

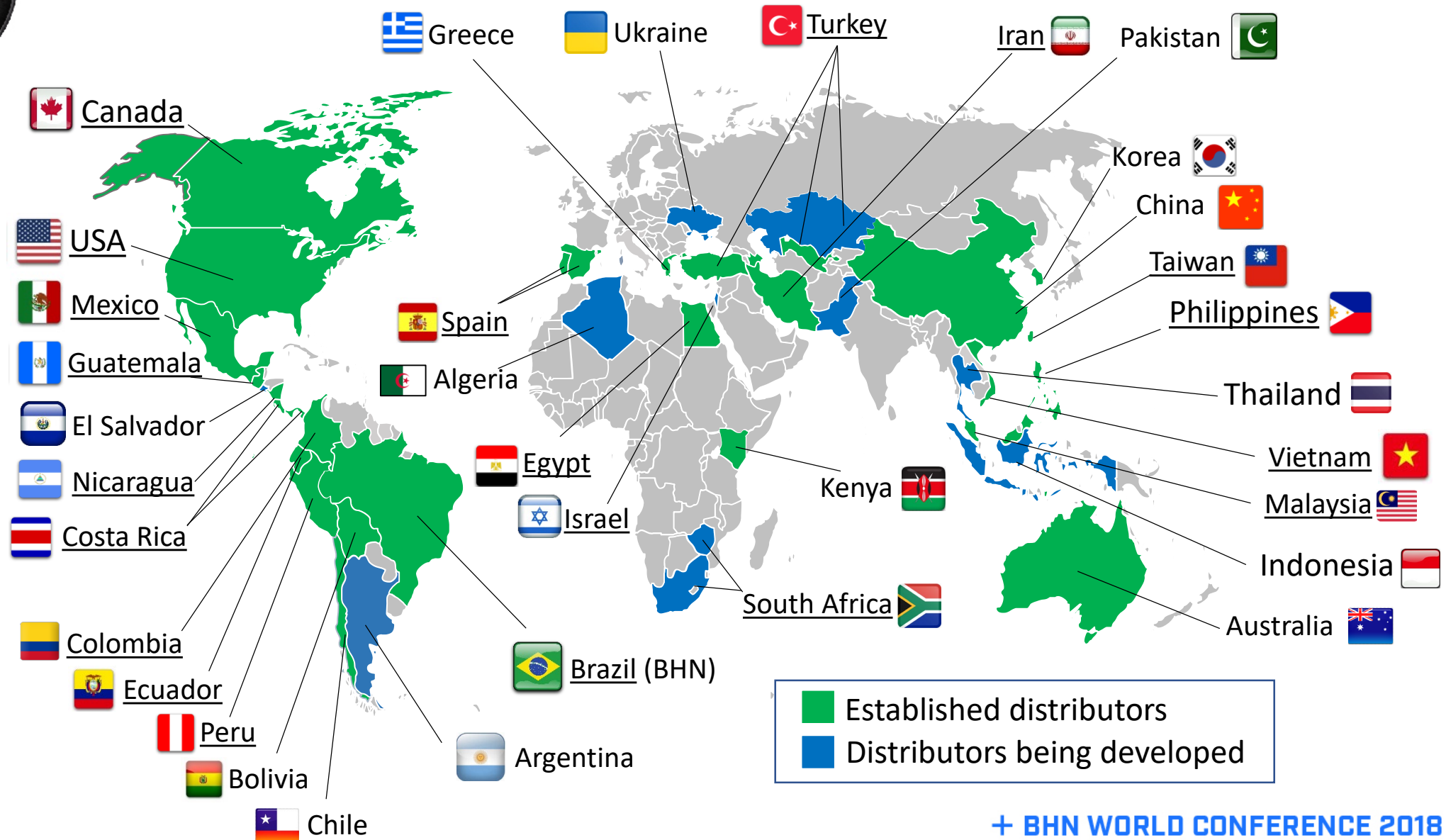
Europe, Africa and Middle East





2018 BHN® Worldwide Presence

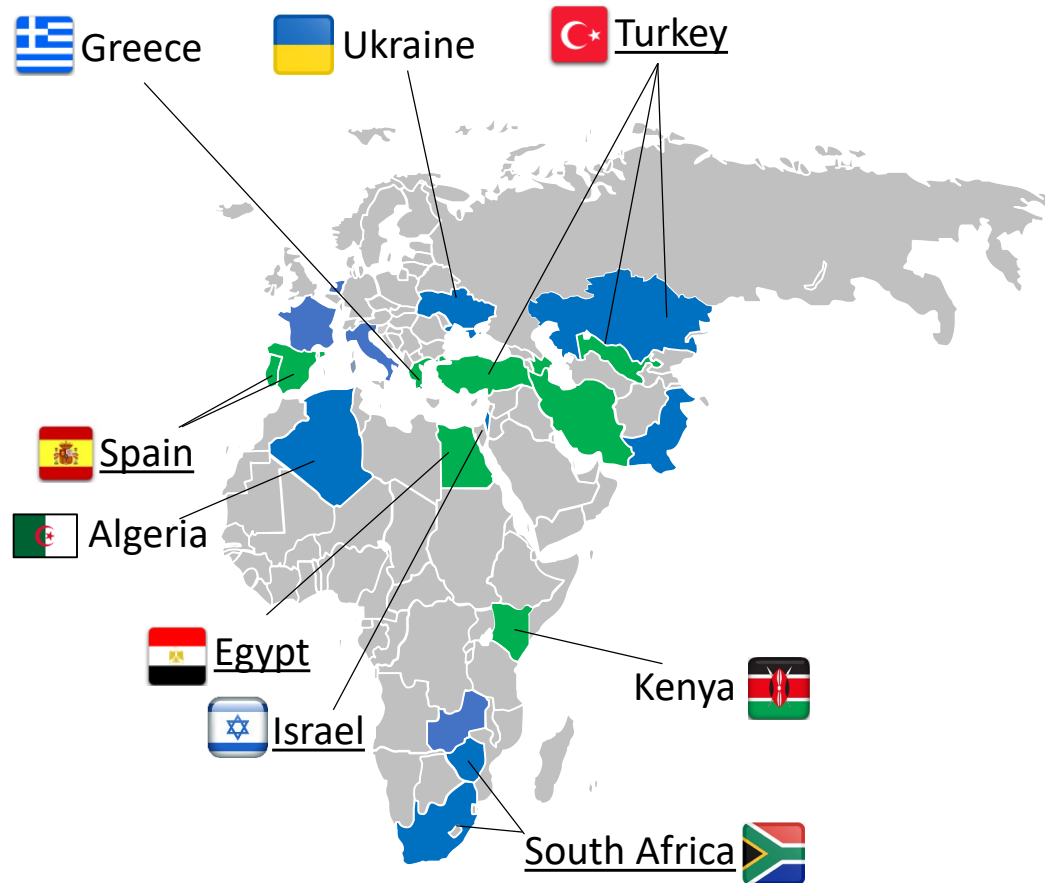
(Huma Gro and Probiotic Solutions)





2018 BHN[®] EAME Presence

(Huma Gro[®] and Probiotic Solutions[®])



- Established distributors
- Distributors being developed



FRUIT & NUT SIZING IN TREE CROPS

WITH HUMA GRO[®] TECHNOLOGY

APPLICATION OF SUPER K™ AND FULVI PRO® FOR FRUIT AND NUT SIZING

General rate of use: 1 L of each product in 1,000 liters of spray volume

SUPER K™

FULVI PRO®



OLIVE TREES → APPLICATION BEFORE BLOSSOM





UNTREATED

SAME TREE

**TREATED (100 CC SUPER K
- 100 CC FULVI PRO /
100 L WATER VOLUME)**



+ BHN WORLD CONFERENCE 2018

COPPER

A fungicide additive for improving plant disease control



COPPER

- **Pear and apple trees**

Application around blossoming against fire blight along with the existing bactericide or a combination of COPPER + ACTIVOL® is a perfect bacterial against fire blight.

- **Apple scab**

Along with Triazol or Strobilurin formulations to improve the scab disease control.

The advantage of Copper is that at the recommended rates it does not produce fruit russeting as other copper formulations do.









THANK YOU!



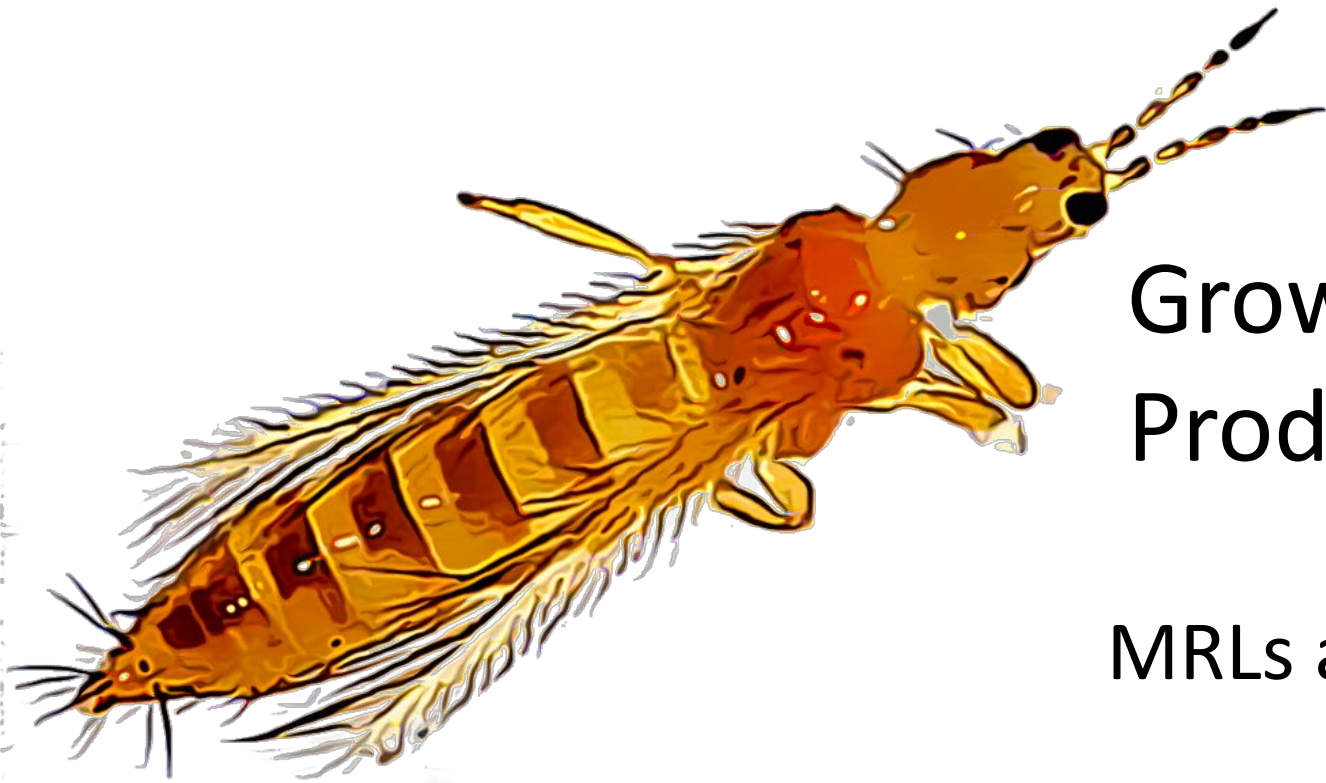
Trials have started with D-Fend® in 2018 in Kenya on Roses



