Syngenta Seedcare Portfolio

Madrid, Octubre 2016

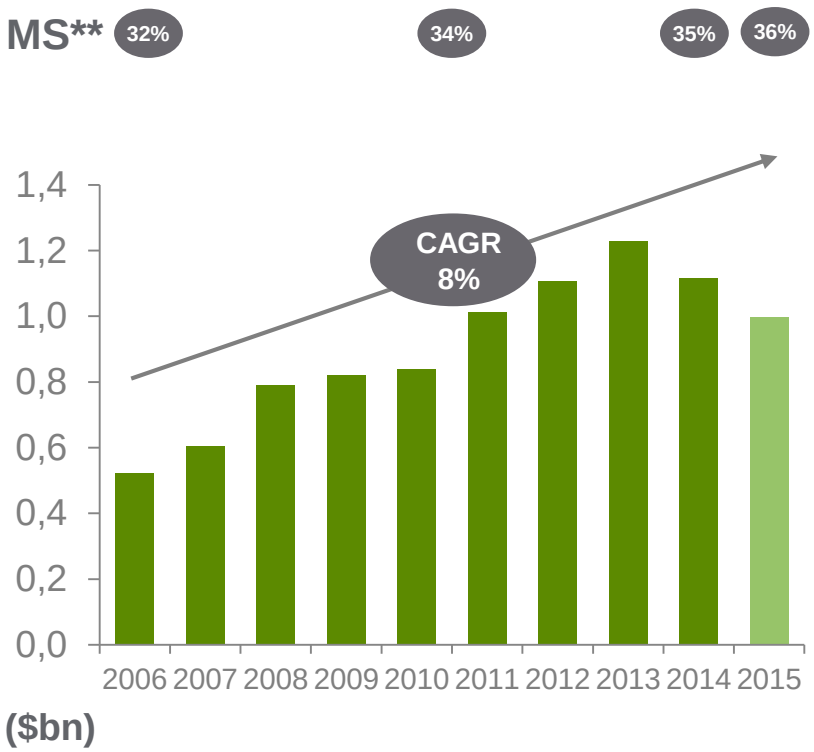
Michael Feitknecht

Seedcare™

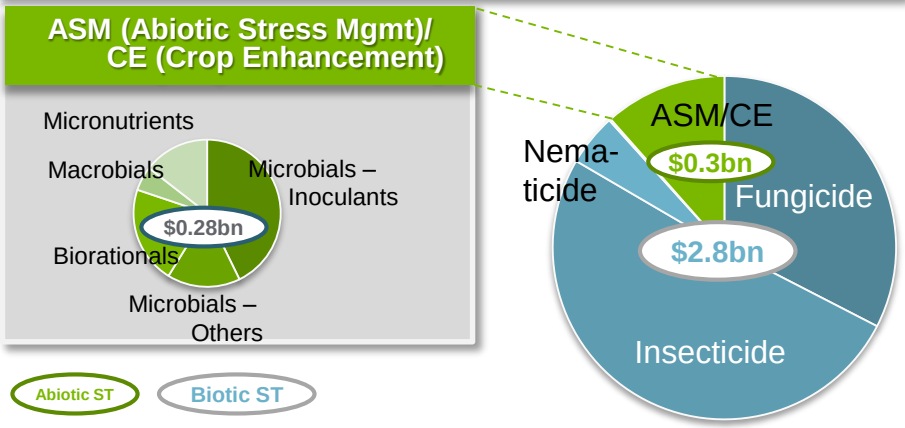
syngenta®

Ventas y participación de mercado

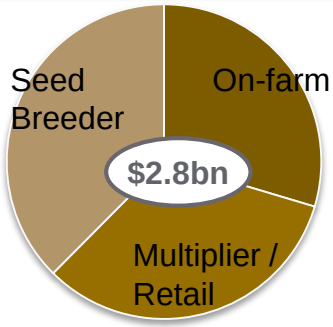
SYT Seedcare sales 2006-2015*



ST Market 2015 by indication



ST Market 2015 by treatment location



*Syngenta Seedcare Calendar Sales, CAR
** Syngenta Seedcare internal estimations based on synthetic chemicals market definition
*** Biologicals in the SAF, SAI and SAN not contempled

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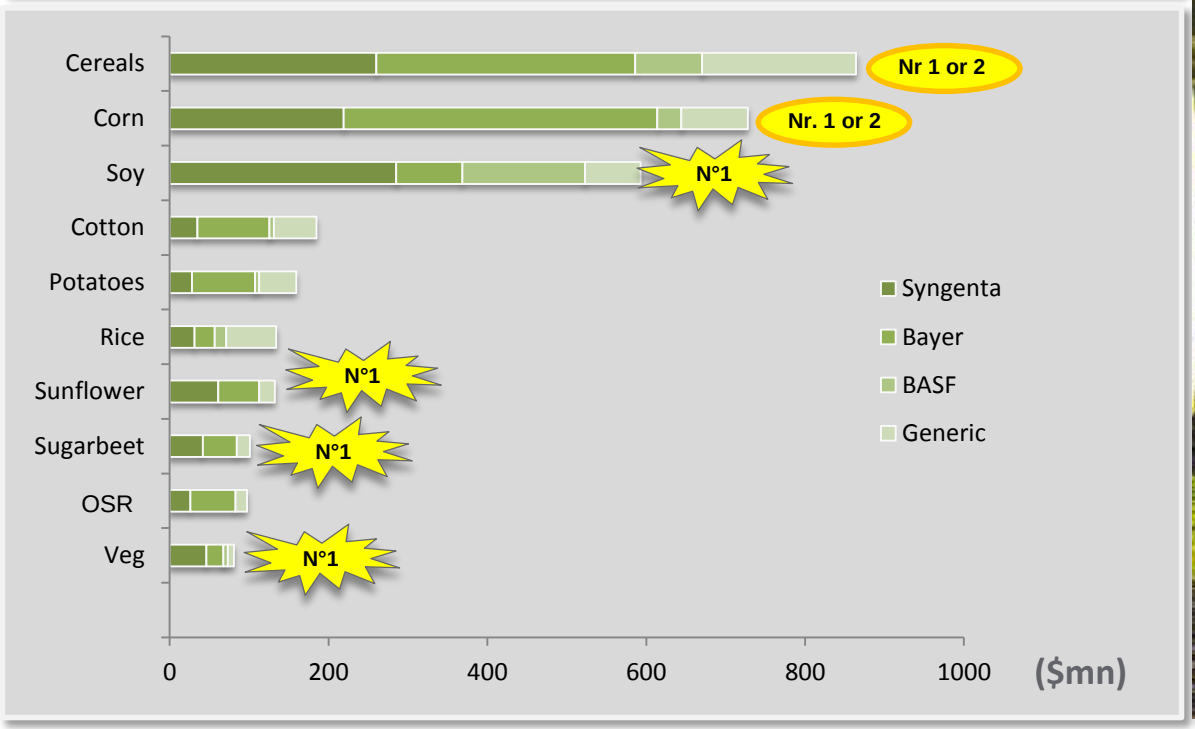
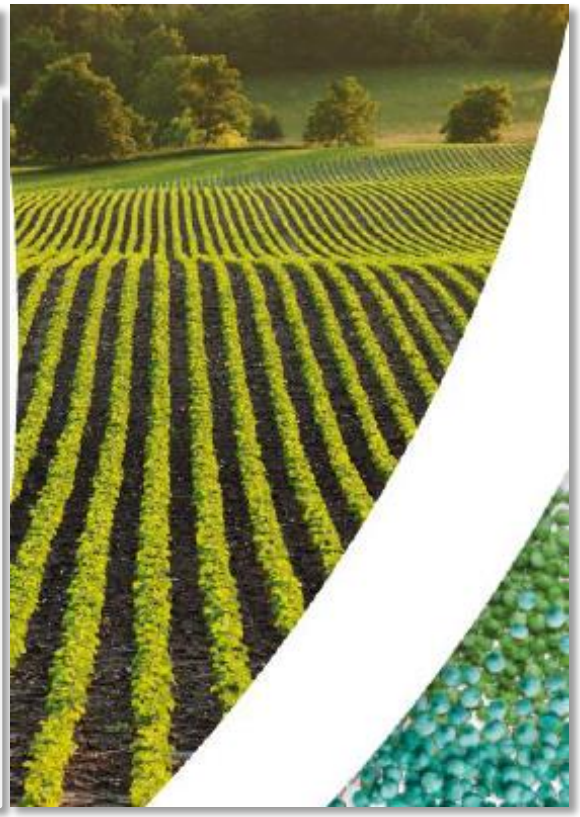
Syngenta lidera el mercado en muchos cultivos

