum of plant parasitic nematodes.
<b>Targets</b>	AVICTA is commercialized as AVICTA Complete brand offers – delivering multi-pest protection in combination with CRUISER® seed treatment insecticide and Syngenta premium fungicide seed treatments (fludioxonil, mefenoxam, azoxystrobin, thiabendazole and sedaxane), in customized ratios for each crop. AVICTA Complete offers unique seed-delivered protection against nematodes, insects and diseases, maximizing profitability in corn, soybeans and cotton.

<b>Main crops</b>	<p><b>Cotton:</b> ‘AVICTA Complete Cotton’ Has protected more than 15 million hectares of cotton in the USA and Brazil since its introduction in 2006.</p> <p><b>Corn:</b> ‘AVICTA Complete Corn’. Successfully introduced in 2010, setting the standard in seed-delivered nematode control in corn.</p> <p><b>Soybean:</b> ‘AVICTA Complete Beans’. First launch in 2011, taking seed-applied seed treatments to a complete new level.</p>
<b>Geography</b>	USA, Brazil, Argentina, Paraguay, South Africa, RSA
<b>Date of first launch</b>	2006
<b>Advantages and Main Benefits</b>	<ul style="list-style-type: none"> <li>• AVICTA Complete brand offers provide triple protection against nematodes, early-season insects and disease – it is immediate, consistent and reliable.</li> <li>• Protects the investment and value of traits and genetics during the plant’s most vulnerable stage.</li> <li>• Consistently delivers significant return on investment for the grower.</li> </ul>



### The Syngenta platform for seed-delivered technologies in vegetables.

- Combines separately registered seed treatment products, specific application technologies and dedicated services.
- Results in enhanced seedling emergence, plant stand establishment, early-season crop vigor, stress tolerance and ultimate protection of the full yield potential.
- Complements genetic resistance and soil-applied or foliar-applied crop protection products to form integrated *crop management programs*.

#### Branding concept



#### Product components and benefits

Current seed treatment active ingredients included in the FarMore® Technology platform in the form of separately registered products and tailored to vegetable-specific formats are:

##### Key FUNGICIDE technologies:

Fludioxonil  
Metalaxyl-M  
Azoxystrobin  
Cymoxanil  
Thiabendazole

**Early seedling protection against major pathogens:** *Pythium, Downy Mildew, Rhizoctonia, Colletotrichum, Fusarium, Sclerotinia, Verticillium, Phoma, Alternaria, Botrytis, Phytophthora.*

#### Product components and benefits (continued)

##### Key INSECTICIDE technologies:

Thiamethoxam  
Spinosad

**Spectrum:** *Aphids, Whitefly, Cabbage fly, Leafminer, Thrips, Maggots, Flea beetle.*

#### Main group of crops

- Legumes (Beans, Peas), Sweet Corn
- Small seeded vegetables (solanacea, cucurbits, leafy, carrot, onion, brassica)

#### Geography

FarMore Technology is commercially available in regions including North America, Europe and Latin America.

Registrations are expanding globally; please check with your local Syngenta representative for further information.

# Cereals

Superior protection,  
productivity and quality

	Benefits	Syngenta Seedcare solutions						
		CELEST®/ DIVIDEND®	VIBRANCE™ GOLD/ Quattro	CRUISERMAXX® VIBRANCE™ Cereals	CRUISER® VIBRANCE™ Quattro	VIBRANCE™ Integral	VIBRANCE™ Duo/Star/ Trio	New/future solutions
Protection	Early season disease protection	✓	✓	✓	✓	✓	✓	
	Early season insect protection			✓	✓	✓		
	Unique superior disease protection and Root Health		✓	✓	✓	✓	✓	
Productivity	Stress tolerance/ crop enhancement		✓	✓	✓	✓	✓	EPIVIO™
	Improved Vigor			✓	✓	✓	✓	EPIVIO™
	Improved nutrient utilization		✓	✓	✓	✓	✓	EPIVIO™
	Higher proteins		✓	✓	✓	✓	✓	EPIVIO™
Quality	Application support	✓ <i>The Seedcare Institute</i>						
	Low dust-off formulation	✓ Formula M technology						
	Integrated grain quality management	✓ Syngenta Seedcare Solutions						