Kenya has around 3000 Ha of Roses under plastic tunnels for an export market into Europe

Thrips are one of the main insect problems with chemical applications applied twice a week





Growers can lose up to 40%
Production due to Thrip damage

MRLs are also becoming a major concern

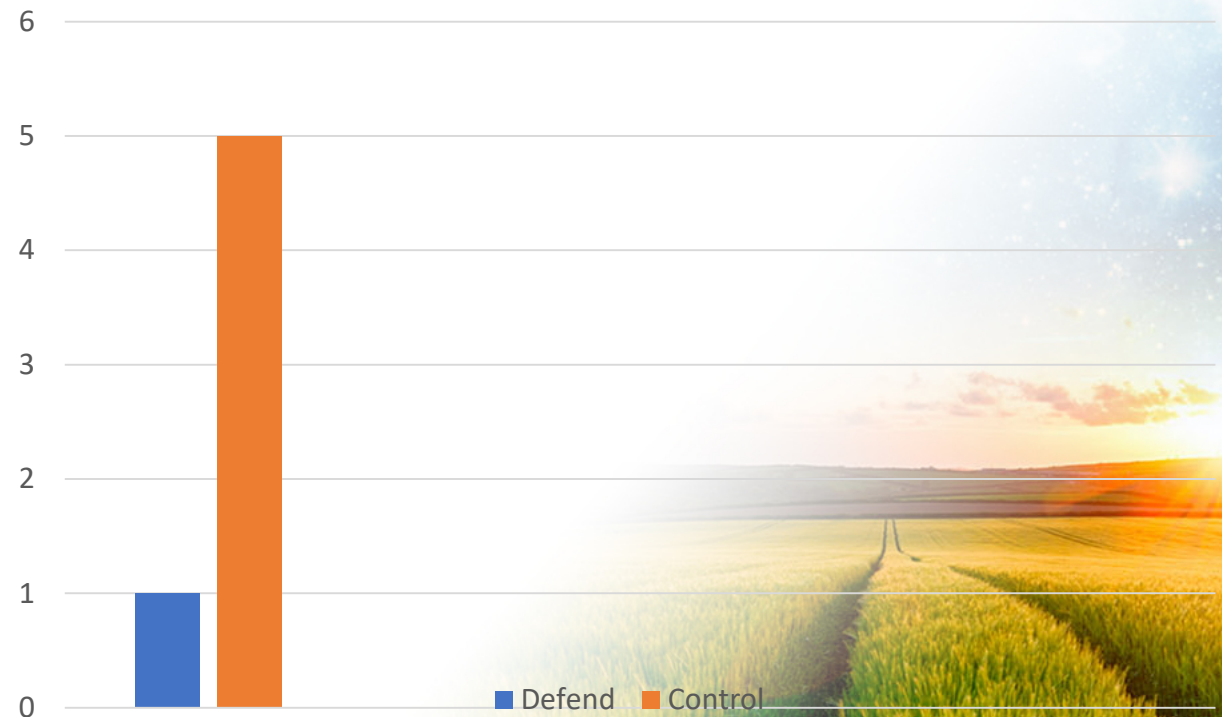


2 applications of **D-Fend**[®] were applied @ 3 L / Ha a week apart

Product was applied to a high population where flower rejects were 5 % in the pack house. After 2 applications this dropped to 1%



Defend trial in Kenya



D-Fend[®] is still in trials now at more growers
and we are excited to see the outcome

We believe this product will be a good fit for the
future with the new pressure on chemicals
Residues and resistance to old chemistry





PROMAX[®] - Status in Israel



Levi Finkels, Arizona Nov. 2018

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Background:

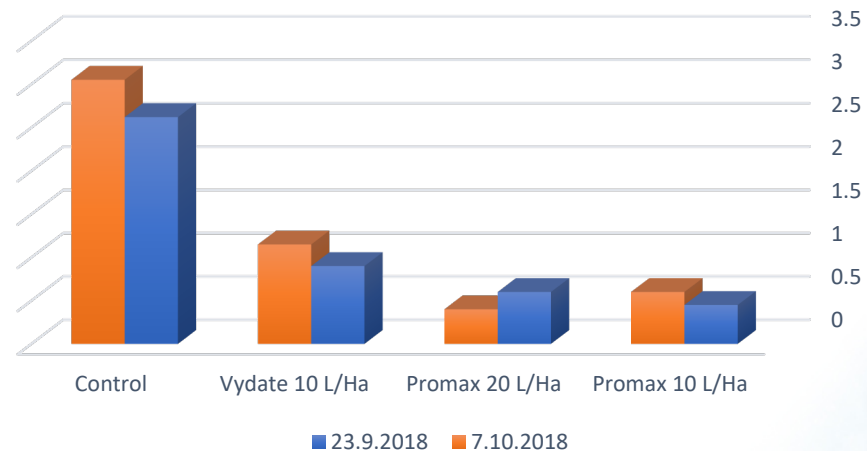
- Israel Agrochemicals market: \$140M.
- Nematicides market: \$10M
- Main current nematicides in Israel: Vydate 10L (DU PONT), Nemacur 400EC (AMVAC), Condor (1,3 Dichloropropene 93.6%) (DOW).
- Bionematicide available in the market: Bioguard SL (*Allium sativum*).
- Bionematicides can't be registered for Organic farming in Israel due to EU regulations.
- Full registration process in Israel 3-4 years.



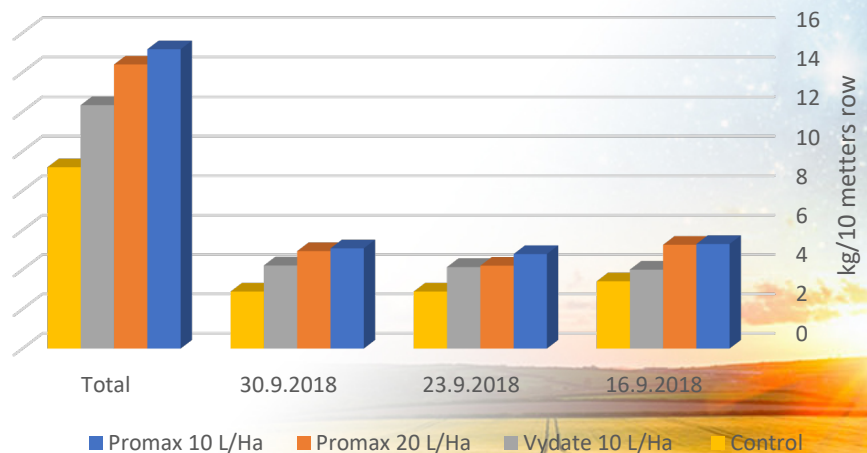
Promax® in Cucumber, Gilat 2018	
Planting	August 2018
First Treatment	10 days after planting
2 nd & 3 rd treatment	Intervals of 2 weeks
Products	Promax® 10 l/ha
	Promax® 20 l/ha
	Vydate 10 l/ha
	Control