Seed treatment market split & leading provider by crop





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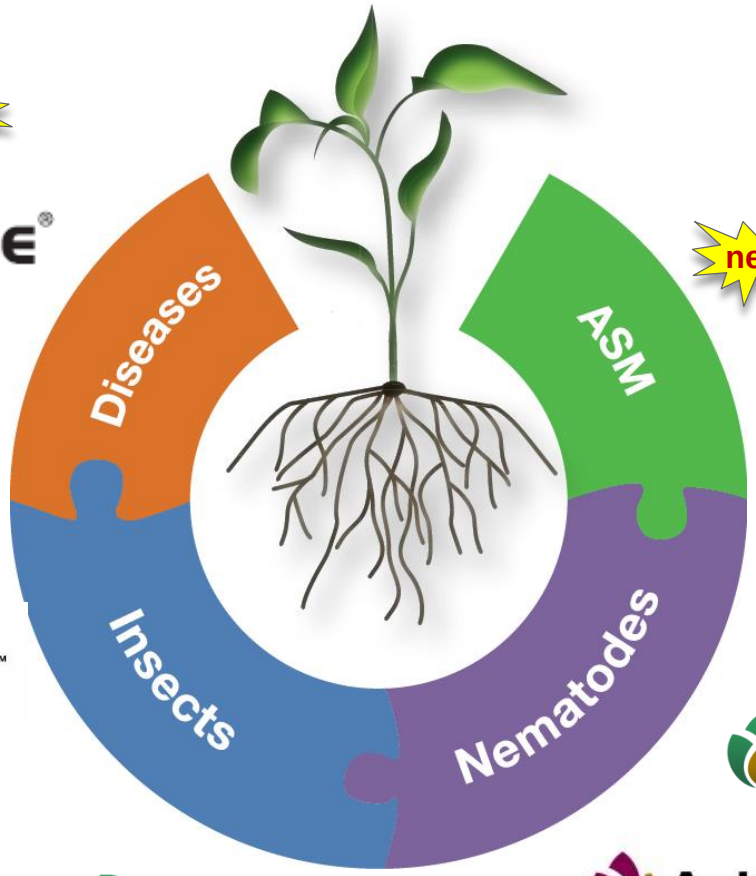
Portafolio Seedcare en todas las indicaciones



new
Vibrance®
Maxim®
ApronXL®
Dynasty®
Dividend®

new
Epivio™
CRUISER® Vigor
VIBRANCE® Root Stimulation

new
Visivio™

new
Fortenza®

new
Clariva™ Complete

Fortenza™ Duo

CruiserMaxx®

Force® 20 CS

Avicta® Complete

new
back in Brazil!

Not all products listed on this page have received regulatory approval in the countries or crops listed. Products cannot be manufactured, imported, distributed or used unless registered.