# Corn

The most comprehensive offer with seed safety top of mind

	Benefits	Syngenta Seedcare solutions								
		MAXIM® XL	MAXIM® QUATTRO	CRUISER® Brands	FORCE® ST	AVICTA® COMPLETE	VIBRANCE™	FORTENZA® DUO	EPIVIO™	New/future solutions
Protection	Seed and soil borne disease protection	✓	✓	✓		✓	✓			
	Extended seed and soil borne disease protection		✓	✓		✓	✓			
	Unique superior disease protection and Root Health						✓			
	Mycotoxin management		✓			✓	✓			
	Headsmut control						✓			
	Early season insect protection			✓	✓	✓		✓		
	Nematode protection					✓				
Productivity	Stress tolerance/crop enhancement			✓		✓	✓		✓	EPIVIO™ brands
	Improved Vigor			✓		✓	✓	✓	✓	EPIVIO™ brands
	Yield & Quality			✓		✓	✓	✓	✓	
Quality	Application support	✓ <i>The Seedcare Institute</i>								
	Application protocols	✓ Partnership with Seed Technology industry								

# Soybeans

Unique portfolio combined  
with exciting pipeline

	Benefits	Syngenta Seedcare solutions						
		MAXIM® brands APRONMAXX® brands	VIBRANCE™ brands	CRUISER® brands	AVICTA® COMPLETE	CLARIVA™	FORTENZA® DUO	New/future solutions
Protection	Seed and soil borne disease protection	✓	✓	✓	✓			
	Unique superior disease protection and Root Health		✓		✓			
	Early season insect protection			✓	✓		✓	
	Unique superior insect protection						✓	
	Nematode control				✓	✓		
Productivity	Stress tolerance/crop enhancement		✓	✓	✓	EPIVIO™ brands		EPIVIO™ brands
	Improved Vigor			✓	✓	FORTENZA® DUO	✓	EPIVIO™ brands
Quality	Application support	✓ <i>The Seedcare Institute</i>						
	Quality assurance	✓ <i>The Seedcare Institute</i>						

\* CLARIVA™ is currently only registered for sale and use in the USA, Canada and Brazil. Please check with your local representative to ensure registration status.

# Rice

Advanced solutions -  
setting higher yield potential

	Benefits	Syngenta Seedcare solutions			
		CELEST®/ APRONMAXX®	CRUISER®	CRUISER® PLUS	New/future solutions
Protection	Early season disease protection	✓		✓	
	Unique superior disease protection and Root Health				VIBRANCE™
	Sheath blight control				VIBRANCE™
	Early season insect protection		✓	✓	
	Unique superior insect protection				FORTENZA® DUO
Productivity	Stress tolerance/ crop enhancement		✓	✓	VIBRANCE™/ EPIVIO™
	Improved Vigor		✓	✓	FORTENZA® DUO/EPIVIO™
	Reduction of transplant shock			✓	
Quality	Application support	✓ <i>The Seedcare Institute</i>			
	Specially designed formulations	✓ <i>Advanced technology</i>			

# Oilseeds

## Canola and Oil Seed Rape

- Delivery of consistently high yield

	Benefits	Syngenta Seedcare solutions			
		HELIX® VIBRANCE™	CRUISER® OSR	FORTENZA®	New/future solutions
Protection	Seed and soil borne disease protection	✓	✓		VIBRANCE™ OSR
	Unique superior disease protection Root Health	✓			VIBRANCE™ OSR
	Early season insect protection	✓	✓	✓	
	Unique superior insect protection	✓		✓	
	Stripped flea beetles				VISIVIO™
Productivity	Stress tolerance/crop enhancement	✓			VIBRANCE™ OSR/EPIVIO™
	Improved Vigor	✓	✓	✓	EPIVIO™
	Output quality	✓	✓		
Quality	Application support	✓ <i>The Seedcare Institute</i>			
	Quality assurance	✓ <i>The Seedcare Institute</i>			

# Oilseeds

**Sunflower** - Delivery of consistently high yield

	Benefits	Syngenta Seedcare solutions				
		MAXIM®	APRON® XL	CRUISER® OSR	FORTENZA® DUO	New/future solutions
Protection	Seed and soil borne disease protection	✓		✓		
	Downy mildew protection		✓	✓		PLENARIS™
	Unique superior disease protection and Root Health					
	Early season insect protection			✓	✓	
Productivity	Stress tolerance/crop enhancement			✓		EPIVIO™
	Improved plant stand			✓	✓	EPIVIO™
	Output quality			✓		
Quality	Application support	✓ <i>The Seedcare Institute</i>				
	Quality assurance	✓ <i>The Seedcare Institute</i>				