Gall Index

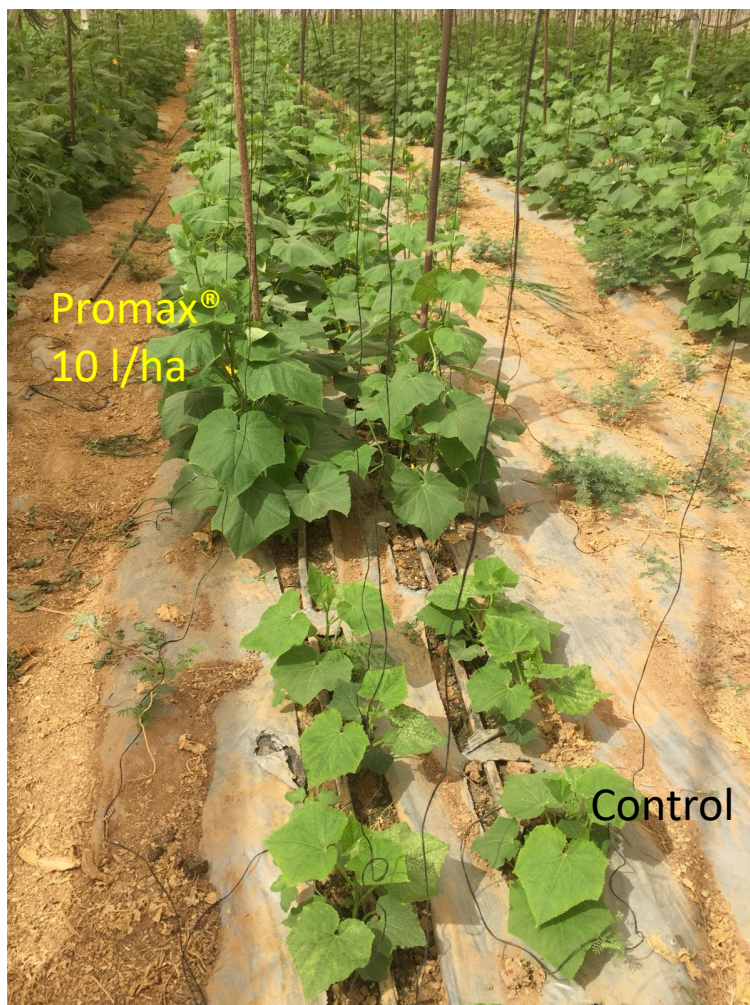


Yield





Promax® in Cucumber, Gilat 2018

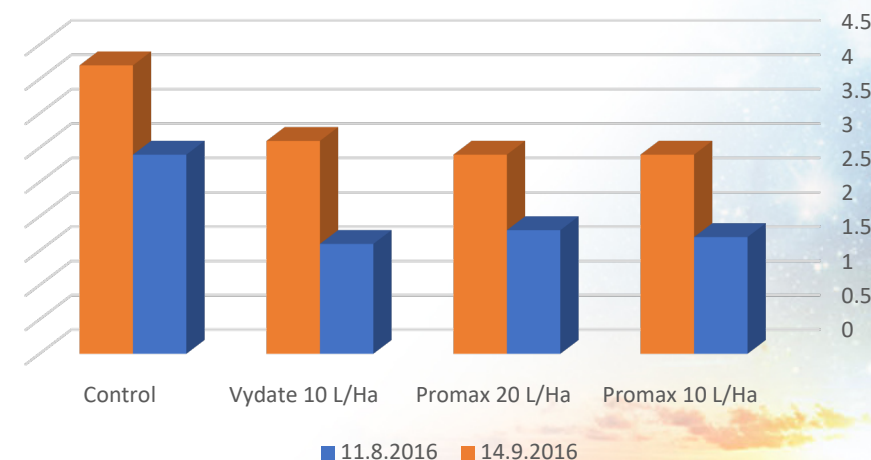




Promax® in Tomato, Bazra 2016	
Planting	July 2016
First Treatment	Planting day
2 nd & 4 th treatment	Intervals of 2 weeks
Products	Promax® 10 l/ha
	Promax® 20 l/ha
	Vydate 10 l/ha
	Control



Gall Index





Promax[®] in Tomato, Bazra 2016

Trunk diameter

Control



Promax[®] 10 l/ha



Promax[®] 10 l/ha



Bazra

Jerusalem



Summery:

- Promax[®] shows good results in the tested crop in most of the field trials.
- First registration (tomato & Cucumber) expected end of 2019.
- Crops still to be tested: Carrot, Eggplant, Pepper, Banana.
- Farmers show interest in the product.



HUMAGRO TRIALS IN COTTON

*SPN AGRO AGRICULTURAL GOODS Co. Ltd.
Sti.*

Adana, Turkey



**MICRO CARBON
TECHNOLOGY**

We are located in Adana in the Mediterranean



BURADA
HUMA
GRO
Energize Your Crops
MİKRO KARBON TEKNOLOJİ
ÜRÜNLERİ KULLANILMAKTADIR



FIRST APPLICATION IN COTTON

*SUPER NITRO® 2L/ha

*C-PHOS™ 2L/ha

*VITOL® 2L/ha





DISEASE CONTROL





CONTROL







SECOND APPLICATION IN COTTON

*VITOL® 2L/ha

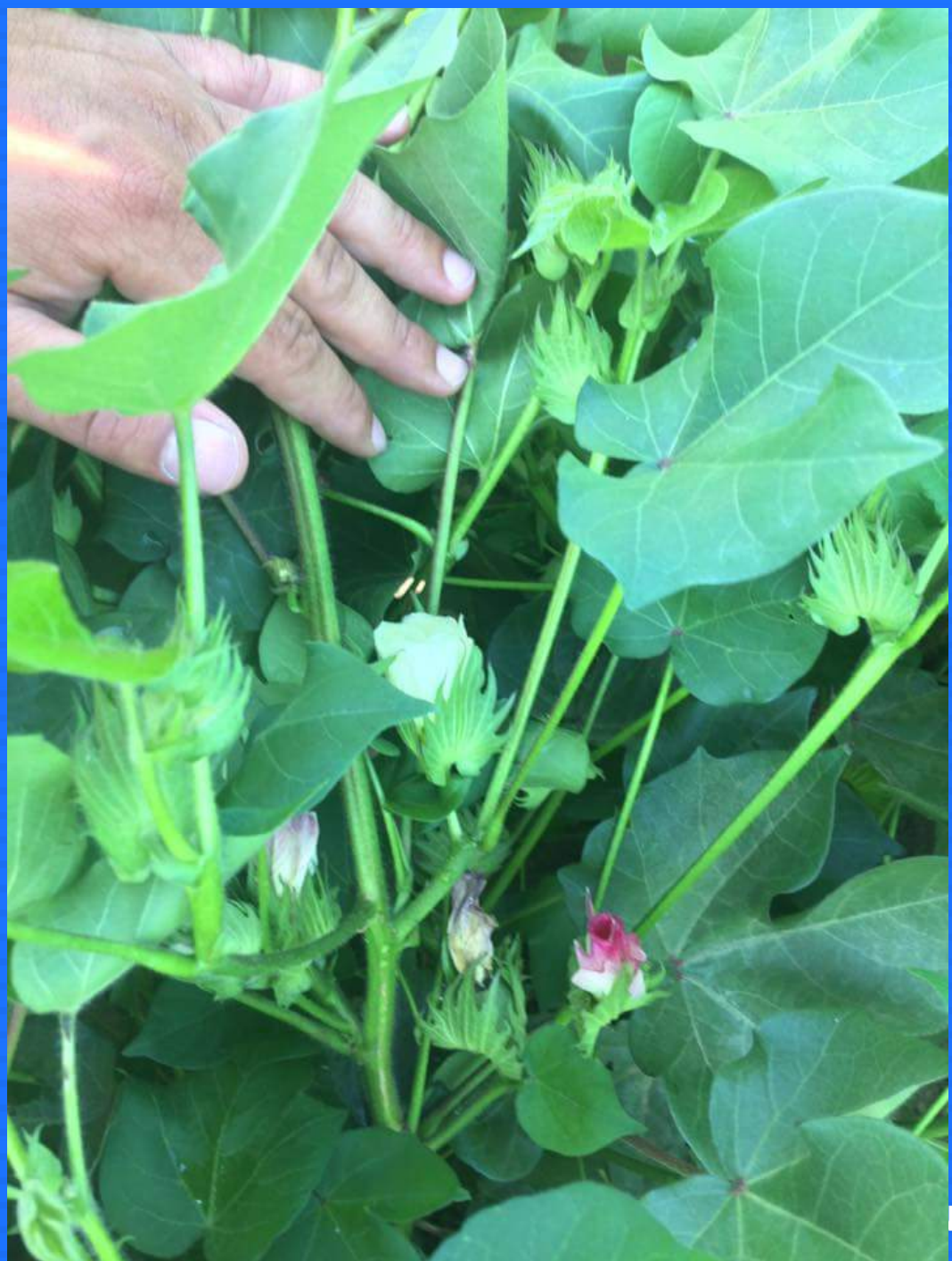
*38 SPECIAL® 1,5L/ha

*MAX PAK® 1,5L/ha











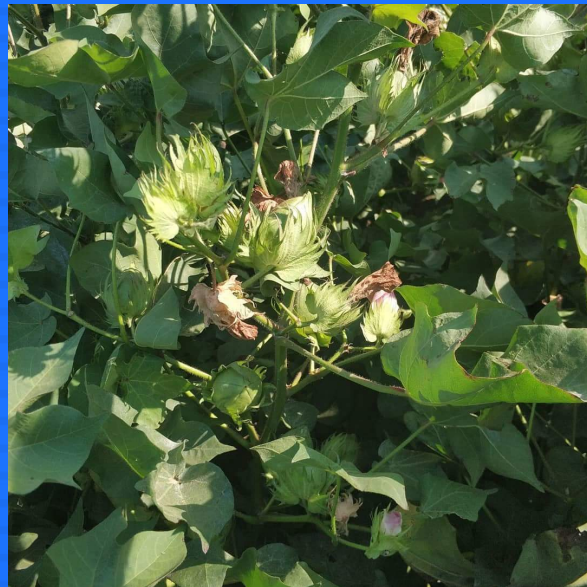




THIRD APPLICATION IN COTTON

- *BREAKOUT® 2L/ha
- *38 SPECIAL® 1,5L/ha
- *GHOST 250cc/ha







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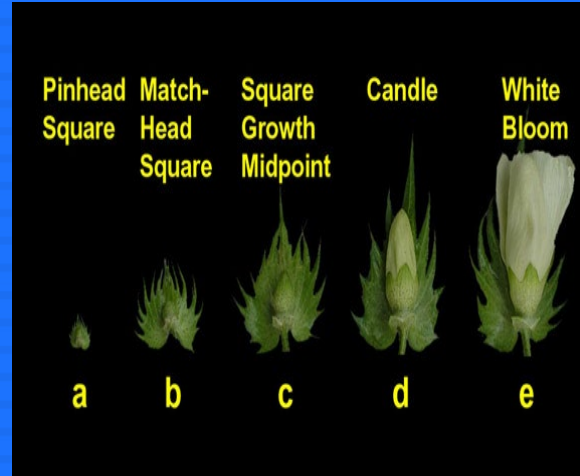
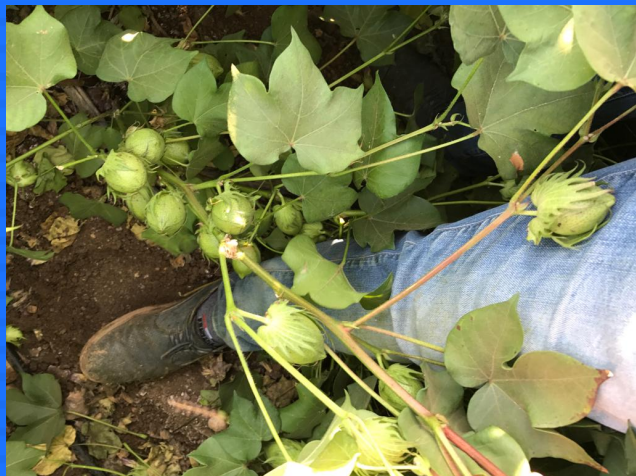