Seedcare™

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FORTENZA™ Duo

Fortenza™ Duo

syngenta®

™

Amplio espectro de control de insectos

Coleoptera and Diptera Pests

Leaf Beetles
Diabrotica speciosa; Cerotoma; Tanymecus

Corn Shootfly
Atherigona

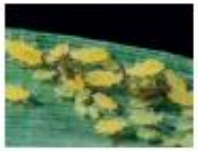
Lepidoptera Pests

Cutworm
Agrotis ipsilon

Foliar Caterpillar
Spodoptera

Lesser Stalk Borer
Elasmopalpus lignoselus

Sucking Pests



Corn Aphids
Rhopalosiphum maidis

Thrips
Frankliniella

Hoppers
Laodelphax; Dalbulus

Stink Bugs
Dichelaps

Soil-Dwelling Pests

Wireworms
Agriotes

False Wireworms
Pterohelaeus

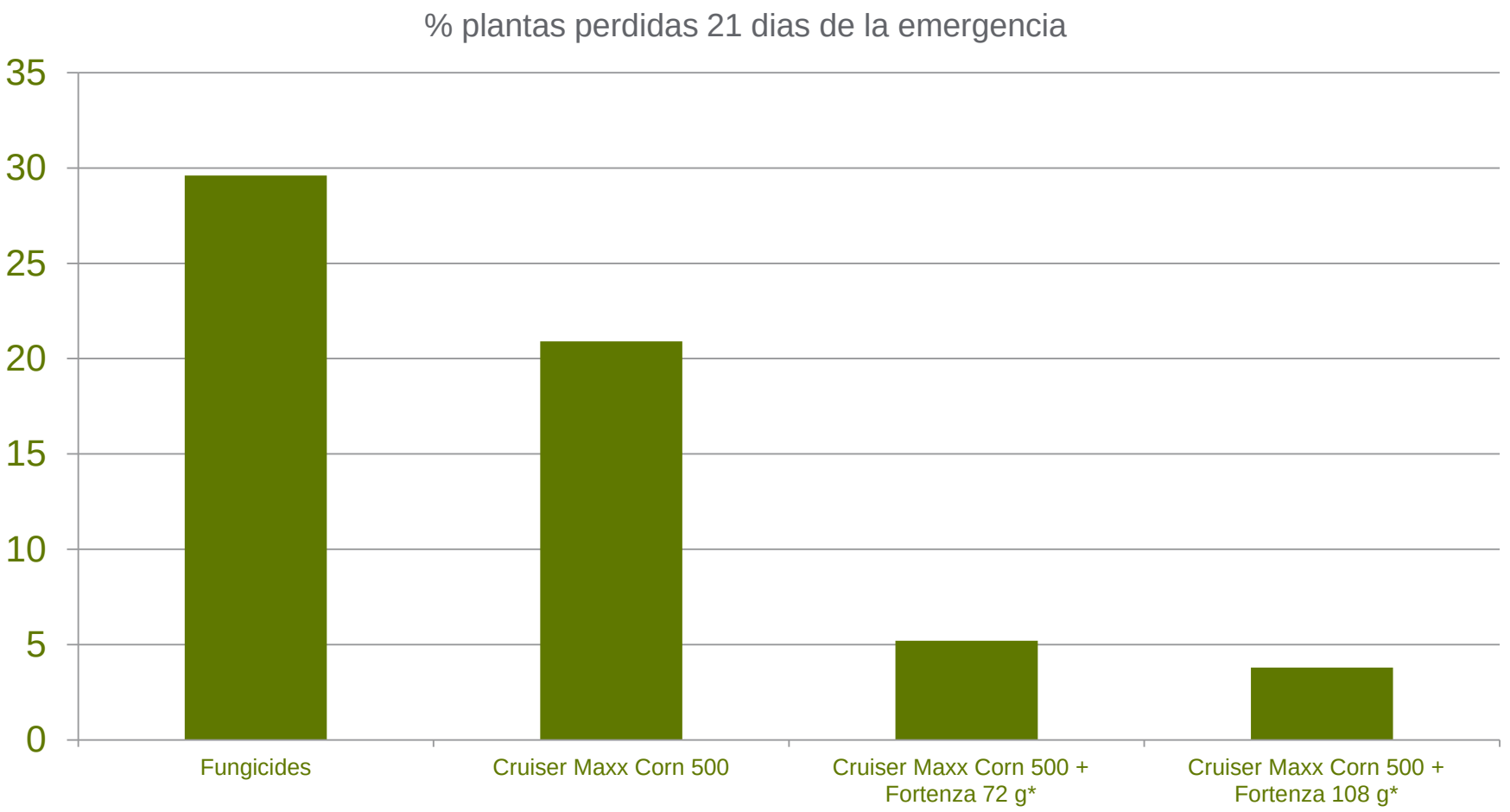
White Grubs
Phyllophaga; Dilobaderus

Corn Root Worm
Diabrotica virgifera

Seed Corn Maggot
Delia

6

Datos de daños de *Spodoptera*, Maiz, Mexico



* g CYNT/100 Kg seeds

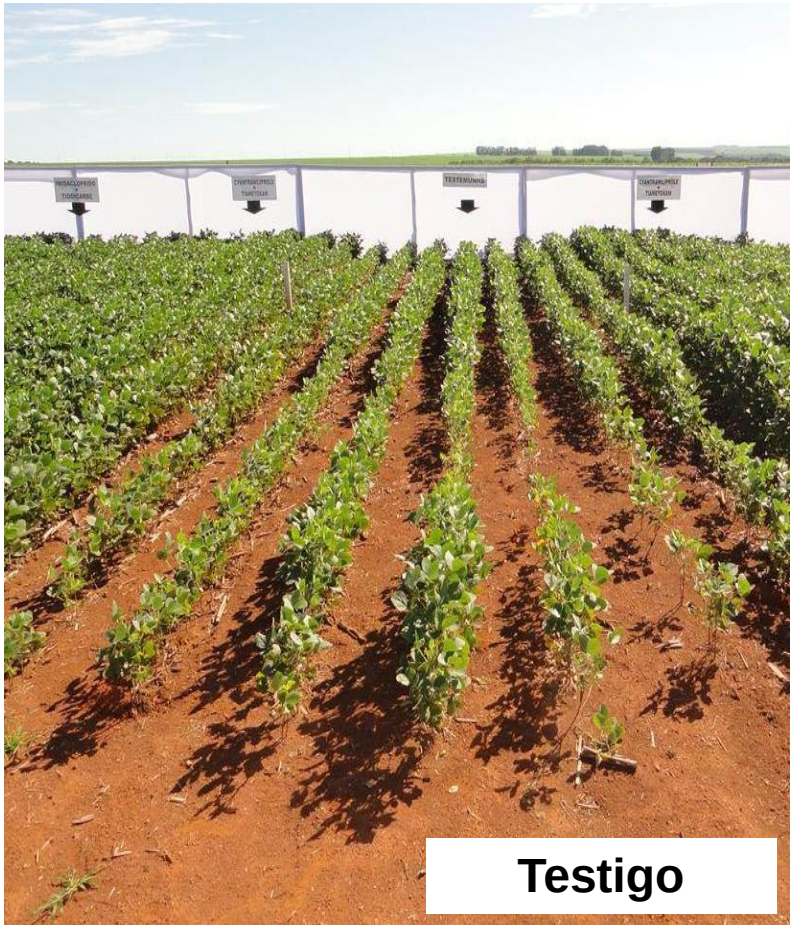
Source: Syngenta R&D Mexico (2015)

Promedio de 40 localidades

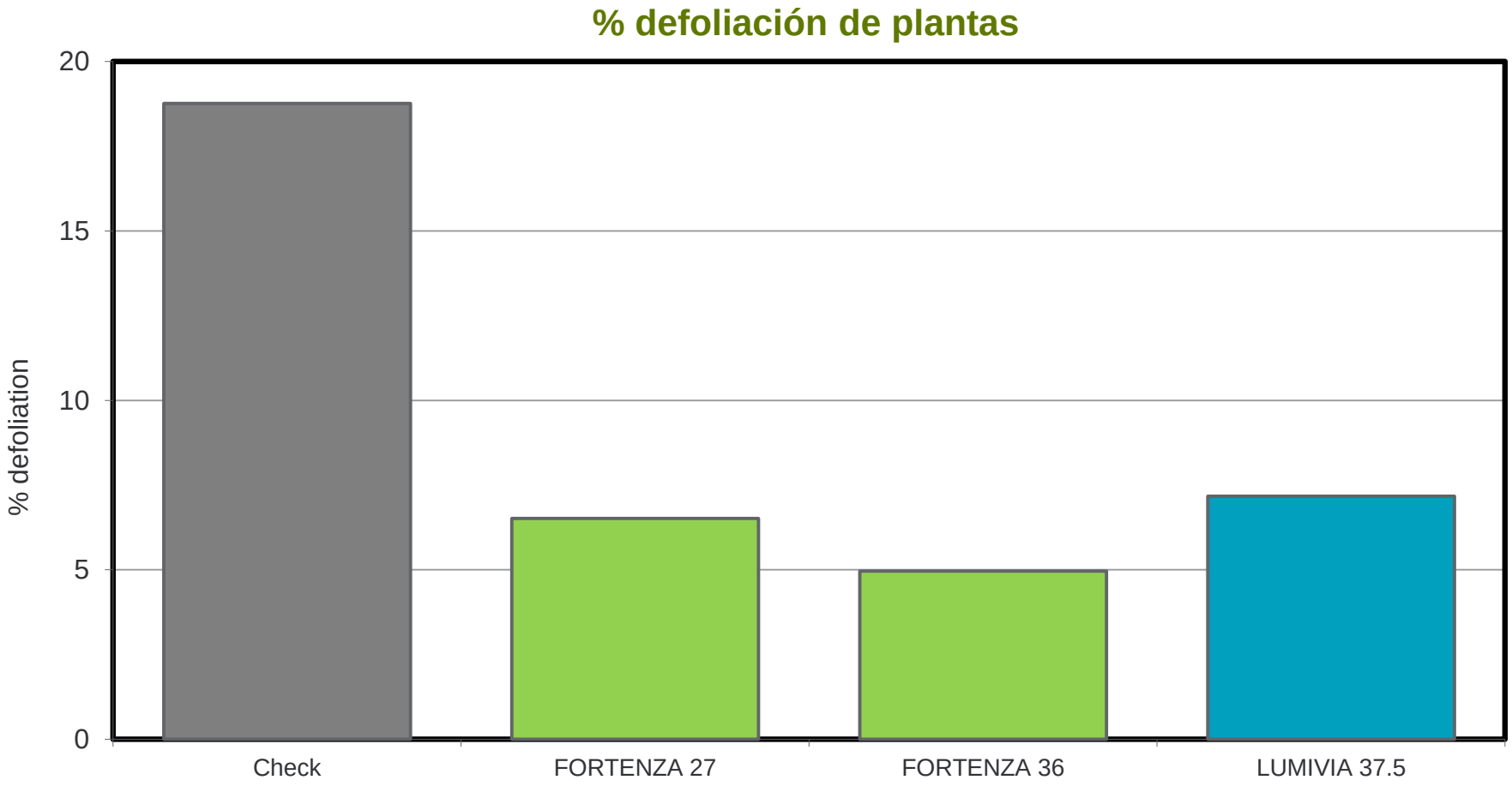
Ensayos semi-comerciales Bajio, MX en Junio 2015