# Sugar Beet

## Optimising your Return-on-Investment

	Benefits	Syngenta Seedcare solutions				
		FORCE <sup>®</sup> MAGNA	CRUISER <sup>®</sup> FORCE <sup>®</sup>	VIBRANCE <sup>™</sup>	CLARIVA <sup>™</sup>	New/future solutions
Protection	Extended spectrum and longevity of soil and foliar insect protection		✓	✓		
	Soil and early foliar insect protection	✓	✓			
	Efficacy at any soil moisture	✓	✓	✓		
	Extended disease control			✓		
	Nematode control				✓	
Productivity	Early & uniform emergence	✓	✓	✓		
	Stress tolerance/crop enhancement					EPIVIO <sup>™</sup>
	Reliable yield, year-on-year	✓	✓	✓		
	Improved plant vigour	✓	✓	✓		EPIVIO <sup>™</sup>
	Yield & Quality	✓	✓	✓	✓	
Quality	Application support	✓ <i>The Seedcare Institute</i>				

\* CLARIVA<sup>™</sup> is currently only registered for sale and use in the USA, Canada and Brazil. Please check with your local representative to ensure registration status.



# Vegetables

Unique global technology platform for vegetables

	Benefits	Syngenta Seedcare solutions									
		Small seeds vegetables							Large seeds vegetables		
		FarMore® I100	FarMore® OI100*	FarMore® F200	FarMore® F300	FarMore® FI400	FarMore® FI500	FarMore® B	FarMore® FI400	FarMore® F300	FarMore® FNI500
Protection	Early season disease protection			✓ EU	✓ US	✓ US	✓ US		✓ US	✓ EU	✓ Brazil
	Early season insect protection	✓ EU	✓ US			✓ US	✓ US		✓ US	✓ EU	✓ Brazil
	Early season nematode control										✓ Brazil
	Early season bacteria protection							✓ US			
Productivity	Early and uniform emergence			✓	✓	✓	✓		✓	✓	✓
	Improved plant vigor	✓	✓	✓	✓	✓	✓		✓	✓	✓
Quality		✓ <i>The Seedcare Institute</i>									

\*organic

---

**NOTES**

---

---

**NOTES**

---



©2018, Syngenta. All rights reserved. The information contained in this publication is proprietary. It may not be photocopied or reproduced in any form.

**Important: Use seed treatment products safely. Always read the label and product information before use. Referenced products are registered for use in certain countries and national label instructions have to be read and followed; please check with your local regulatory authority for further information. AVICTA® 500FS, AVICTA® Complete Beans 500, AVICTA® Duo Corn, AVICTA® Complete Corn 250, AVICTA® Complete Corn 500, AVICTA® Duo Cotton, AVICTA® DuoCOT 202 are Restricted Use Pesticides.**

CLARIVA™ is currently only registered for sale and use in the USA and Brazil. Some crop protection products may not be registered for sale or use in all states or counties. Please check with your local representative to ensure registration status. CLARIVA™ Complete Beans is an on-seed application of CLARIVA™ pn and CRUISERMAXX® VIBRANCE™. CRUISERMAXX® Beans is an on-seed application of CRUISERMAXX®, alone or with additional APRON® XL. CRUISERMAXX® VIBRANCE™ Beans is an on-seed application of CRUISERMAXX® VIBRANCE™ alone or with additional APRON® XL.

FarMore® Technology is a seed company- or seed technology provider-applied combination of separately registered seed treatment products and proprietary application technologies. Not all FarMore® Technology offerings are available for use on all crops or in all countries. Check with your FarMore® Technology provider for more information.

AVICTA®, BION® 375FS, CLARIVA™, CRUISER®, CRUISERMAXX®, EPIVIO™, FORCE®, FORTENZA™ DUO, PLENARIS™ and VISIVIO™ not registered for sale in all markets. APRON®, AVICTA®, BION® 375FS, CELEST®, CLARIVA™, CRUISER®, CRUISERMAXX®, DIVIDEND®, DYNASTY CST®, EPIVIO™, FORCE®, FORTENZA®, MAXIM®, PLENARIS™, VIBRANCE™, VISIVIO™, FarMore®, WAKIL®, the ROOTINGPOWER™ Logo, the Seedcare Logo, the Seedcare Icon, the SYNGENTA Logo, the SYNGENTA Wordmark, the PURPOSE Icon and the ALLIANCE FRAME are Trademarks of a Syngenta Group Company.



**CONTACT:**

**Syngenta Crop Protection AG**

Schwarzwaldallee 215

P.O. Box 4002 Basel, Switzerland

**Phone:** +41 61 323 11 11

**Email:**

[chbs.seedcare@syngenta.com](mailto:chbs.seedcare@syngenta.com)