FOURTH APPLICATION IN COTTON

*SUPER K MAX 1L/ha

*CALCIUM 1L/ha





GHOST

- * Bitkinin beslenmesini başlatmayı ve özellikle toprakta en iyi özütleyici olarak kullanılır.
- * Yüksek pH ortamlarında en iyi özütleyici olarak kullanılır.
- * Çiçek oluşumunda en iyi özütleyici olarak kullanılır.
- * Bitkinin genetik faktörlerine karşı direnci artırır.



C-PHOS

- * Özel formülasyonu yüksek oranda kalsiyum ve fosforun birleşimidir.
- * Pamuklarda toprakların en yoğun olduğu bölgelerde bitkinin daha aktif hareket etmesini sağlar.
- * Fosfor ve kalsiyum diEtyacire karşılar, bitkiye enerji verir.
- * Elyaf ve lif kalitesini artırır, randımanı yükseltir.
- * Bitkinin boğum aralarının açılmayı azaltır verime artı sağlar.



VITOL

- * Bitkinin büyüme dönemlerinde suya ve toprakta en iyi özütleyici olarak kullanılır.
- * Pamukta toprakta en iyi özütleyici olarak kullanılır.
- * Büyümekte olan bitkinin boğum aralarını açar.
- * Sıcak iklimlerde bitkiye gerekli enerjiyi sağlar.
- * Karşı direnci artırır.



SPN AGRO
Sustainable Plant Nutrition

Sürdürülebilir Bitki Besleme

Pamuk
Gübreleme
Programı

VITOL
BREAKOUT
GHOST
C-PHOS
BUTON

SPN AGRO
Sustainable Plant Nutrition

www.spnagro.com

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HUMAC
ARTIPLUS
LANO





FIFTH APPLICATION IN COTTON

***SUPER K MAX 2L/ha**

PS: If you make 2 applications every 15 days, the quality of cotton will be very high. In this way, defoliants work very well.







+ BHN WORLD CONFERENCE 2018



1 BRANCH

7300 KG/HA = 6,515 LB/AC (UNLINTED) + BHN WORLD CONFERENCE 2018

HAPPY ENDING

THANK YOU





Effects of **HUMA GRO[®]** products on horticultural crops

Presented by



MAFCO for Agriculture
Egypt



Effects of Huma Gro[®] products on growth improvement, fruit quality and yield increase in **Strawberries** and comparing with conventional treatments.

Objective:

Increase vegetative growth, improve fruit yield, and quality of Strawberry plants.

Variety	Purpose	Planting date	Farm Area (acre)	Trial Area (acre)
029	Fresh Market	2/10/2017	280	1

MATERIALS AND METHODS

HUMA GRO products used (**VITOL®**, **SUPER NITRO®**, **SUPER PHOS®**, **GOLDEN PRO®**, **SUPER Potassium®**, **CALCIUM**, **MAX PAK®**) were at the rate of 0.5 L / 200 L / acre applied foliar for each compound or mixed with the other as follows:

Conversion

1 Feddan = 1.04 acres

1 feddan = 0.42 ha

0.5L/feddan = **1.2 L/ha**

Date	Products	Dose (L/acre)	Purpose
16/11/2017	Vitol®	0.5	Promote vegetative & root growth
23/11/2017	Super Nitro® + Super Phos®	0.5 + 0.5	Promote vegetative & root growth
01/12/2017	Golden Pro®	0.5	Stimulate flowering and increase fruit number
10/12/2017	Super Potassium® + Calcium	0.5 + 0.5	Increase fruit size and firmness
23/12/2017	Vitol® + Max Pak®	0.5 + 0.5	Promote plant growth & Health
09/01/2018	Super Potassium® + Calcium	0.5 + 0.5	Increase fruit size, firmness, Brix° and promote color
11/01/2018	Vitol®	1 (fertigation)	Root growth stimulation
25/01/2018	Super Nitro® + Super Phos®	0.5 + 0.5	Promote vegetative & root growth
03/02/2018	Golden Pro®	0.5	Stimulate flowering and increase fruit number
10/02/2018	Max Pak®	0.5	Keep the plant health



RESULTS



Application with **SUPER NITRO[®]** + **SUPER PHOS[®]** at 0.5 L/acre per product (mix) to increase and improve *vegetative growth* and increase the chlorophyll content (green color of the leaves), which gives *healthy appearance and vitality*.



SUPER NITRO® + SUPER PHOS®
Increase vegetative growth



Conventional
+ BHN WORLD CONFERENCE 2018



SUPER NITRO[®] + SUPER PHOS[®] also resulted in the *uniformity* of plant growth and stimulated more *flowering* compared to the competitive products, which showed symptoms of nutrient deficiency with light green leaves and irregularities in the vegetative growth.



SUPER NITRO® + SUPER PHOS®
(Improve plant growth and uniformity, dark green color & more vitality)



Conventional
(Weak and irregular growth & Pale color)



The application of **GOLDEN PRO**[®] at a rate of 0.5 liter /
acre increased the number of flowers (fruits)
on the plant at the rate of **2.0** fruits/plant (20 gm / fruit in average)
compared to the conventional treatments where the
average number of fruits in plants treated was **10.0** fruits /
plant while the conventional treatments was **8.0** fruits /
plant.



GOLDEN PRO®



Promotes flowering & Fruit set

Conventional



Low flowering & Fruit yield

+ BHN WORLD CONFERENCE 2018



GOLDEN PRO®



Conventional





Application of **SUPER Potassium**[®] + **CALCIUM** by 0.5 liter / acre from each of them (mix) increased fruit color and firmness and decreased fruit cracking.

Foliar spraying with **VITOL**[®] + **MAX PAK**[®] improved plant growth, increased vegetative and root growth, and maintained natural growth of the plant during the frost period compared to conventional treatments containing plant growth regulators.



The use of 1 liter **VITOL**[®]/acre fertigated through drip significantly increased and spread root growth compared to conventional treatment.

VITOL[®] Fertigation as root stimulator



Conventional root stimulator

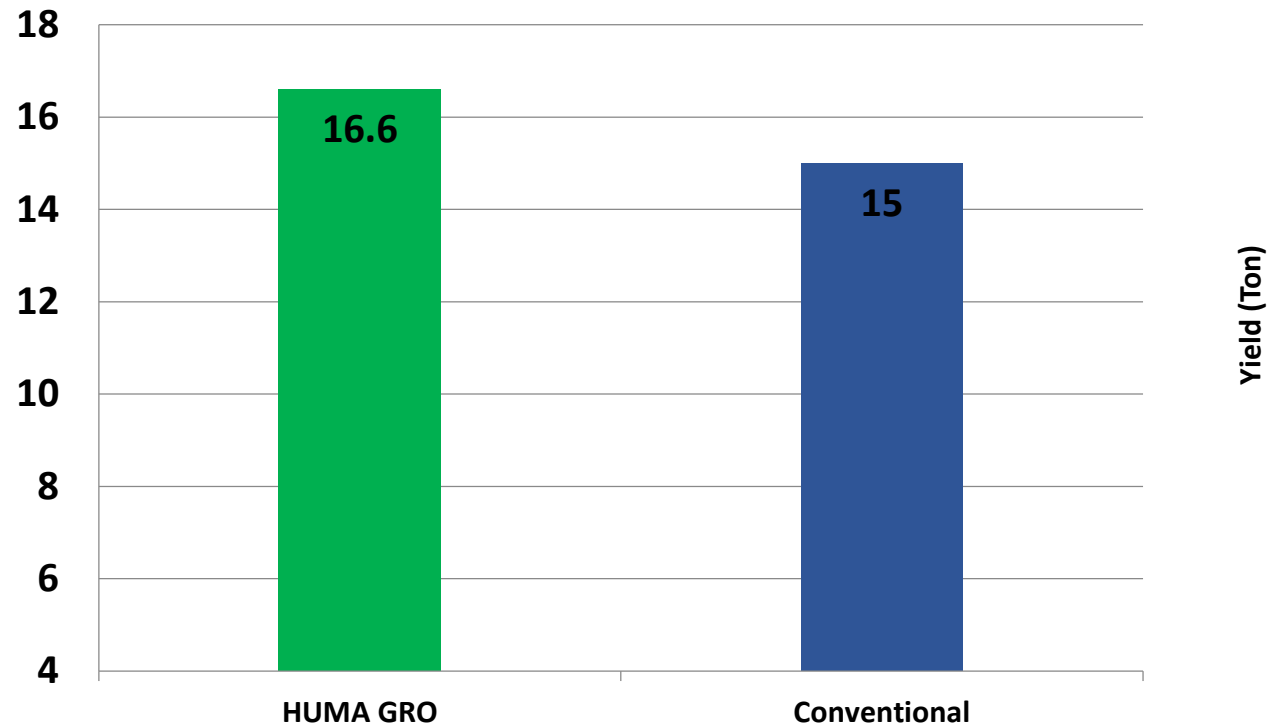




Return on investment (ROI)

Huma Gro[®] nutrition program led to increase the yield of strawberry by 10.6 % (1600 Kg/acre). Moreover, the total income increased by \$2000/acre (36000 L.E).