8

Control de *Phyllophaga* en soya en Brazil



Control de lepidoptera foliar en soya, Argentina

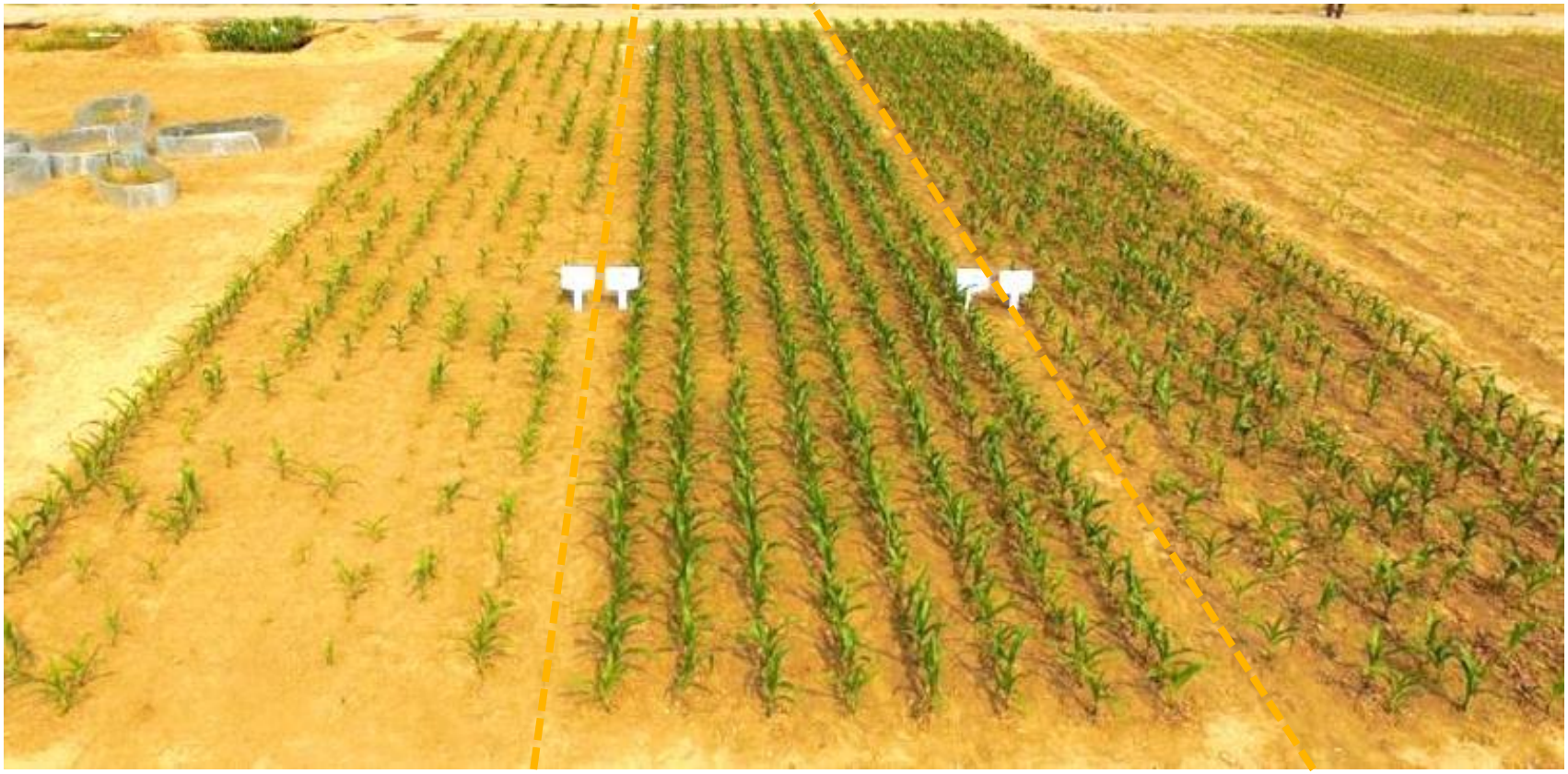


Rates in g ai/ ha, CRUISER added to all treatments

Source: Syngenta R&D Argentina (2015)

Promedio de 8 ensayos

Daños de *Agrotis en* Maiz, China



Untreated
50%

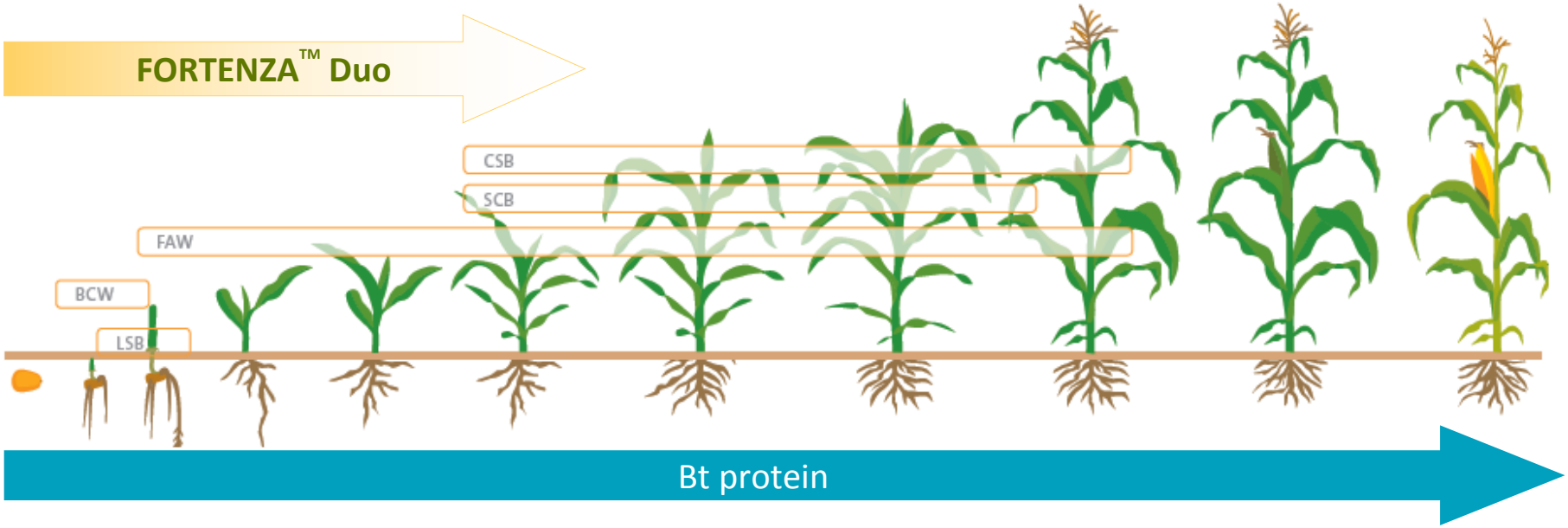
FORTENZA™ DUO
97%

Local standard
72%

Source: Syngenta R&D China (2015)

Classification: Confidential

Modo de acción complementarios para garantizar la sostenibilidad de los eventos tecnologicos



FAW: Fall Armyworm (*Spodoptera*); **LSB**: Lesser Stalk Borer (*Elasmopalpus lignoselus*); **BCW**: Black Cutworm (*Agrotis ipsilon*); **SCB**: Sugarcane Borer (*Diatraea saccharalis*); **CSB**: Cornstalk Borer (*Ostrinia*)

Source: Syngenta R&D Product Biology

Video Maiz

VIBRANCE® – Una innovacion en la salud de la raiz

Vibrance®

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TM

VIBRANCE® control de enfermedades: amplio espectro gracias a nuevo modo de acción

ROOTING POWER™

- *Rhizoctonia spp.*
- *Microdochium nivale*
- *Sphacelotheca reiliana*
- *Pyrenophora graminea*
- *Ustilago spp.* (cereals)
- *Macrophomina*
- *Sclerotium*
- *Typhula spp.*
- *Cochliobolus sativus*
- *Tilletia caries*
- *Urocystis occulta*
- *Sclerotinia*
- *Helminthosporium solani*
- *Early phakopsora*

- *Phoma*
- *Verticillium*
- *Tilletia controversa*
- *Fusarium spp.* (some)
- *Helminthosporium oryzae*
- *Pyricularia oryzae*
- *...*






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VIBRANCE® cereales:
mayor productividad gracias a raices mas sanas y fuertes

Market standard Vibrance™ Gold

Microdochium nivale control by VIBRANCE® ·Gold, winter wheat. Field trials Czech Republic

Market standard

Vibrance™ Gold

Market standard

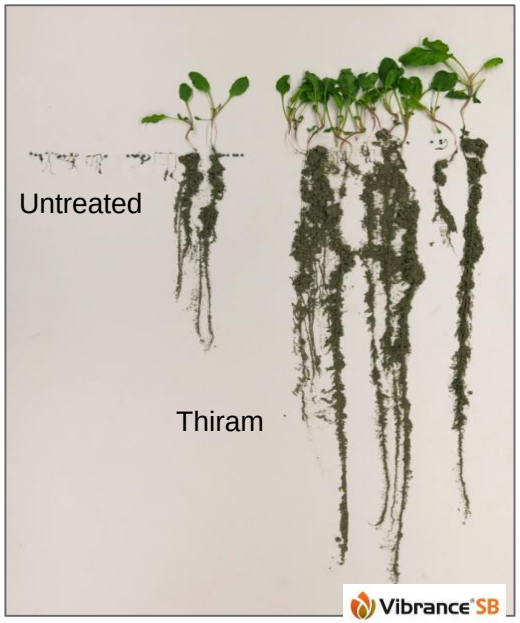
Vibrance™ Gold

Vibrance® syngenta

VIBRANCE® efectos de incremento de desarollo radicular confimado en investigaciones