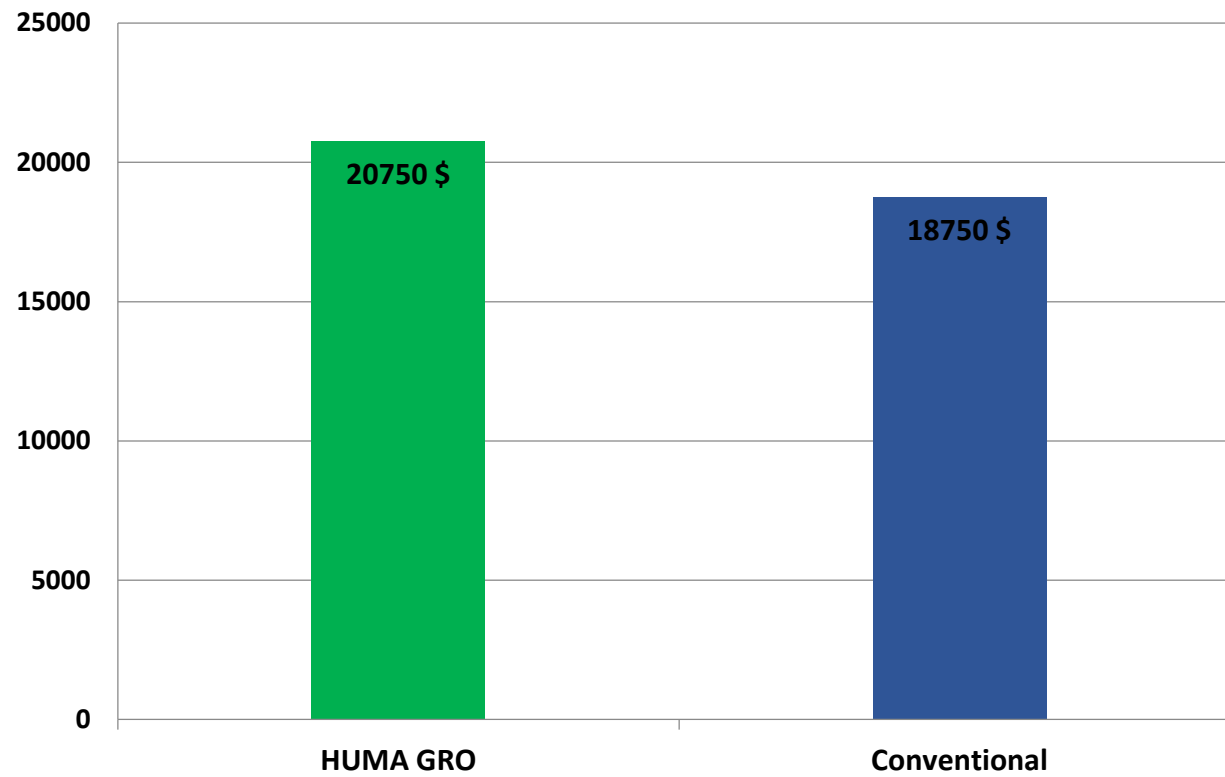
Yield





Return on investment (ROI)

Total income (\$)





The effect of **JACK POT[®] on increasing the growth and size of sugar beet tubers and increasing the level of sugar available for extraction**

Objective:

Increase the yield of sugar beet and tuber size and increase the level of sugar available during extraction.



MATERIALS AND METHODS

The treatment was carried out by JACK POT[®] on monogerm sugar beet plants which was planted in clay-loam soil and irrigated by flood system. Soil and water properties were (EC_w : 0.7 ds/m pH : 7.2 - EC_e : 1.1 pH: 8.2).

Planting date was 7/9/2017. JACK POT[®] was sprayed twice at the age of 150 and 160 days at a rate of 0.5 and 1 liter/acre, respectively. Harvest age was 195 days.



RESULTS

An increase in the **size** of sugar beet tubers was observed **after 7 days** of the first treatment at a rate of **0.5** L/acre. Moreover, it also increased the volume of vegetative growth and the second application was done **after 10 days** from the first at a rate of **1** L / acre

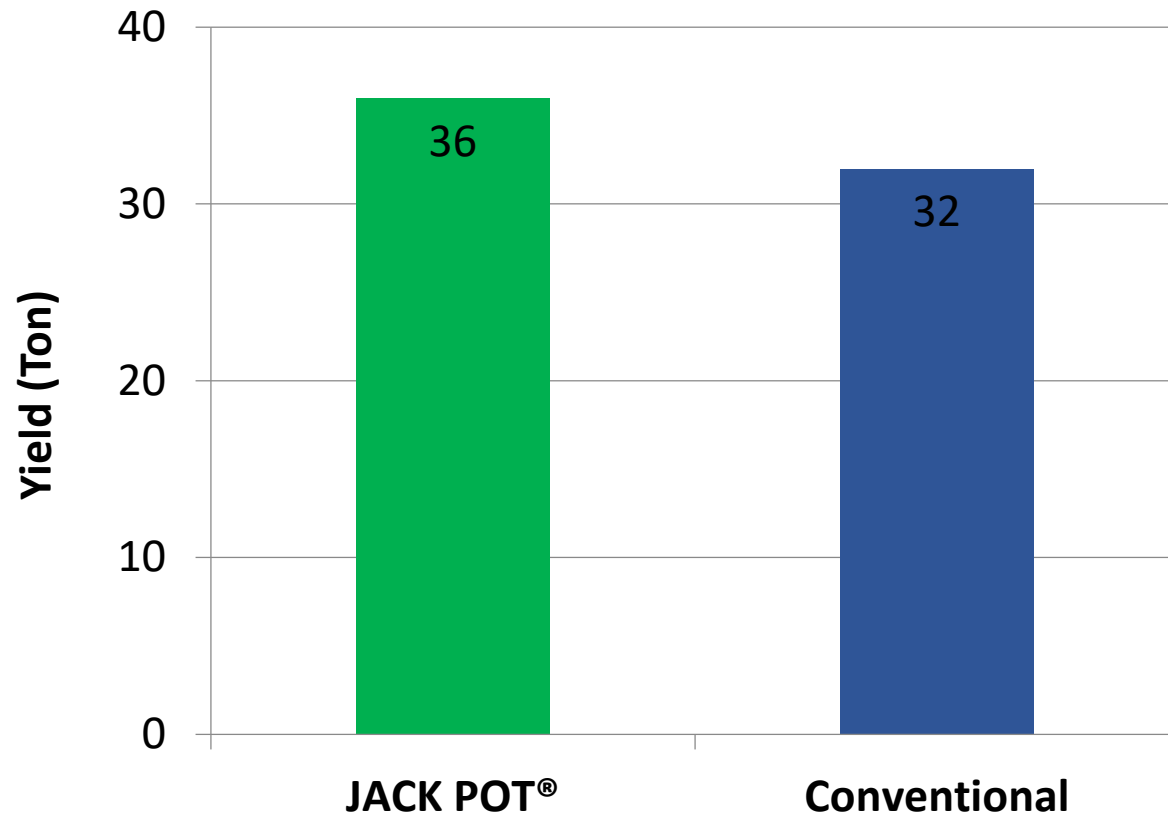




A significant increase in the size of sugar beet tubers was observed until the harvest day, which averaged **6-8 kg** weight of the tuber and the average yield per acre increased by **4 tons** (average production in traditional treatments is 30-32 tons / acre), reaching **36 tons/acre**.

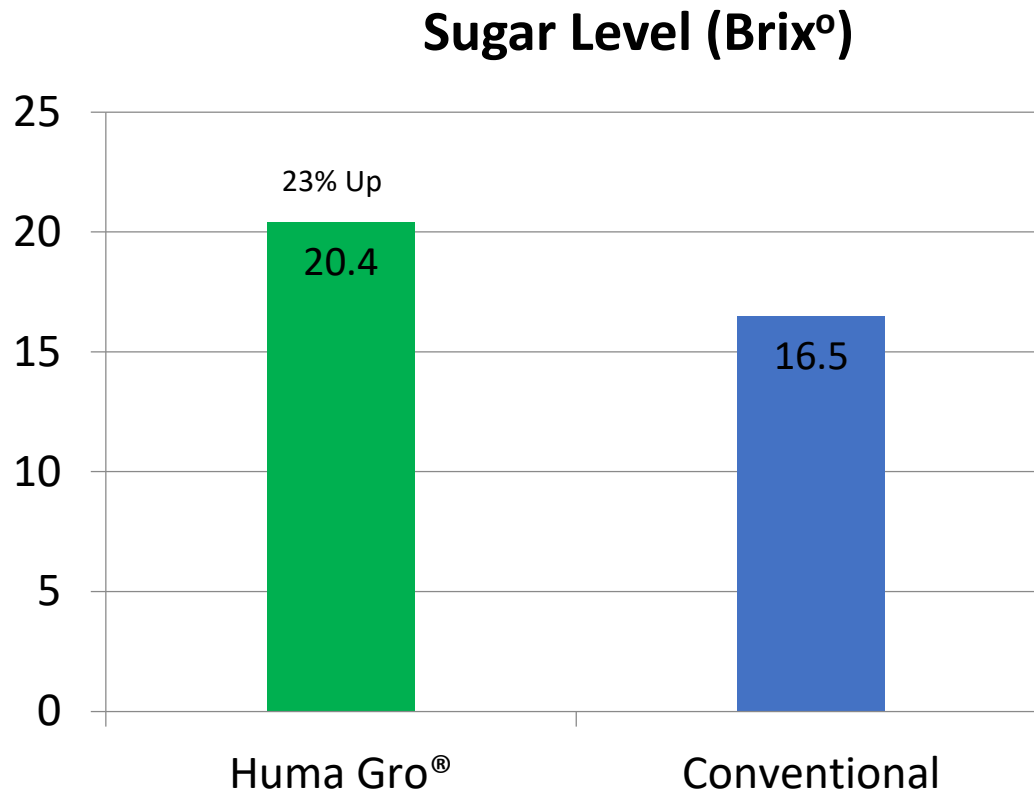


Sugar beet Yield





Increasing in Sugar level

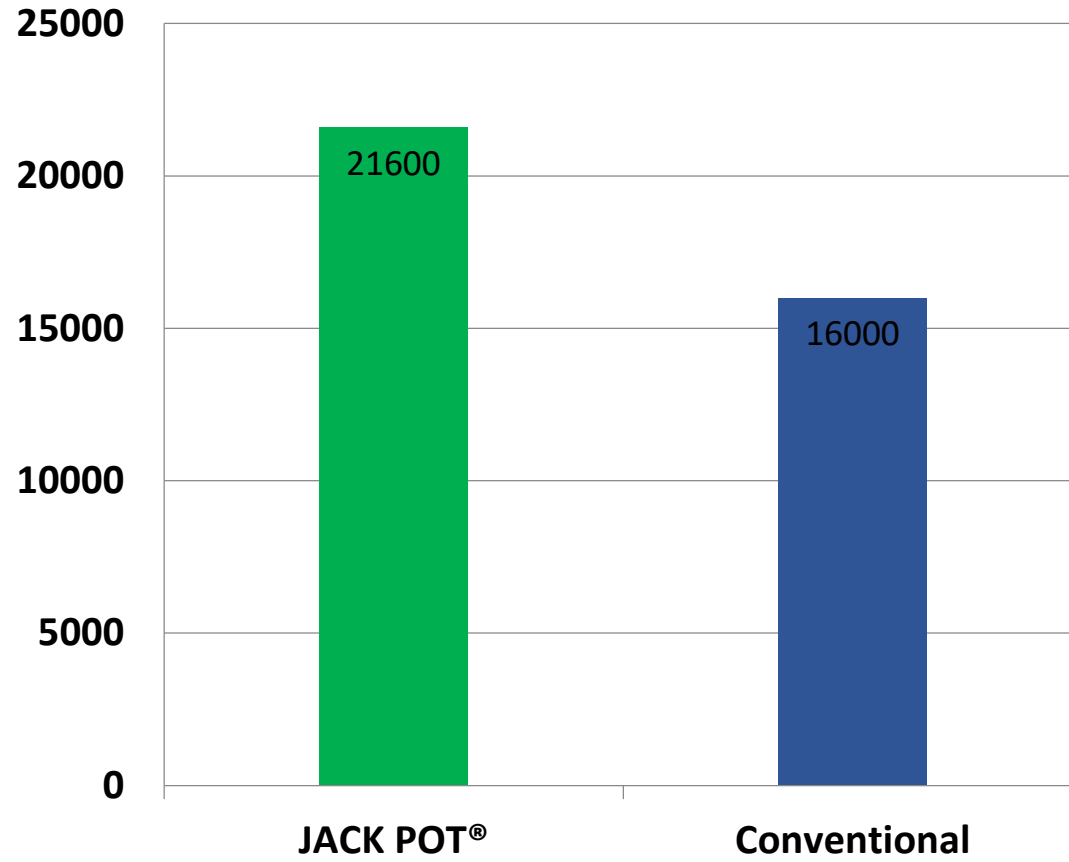


In addition, the sugar available for extraction was increased when analyzing a sample of beets treated with **JACK POT®** which ranged between 19-21.8° Brix (Average **20.4°** Brix) with increasing **23.4 %** for sugar level compared with conventional treatments (which sugar level ranged between **16 – 17°** Brix).



Total Income

ROI (5600 L.E)





CONCLUSION

From the previous results, it is clear that to obtain the best result—and under the same conditions—from an increase in sugar beet yield and tubers sizes and increase in sugar level, the **JACK POT[®]** is sprayed twice between 45-60 days and 10-15 days before harvesting at 0.5, 1 liter/acre, respectively.



The effect of using a full nutrition program from Huma Gro[®] products on increase yield and quality of potatoes

Objective:

Comparison of the Huma Gro[®] nutrition program with the conventional program and its effect on increasing yield and quality in potatoes.



MATERIALS AND METHODS

This trial was conducted on 68 acres which describe as follow :

Soil type : Sandy soil
Irrigation system: Pivot
E.Cw : 300 ppm E.Ce: 600 ppm

P. variety	Purpose	Planting date	Plants/acre
Spunta	Fresh	25/12/2017	18000



Huma Gro[®] products / acre

Products	Total amount / acre (Liter)
VITOL [®]	2
SUPER PHOS [®]	1
SUPER NITRO [®]	0.5
MAX PAK [®]	0.5
CALCIUM	1.5
SUPER K [™]	1
JACKPOT [®]	1



Application times

Date	Age (days)	Product	Dose/ acre	Purpose
11/02/2018	48	Diamond Grow	1 Kg (fertigation)	promote vegetative and root growth
12/02/2018	49	VITOL®	1	promote vegetative and root growth
16/02/2018	53	SUPER PHOS®	1	Enhance tuber initiation (stolons)
18/02/2018	55	Diamond Grow	1 Kg (fertigation)	promote vegetative and root growth
25/02/2018	62	SUPER NITRO® + MAX PAK®	0.5 + 0.5	increase vegetative growth and protected plant from nutrient deficiency
28/02/2018	65	Gibberellin + Boron	1 + 0.1	Increase vegetative branches of plants and protected from the hollow heart
02/03/2018	67	SUPER K™ + CALCIUM	0.5 + 0.5	increase cell size and firmness
10/03/2018	75	VITOL®	1	stimulate growth and tuber uniformity
17/03/2018	82	SUPER K™ + CALCIUM	0.5 + 0.5	increase tuber size and firmness
24/03/2018	89	JACKPOT® + CALCIUM	0.5 + 1	increase tuber size and firmness



RESULTS



Tuber Initiation Stage



Hydrophos®
Tubers: 7.5/stem



SUPER PHOS®
Tubers: 9.5/stem
More uniformity

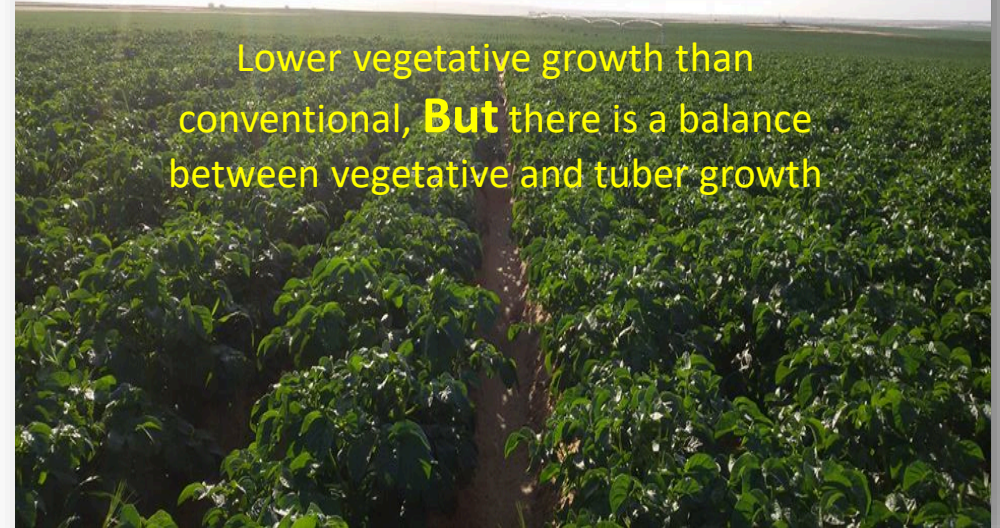




More Uniformity
for tuber size



HUMA GRO®



Lower vegetative growth than
conventional, **But** there is a balance
between vegetative and tuber growth

Conventional

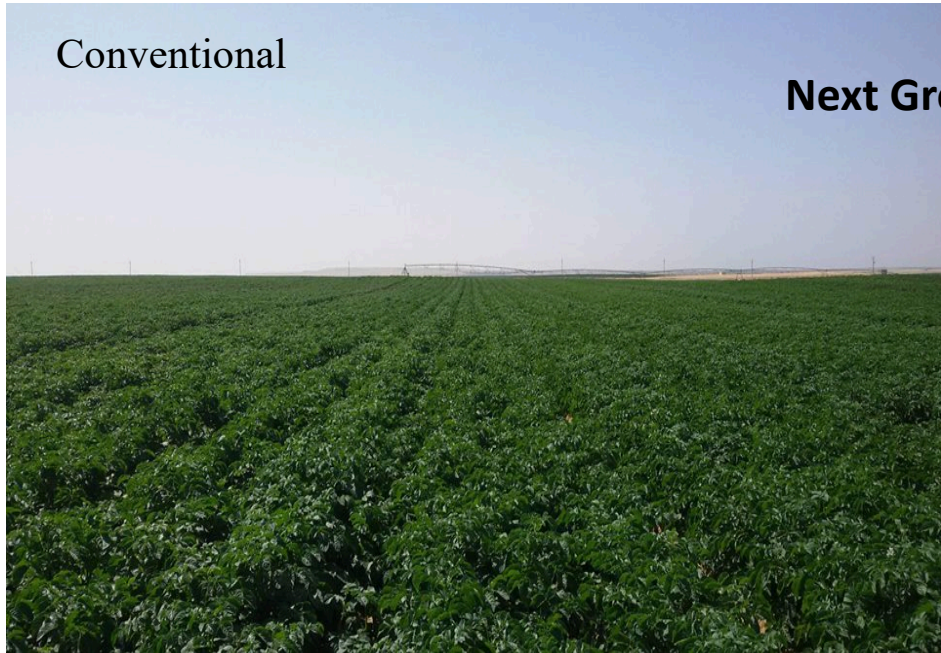


Conventional products effect which
contained plant growth regulators (PGRs)