ROOTING POWER™

- **Root biostimulant effect** even under sterile conditions[1]. Nitrogen Use efficiency benefits[2] — new
- Increased **photosynthetic activity** under drought stress[3] — new
- Demonstrated **soybean and sunflower increased root density** under sterile conditions[5]
- Work on-going **on Arabidopsis plant model** to understand MoA[4] — new
- On-going reviews **at regional and global Root Health Forums**



1 BIOtransfer, France
2 Biostimulant label formally submitted to FR regulatory authorities
3 Nottingham University, UK
4 CNRS, France
5 Buenos Aires University, ARG

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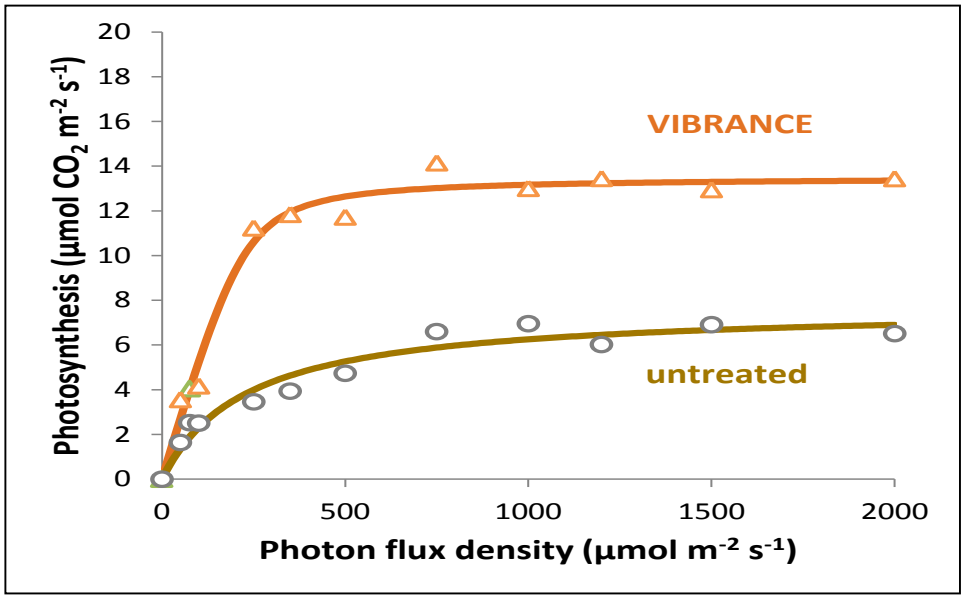
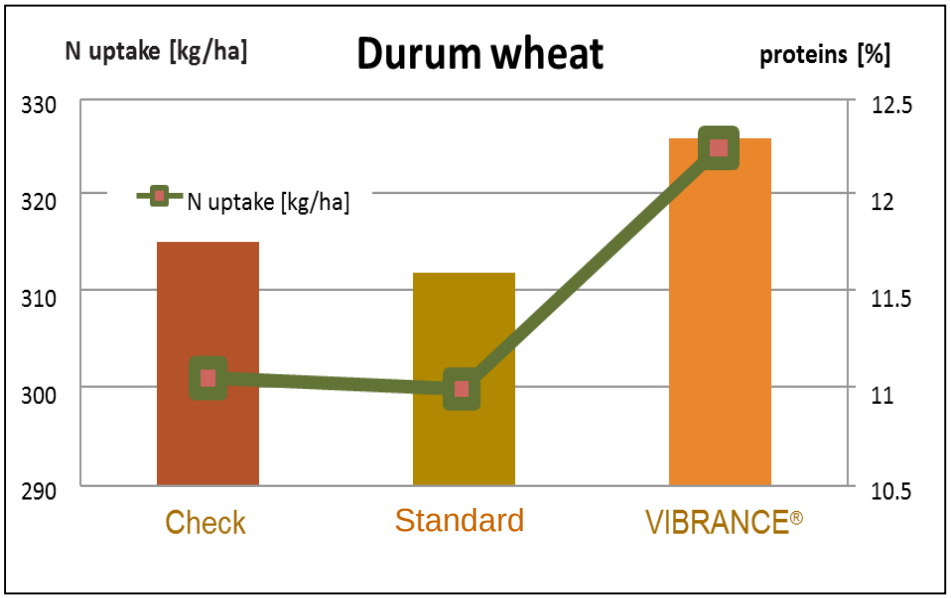
VIBRANCE® cereals: mayor eficiencia en la fotosíntesis

Increased photosynthetic efficiency under drought stress[1]

First time such effect is demonstrated for a seed treatment compound[2]

Increased nitrogene uptake resulting in higher protein level[3]





VIBRANCE tiene un efecto de biostimulación en la fisiologia de las plantas mas allá del control de enfermedades

[1] Source: Nottingham University research, UK, 2014, winter wheat Gallant
[2] Similar effect was demonstrated for foliar SDHIs e.g. Isopyrazam
[3] Source: Padova university, 2015

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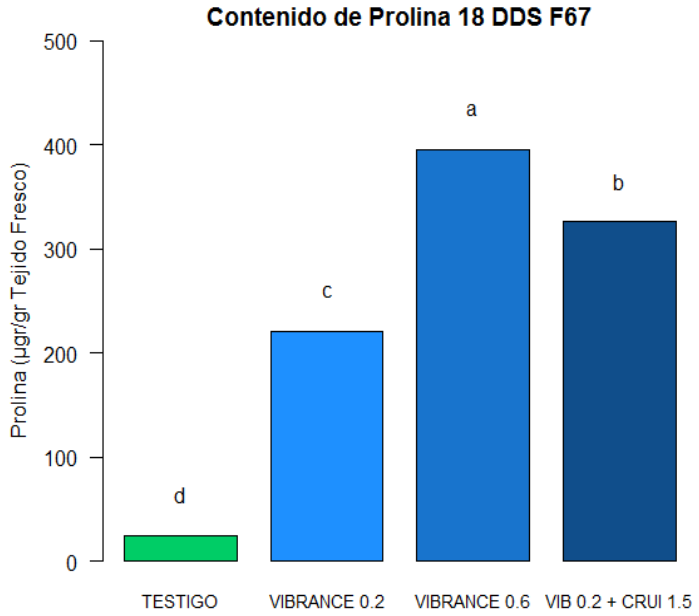
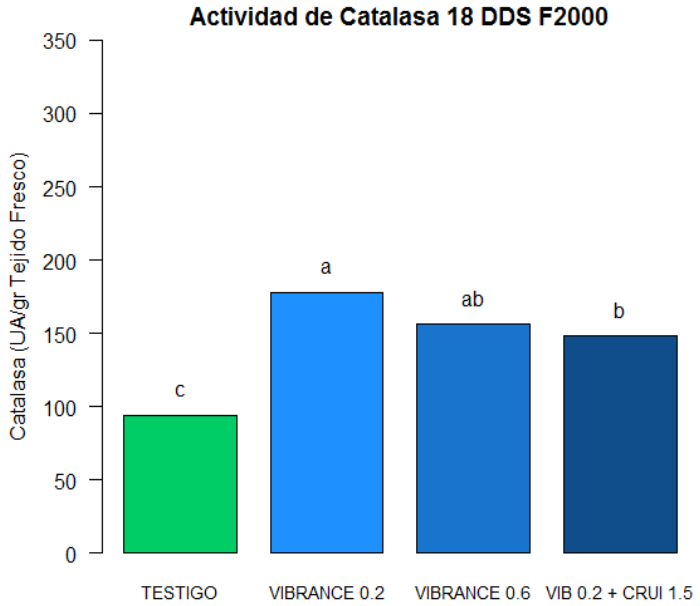
Estudios sobre efectos bajo estres abiotico en arroz, Colombia

Contenido de prolina: la prolina juega un papel adaptativo al mediar el ajuste osmótico y proteger los órganos de las plantas bajo estrés hidrico.