Increase vegetative growth at the
expense of tuber growth



Conventional

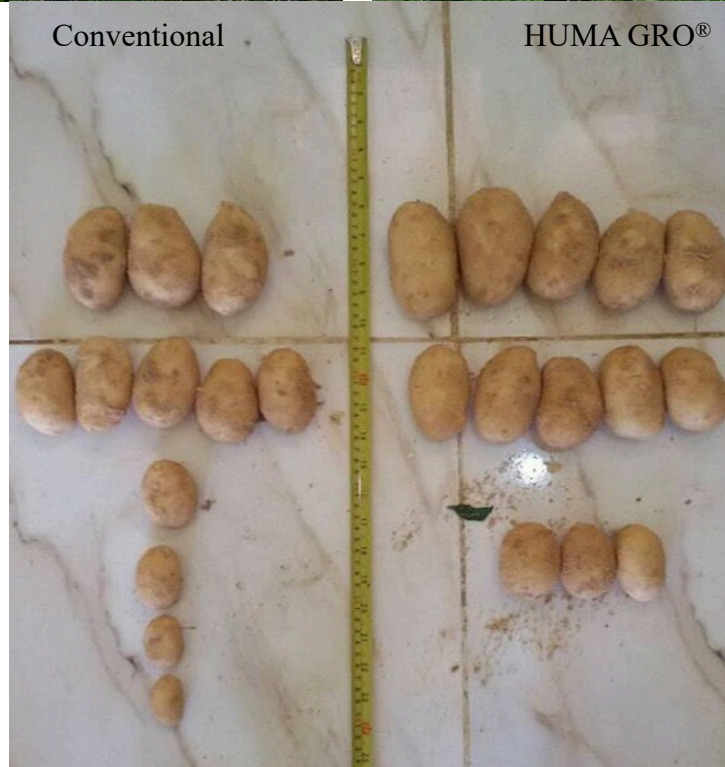


Next Growth Stage



HUMA GRO®

Conventional



HUMA GRO®



Conventional

15 days before harvest

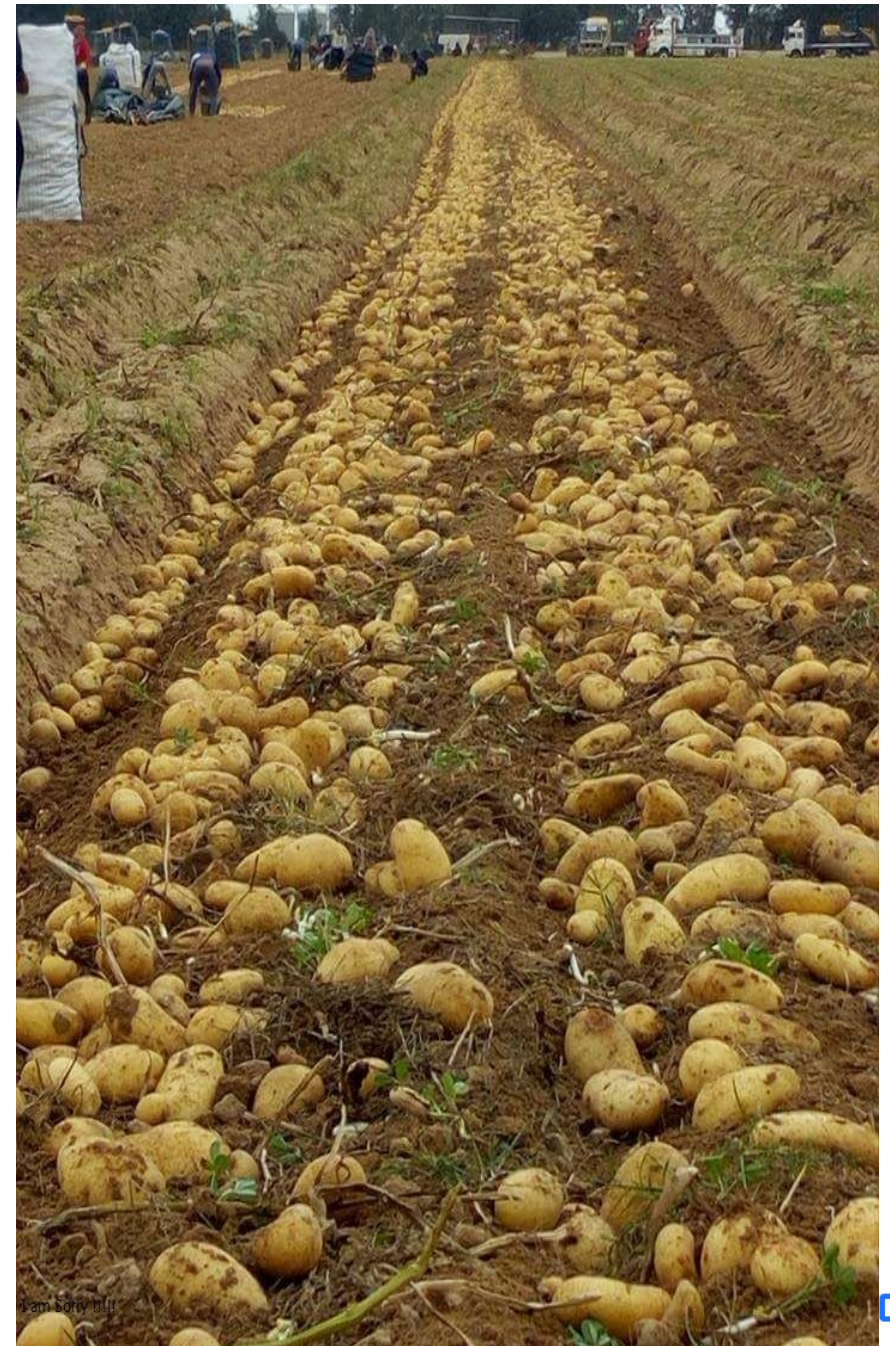
HUMA GRO®





Harvest day





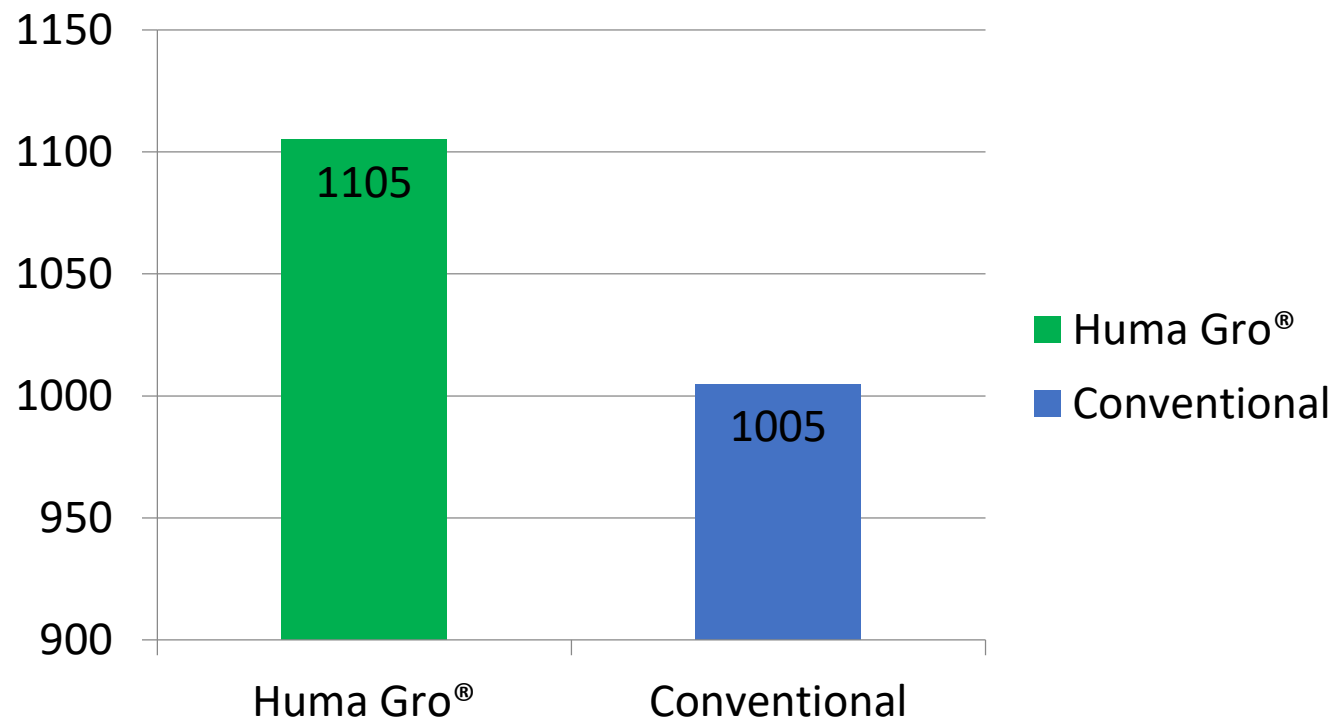






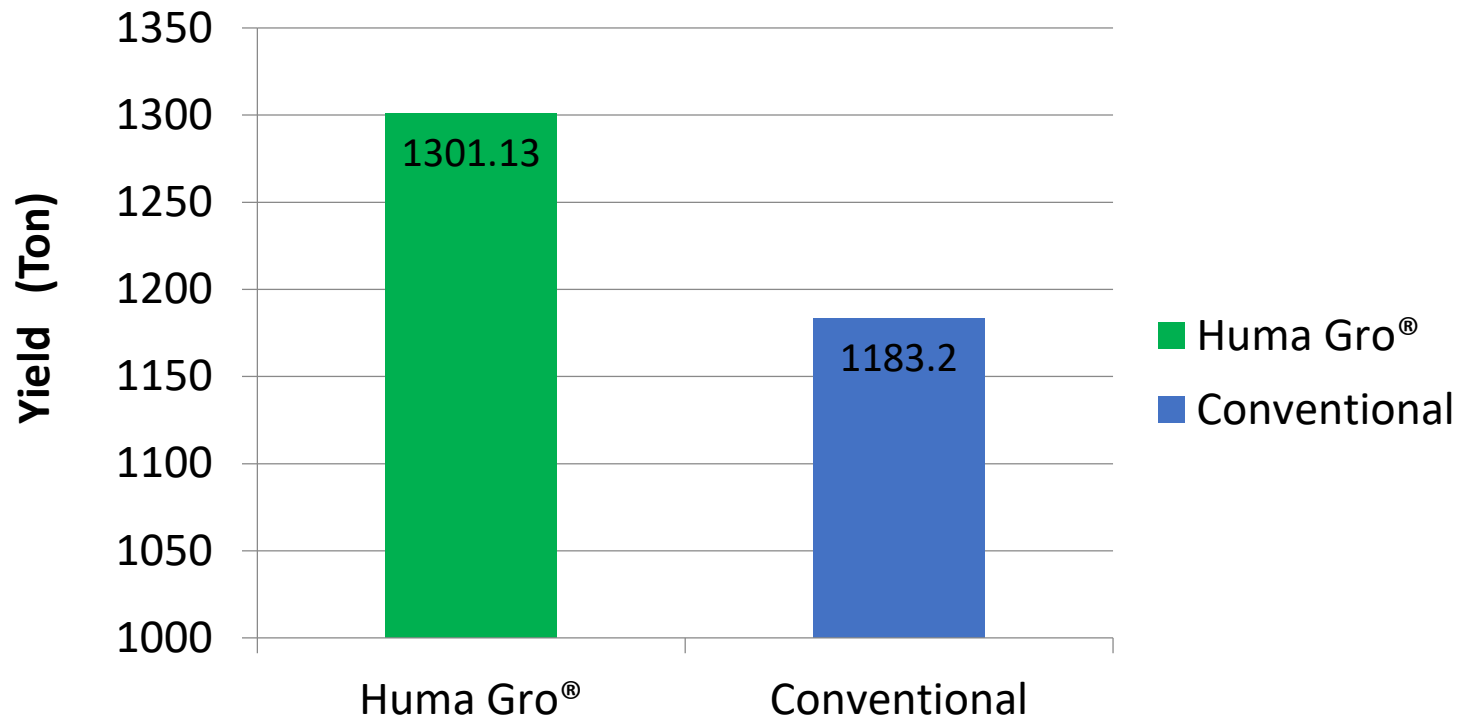


Jumbo sacks no./Pivot



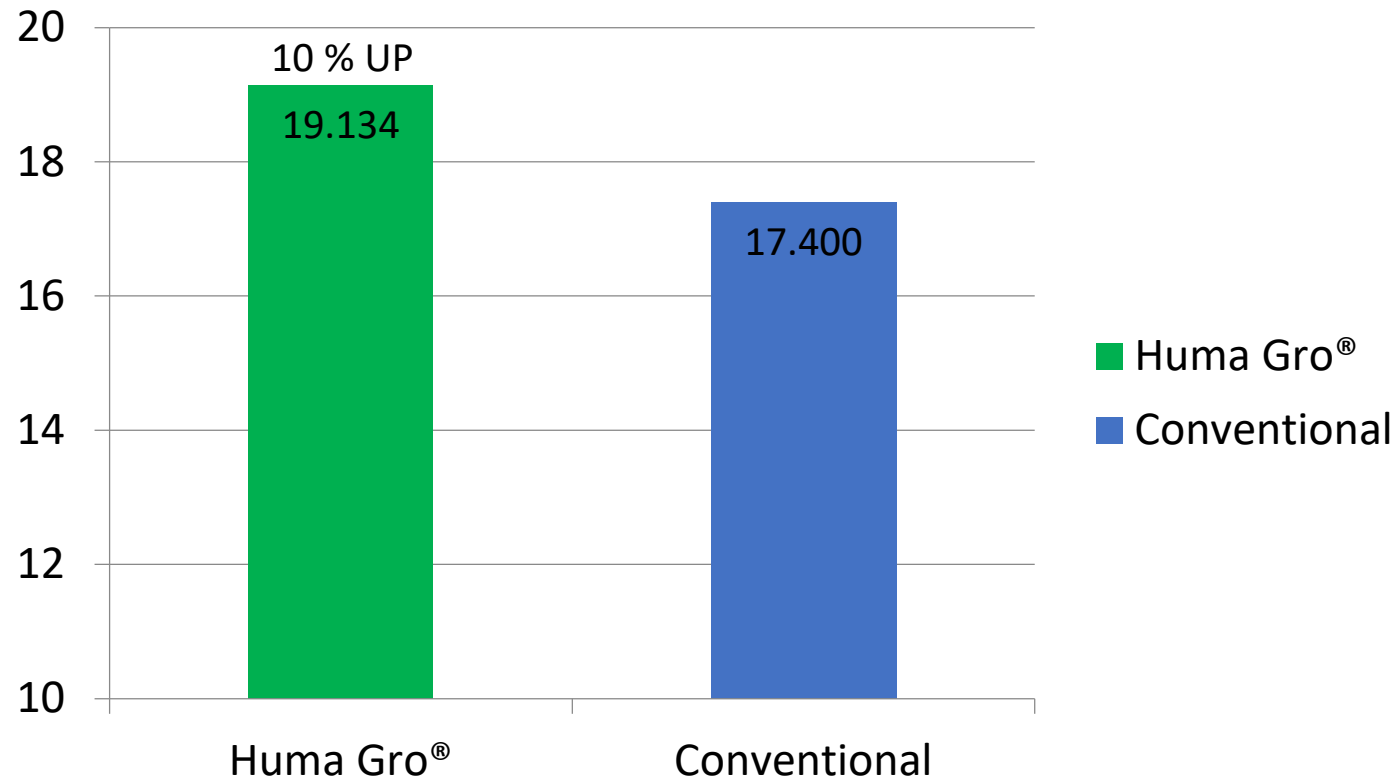


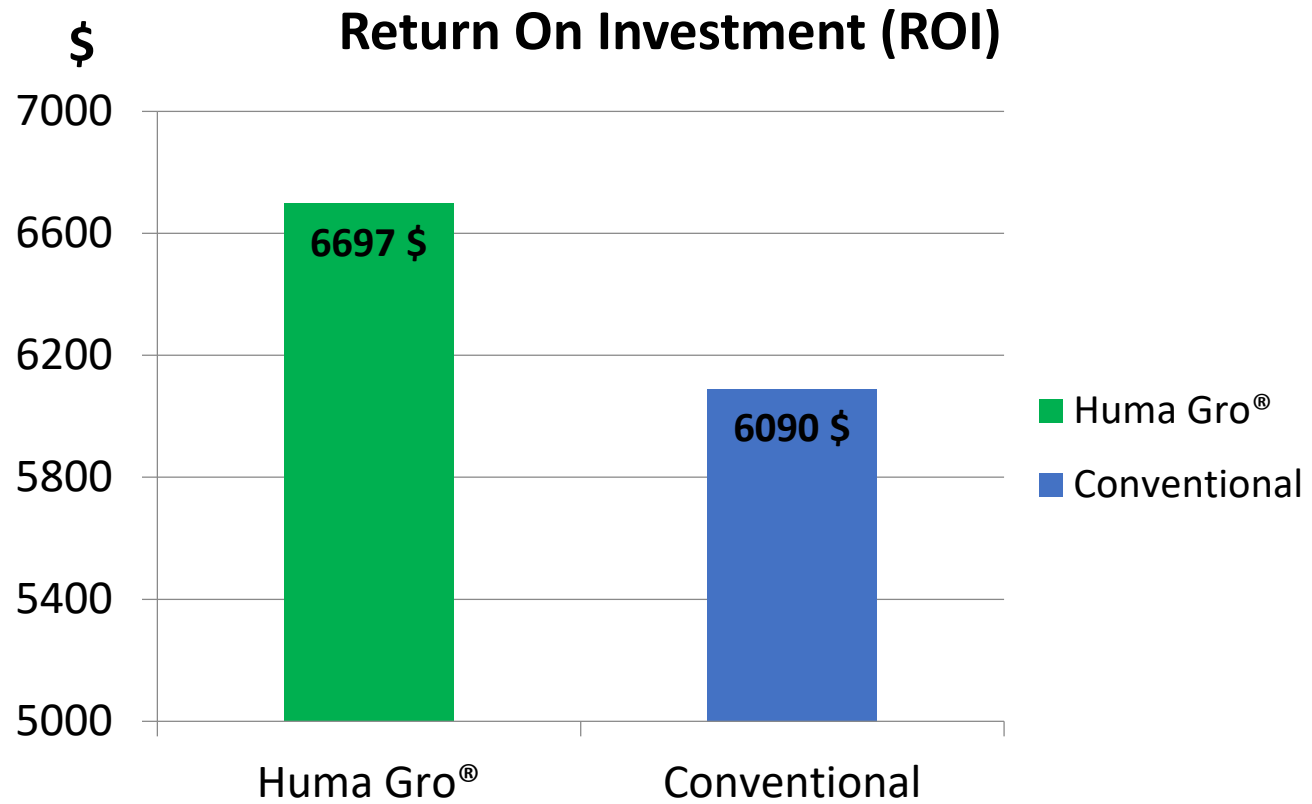
Total Yield / Pivot (68 acre)





Average Yield / Acre







THANK YOU

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Egypt