Actividad de catalasa: La catalasa es una enzima que se encuentra en organismos vivos en los peroxisomas y cataliza la descomposición del peróxido de hidrógeno (H_20_2) en oxígeno y agua.





Fuente*: YPEST3992 Journal title: Pesticide Biochemistry and Physiology Corresponding author: Dr. Rumiana V. Ray First author: Dr. Olubukola O. Ajigboye, 2016

Fuente**: Miguel Antonio Romero Sánchez, **EFECTO DE VIBRANCE SOBRE EL CRECIMIENTO Y DESARROLLO DE PLANTAS DE ARROZ FEDEARROZ 67 Y FEDEARROZ 2000**

What's new in Root Health?

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This open, online resource for sharing scientific information and knowledge about Root Health will constantly evolve and grow as research continues.

Global Root Health Network
https://www.linkedin.com
Search groups and click to join
A group hosted by Syngenta on LinkedIn. With more than 950 members, this community regularly posts about new scientific results and technologies – plus discussions and interviews.

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UNA NUEVA CATEGORIA DE SEEDCARE:

ASM/CE[1]

[1] ABIOTIC STRESS MANAGEMENT & CROP ENHANCEMENT

Epivio™

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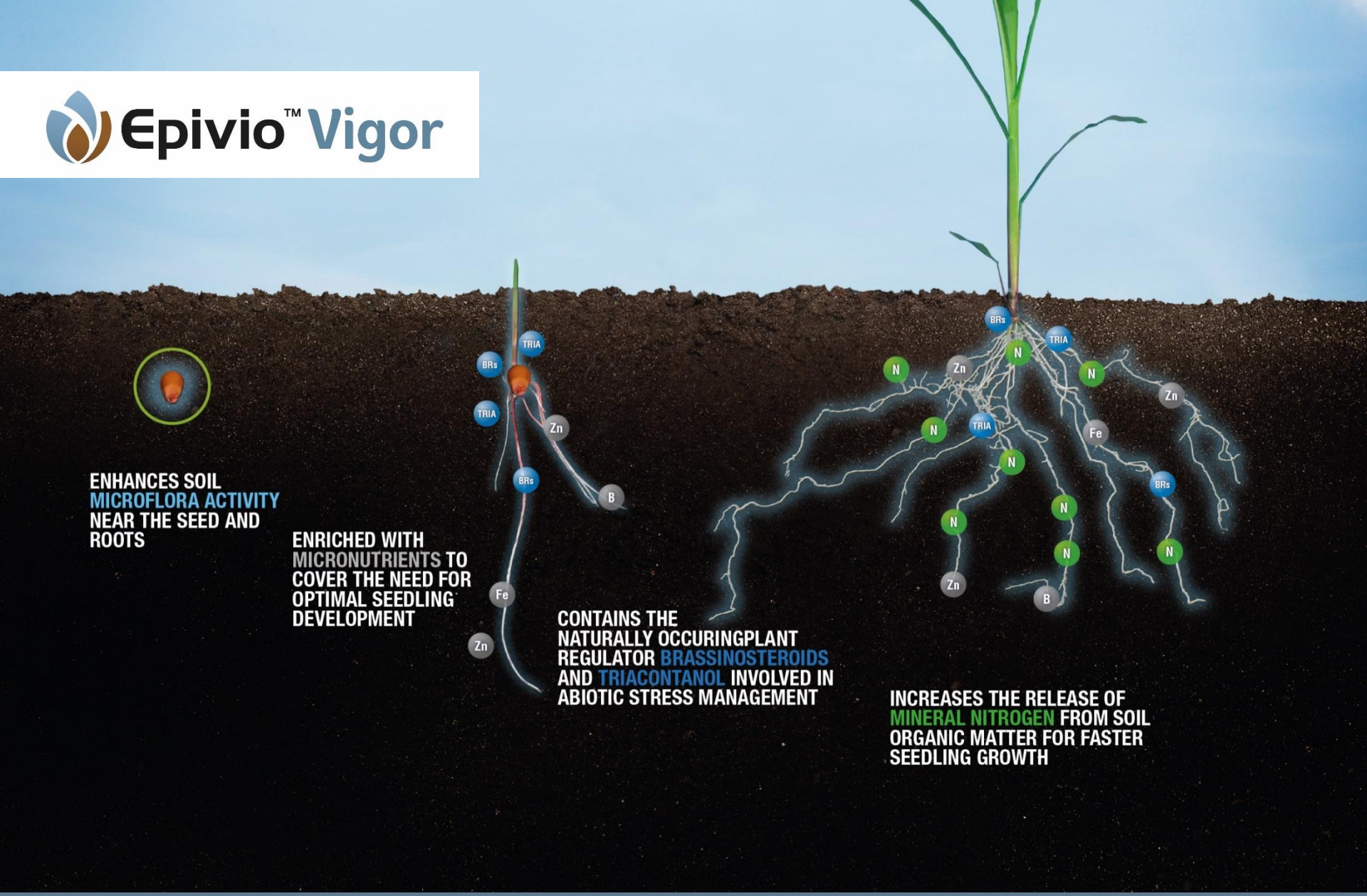
3 tecnologías EPIVIO™ en diversos cultivos y geografías

Name	Mode-of-action	Benefits	Crops	Geographies
EPIVIO™ Vigor	▪ Bio-estimulante componentes como Brassinosteroids y Triacontanol (todos de origen natural) ▪ Glycosides y coenzymes (vitamin B group) ▪ Micronutrienets (incluso chelated-zinc, -iron, boron)	▪ Emergencia más rápida, plántulas más vigorosas ▪ Mejor uso de los nutrientes ▪ Más producción		2016 LATAM[1] 2018 EAME[2] 2018 APAC[2]
Brand name tba	▪ Bio-estimulante como extracto de Ascophyllum ▪ Glycosides (vitamin B group) ▪ Micronutrientes (incluso Molybdenum y chelated Manganese)	▪ Emergencia más rápida ▪ Apoyo a la planta con micronutrientes ▪ Más producción		2018 EAME[2] 2018 APAC[2] 2019 NA tbc[3]
EPIVIO™ C (APAC only)	▪ Nueva tecnología mejorando la tolerancia al uso de herbicidas[4]	▪ Emergencia más rápida, plántulas más vigorosas ▪ Tolerancia al stress abiótico ▪ Más producción		2016 China[1] 2019 APAC[1]

[1] launch confirmed
[2] earliest possible launch date shown. Field trialing and profiling through SYT ASM platform
[3] launch to be considered, go/no go launch decision TBC; earliest possible launch date shown. Field trialing and profiling through SYT ASM platform
[4] ISO-name to be annouced

Epivio™ Vigor



Epivio™ Vigor

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EPIVIO™ lanzamientos:

- **Tratamiento Industrial**
- **Cultivos/geografías seleccionadas con la máxima propuesta de valor**

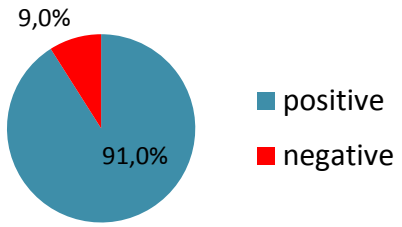
								
LATAM	**wave 2**	✓	-	-	-	-	-	-
NA	*profiling*[1]	*profiling*[1]	**wave 3**	-	-	-	-	-
EAME	*profiling*[2]	-	**wave 3**	-	*profiling*[2]	*profiling*[2]	-	-
APAC	✓	-	-	**wave 2**	-	-	*profiling*[2]	*profiling*[2]

✓ Launch in 2016[3, 4]
wave 2 Launch in 2017-19
wave 3 Launch in 2020+

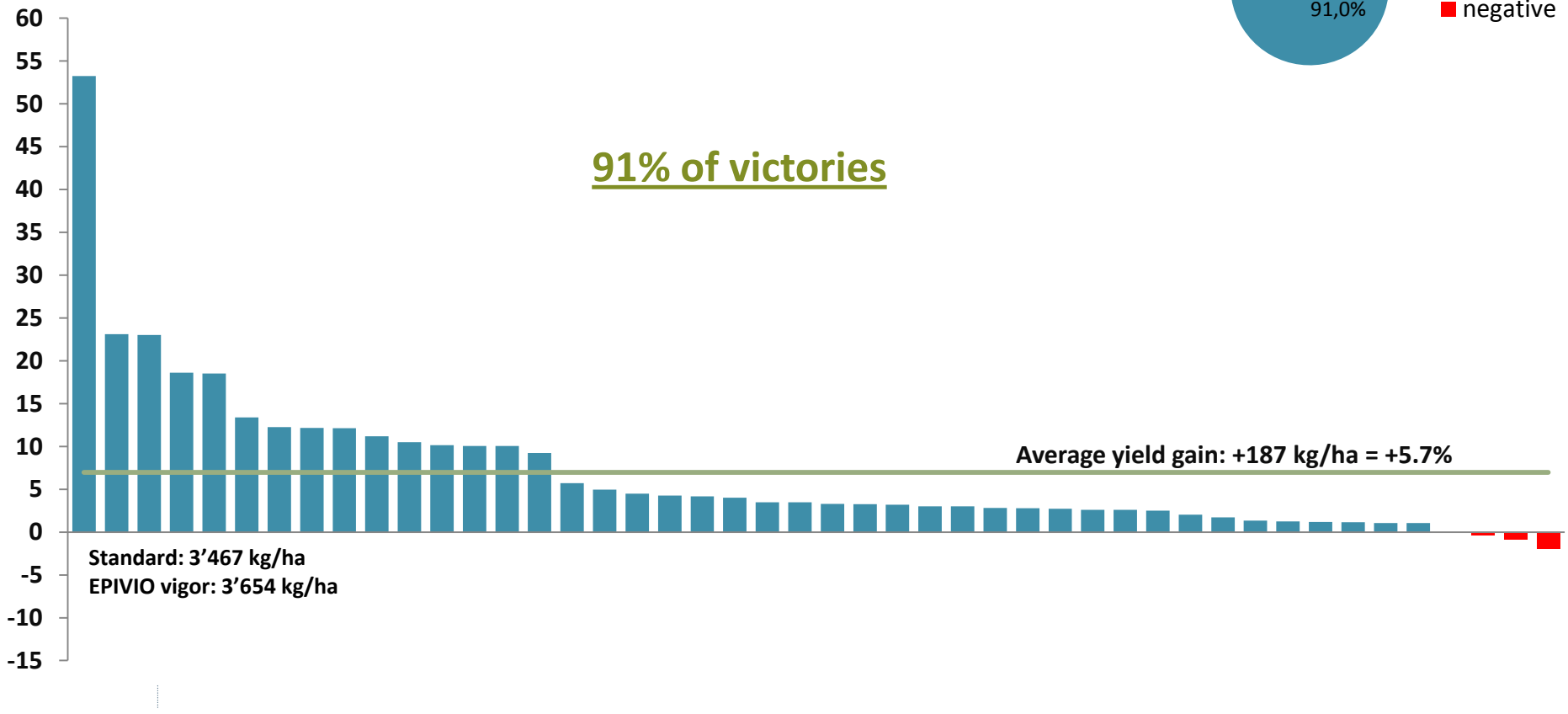
[1] launch to be considered, go/no go launch decision TBC; earliest possible launch date shown. Field trialing and profiling through SYT ASM platform
[2] earliest possible launch date shown; field trialing and profiling through SYT ASM platform
[3] registered in Brazil
[4] registration expected in September 2016 in China

Brazil/ARG soybean

EPIVIO™ Vigor field testing (large strips & R&D trials)



46 trials average (BR+Arg)



91% of victories

Epivio™ Vigor

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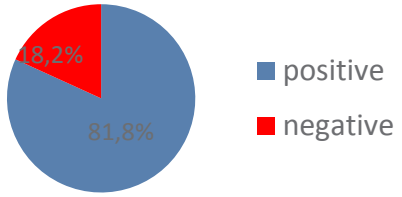
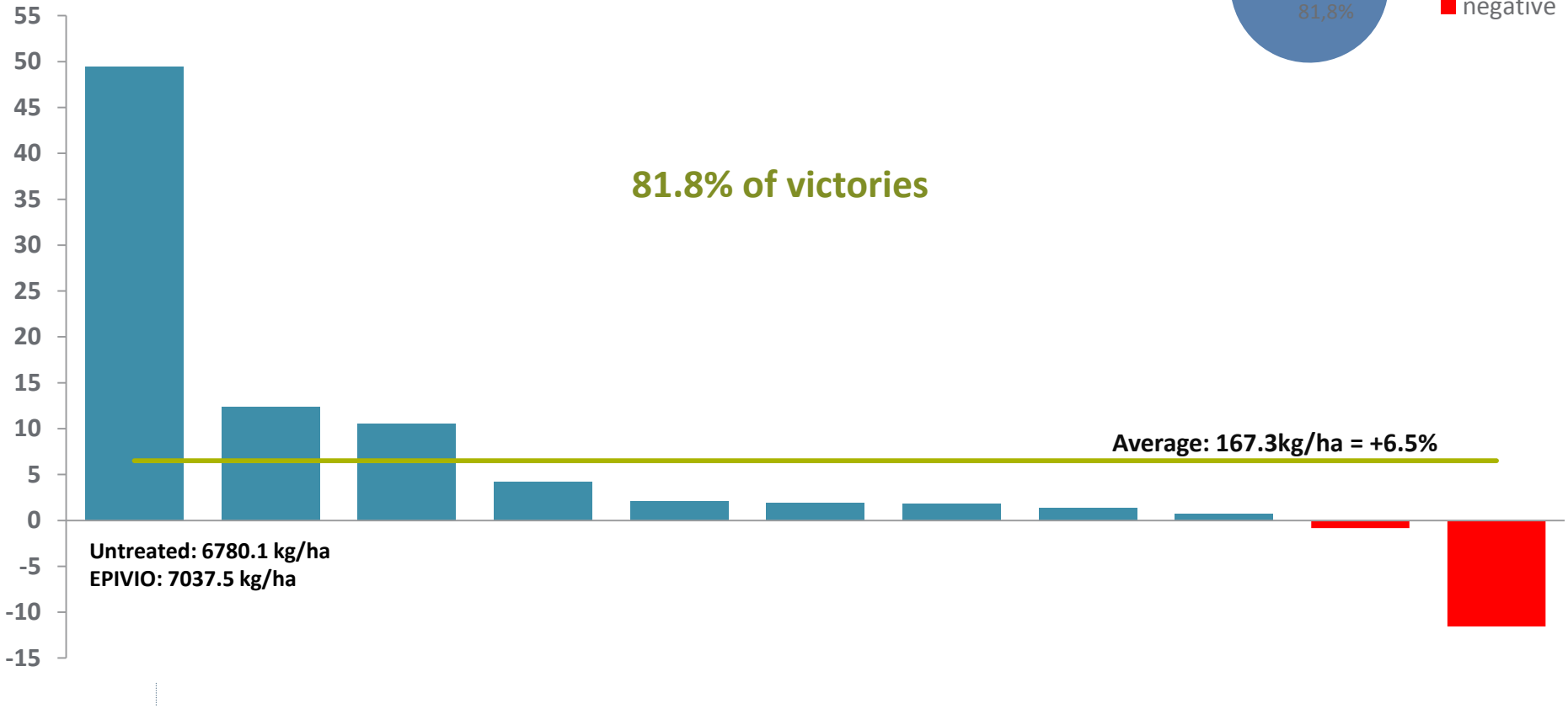
Brazil/ARG corn

EPIVIO™ Vigor promising field data (large strips & R&D trials)

11 trials average (BR+Arg)



81.8% of victories



Epivio™ Vigor

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Cruiser Overview

Cruiser®

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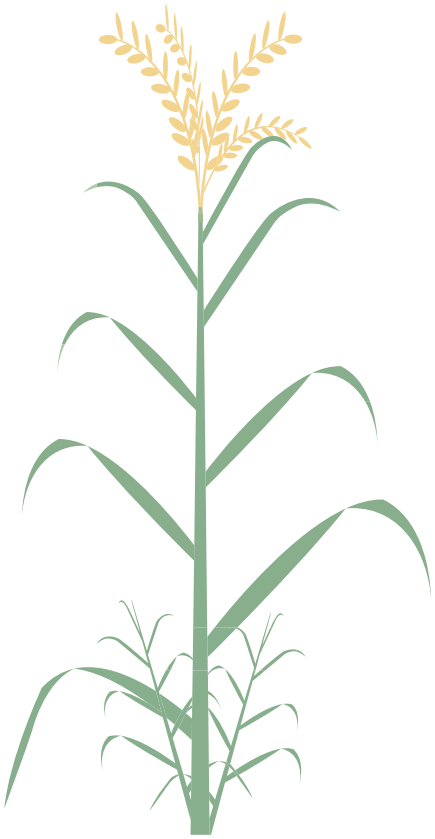
™

Ejemplos de plagas controladas

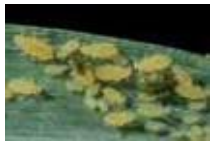


Chewing pests

Beetles
e.g. *Leptinotarsa*
e.g. *Diabrotica sp.*

Weevils
e.g. *Lissorhoptrus oryzophilus*
e.g. *Sternechus subsignatus*

Sucking pests



Aphids
e.g. *Myzus*

Whiteflies
e.g. *Bemisia*

Stink bugs
e.g. *Dichelops*

Thrips
e.g. *Frankliniella*

Leafhoppers,Jassids
e.g. *Amrasca*

Soil dwelling pests

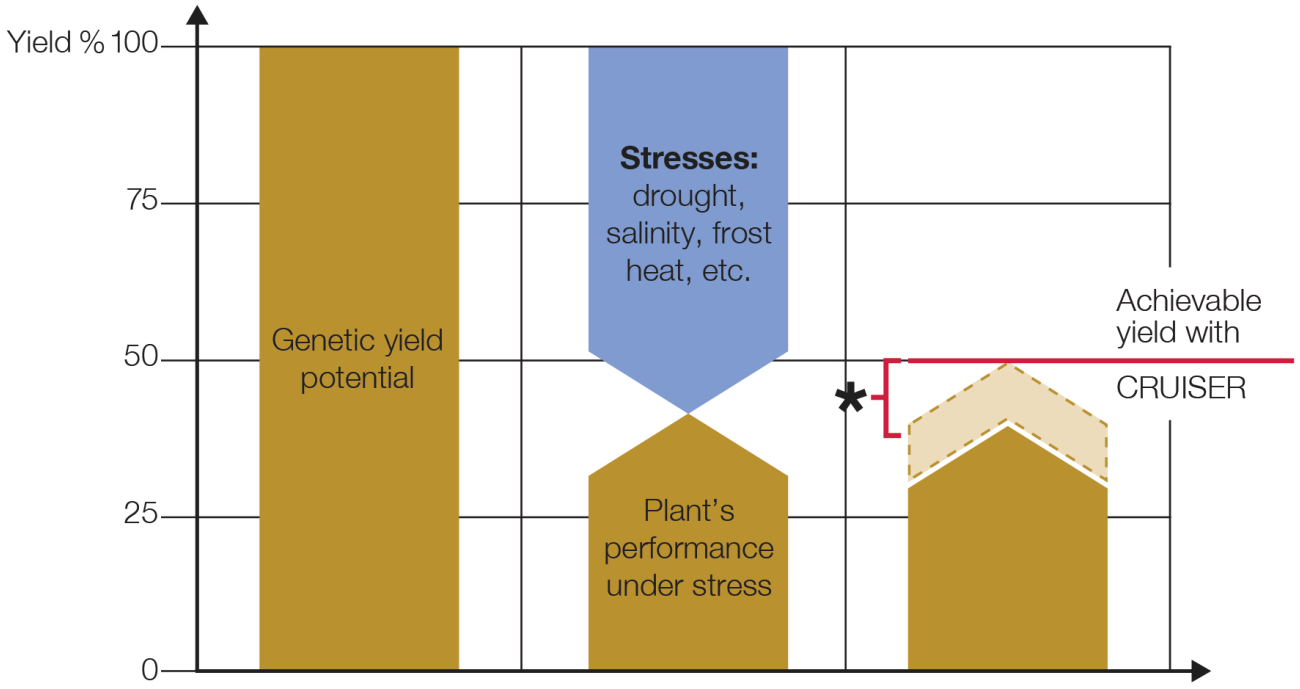
Wireworms
e.g. *Agriotes*

False wireworms
e.g. *Pterohelaeus*

Corn rootworms
e.g. *Diabrotica v.*

White grubs
e.g. *Phyllophaga*

El stress abiótico: mayor causa de pérdidas de producción!



* Yield increase as a result of the CRUISER Vigor effect

Source: ISAAA.org, 2006

Stress de sequía en maiz

Shandong, China 2009

- CRUISER treatment gave taller, thicker stems and increased root mass
- The crop was stressed by lack of rain…
- The increased vigor resulted in approximately 15 % greater yield

Cruiser: base de registro muy amplia a nivel de cultivos y países

		NORAM		EAME								LATAM			APAC				
		Canada	USA	AME	CIS	EU Central	EU North	EU SE	France	Iberia	Italy	Brazil	LAN	LAS	Australasia	China	NE Asia	SE Asia	South Asia
1.	Cereals	●	●	●	●	●	●	●				●	●	●	●				●
2.	Corn	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
3.	OSR (Canola)	●	●		●	●	●	●						●	●	●			
4.	Peanuts		●									●	●					●	
5.	Potato	●	●	●	●	●	●	●		●	●	●	●	●		●			
6.	Rice		●	●	●							●	●			●	●	●	●
7.	Soya	●	●									●	●	●			●	●	●
8.	Sugarbeet	●	●	●	●	●	●	●	●	●	●			●			●		
9.	Sunflower	●	●	●	●	●		●				●		●	●			●	●
10.	Cotton		●	●	●			●		●	●	●	●	●	●	●		●	●
11.	Vegetables	●	●	●	●	●	●	●	●			●	●	●			●		
12.	All other vegetables	●	●	●	●	●	●	●		●		●	●	●	●		●	●	●

● 2 year suspension in EU 28 as of 1 December 2013; winter cereal use still allowed.

Cruiser®

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Impactos en la agricultura de UK y DE

60.000 ha de perdida de cosecha en colza in UK debido a plagas

4 X mas tratamientos de insecticidas foliares

38,000 ha no plantadas por falta de soluciones

6% menos de area cultivada de colza

10% area severamente afectada por plagas

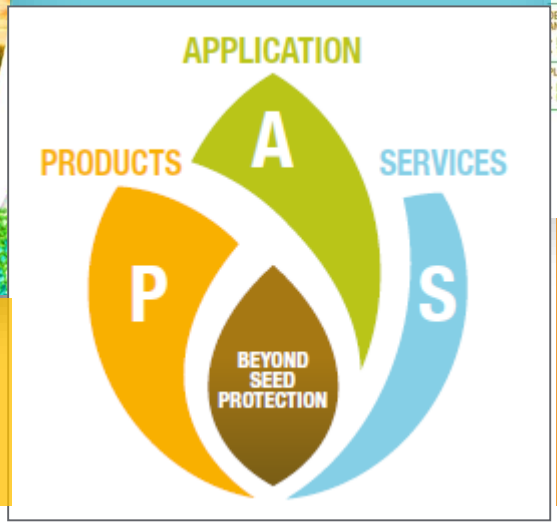
- Insecticidas foliares
- Costos de produccion
- problemas de resistencias

Source: Copa Cocega data

Seedcare entrega valor mas alla del producto

- Apoyos para equipamiento
- Apoyo en aplicación y custodia
- Evaluación de Calidad / Manejo
- Seed Safety

- El mejor portafolio en su clase
- Innovacion y diferenciación



- Creación de demanda y co-promoción
- Planeación y entrega
- Suministro confiable y flexibilidad logística