

**DAKOTA™**

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**REV™**  
Growing Stronger. Naturally.



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### Crop Pro Formula

- Increases fertilizer and chemical efficacy and longevity
- Increases nutrient uptake and rootmass
- Improves water retention and management
- Improves seed germination and establishment





Crop Pro




re-defined.

Organic

We're changing everything...

Carbon


# The New Carbon –


-  DAKOTA has re-defined organic compounds and what they can do.
-  Unlike ordinary humic acid products that are extracted from coal, REV is a superior – and naturally-occurring – organic carbon.
-  REV is the only crop product with the perfect natural profile to dramatically improve plant and soil health.


# DAKOTA REV™ *Soil and Plant Enhancer*

*r*

*"The highest quality organic material in the world"*

 DAKOTA's story began thousands of years ago in what are now known as peat fields left behind from glacial Lake Agassiz after the end of the last Ice Age.

 The conditions necessary to create the best organics anywhere took thousands of years.

 The amazing qualities of DAKOTA materials aren't a result of human engineering, just DAKOTA's great fortune of having the best organic material in North America.












# DAKOTA REV™ Soil and Plant Enhancer

*"The highest quality organic material in the world"*

***Unique properties are essential to the process***

-  100% natural with neutral pH of 6-7
-  Exceptionally high microbial content
-  Increases fertilizer and chemical efficiency
-  Stimulates seed germination
-  Improves nutrient uptake and rootmass
-  Reduces incidence of pathogenic diseases
-  Growth enhancer



# Research & Trial Collaborators –

DAKOTA has collaborated with leading institutions and agribusiness companies from around the globe on the development and validation of REV:



Chinese Academy of  
Agricultural Sciences



IOWA STATE  
UNIVERSITY



Irrigation  
Research  
Foundation

NDSU NORTH DAKOTA  
STATE UNIVERSITY



ABSugar



UNIVERSITY of AGRICULTURAL  
SCIENCES - BANGALORE

PETERSON  CONTROL UNION



Biohymn  
佰惠生

**H**efty/AgPhD  
SEED COMPANY



TTC SUGAR



Organic  
and  
Beyond

STARCOM  GROUP PTE. LTD.  
UKRAINE



RHi  
ROXAS HOLDINGS, INC.

# Better Microbial Activity

Independent laboratory analysis of REV and ordinary liquid biological products shows that REV has clearly superior biological characteristics.

	REV Crop Pro	Ordinary Products
Active Bacteria	287 µg/ml	10 – 25 µg/ml
Total Bacteria	111,360 µg/ml	100 – 1,000 µg/ml
Active Fungal	0	2 – 5 µg/ml
Total Fungal	15 µg/ml	10 – 100 µg/ml

Per 1 ml of REV Crop Pro

- 🌿 Bacterial activity above expected levels.
- 🌿 Bacterial biomass increases over time.
- 🌿 Aerobic fungal biomass in normal range.
- 🌿 High total bacterial biomass.
- 🌿 Biological activity will increase nitrogen efficiency by 25% or more.



Iowa Field Trials  
August 2016

Corn roots  
with REV





# Robust Growth & Improved Yield -

Potatoes planted in two gardens in Wichita, Kansas show a dramatic difference in plant height, mass and blooms with REV.



REV applied after emergence



No REV treatment



In a 2013 NDSU Edible Cranberry Bean trial - REV was applied alone at 1 gallon per acre in-furrow in one plot and applied at 1 quart per acre with starter fertility in a second plot.

The results as compared to the Control plot in germination rates, average plant count and total yield were clear and compelling.

Treatment	Pod Weight	Yield %	Avg. Plant Count (Per 15 ft)	Plant Germination %
Untreated	2.7 Kilograms	Baseline	42.50 plants	Baseline
Starter/Q <sub>t</sub> REV	3.0 Kilograms	+ 11%	47.25 plants	+ 11%
Gal REV	3.9 Kilograms	+ 14%	47.00 plants	+ 11%

2013 NDSU research





Treatment	Pod Weight	Crop %
Fertilizer Only	1,095.05 Grams	Baseline
Fertilizer with 1 qt. REV	1,847.76 Grams	+ 69 %

2013 NDSU research

In a 2013 NDSU edible bean trial REV with fertility generated a 69% higher yield than fertility alone.

**NDSU** NORTH DAKOTA  
STATE UNIVERSITY



**Dakota REV**

**Sprayed at 39 days of growth.**

**Picture taken 15 days later.**

施用 REV

15 天后拍摄

REV 处理

未添加 REV 处理

Treated with REV+

Untreated control





# Dakota **REV**

Sprayed at 39 days of growth.

Picutre taken 36 days later.

**Treated with REV**

**Untreated control**







**Seven days after treatment at establishment stage** (Picture date 12-2-2013).

16 Hours  
After Clipping



**Sixteen hours after cutting samples** (Picture date 12-3-2013).

# 2016 Irrigated Corn Trial

<u>Protocol</u>	<u>Bushels/Acre</u>
2 Quarts REV w/Fertility	222.9
1 Quart REV In-Furrow w/Fertility	217.9
1 Quart REV Foliar w/Fertility	203.6
Control – Standard Fertility Only	199.2



# 2015 Soybean Trial

Protocol

Bushels/Acre

Control

**60.08**

REV Only

**64.29**

REV w/ProGerm Fertilizer

**66.55**





## 2015 Corn Trial

<u>Protocol</u>	<u>Bushels/Acre</u>
Control	133.26
REV Only	146.51
REV w/ProGerm Fertilizer	147.06
REV w/ProGerm Fertilizer + Insecticide	151.34





# Corn Fertilizer Trial 2016

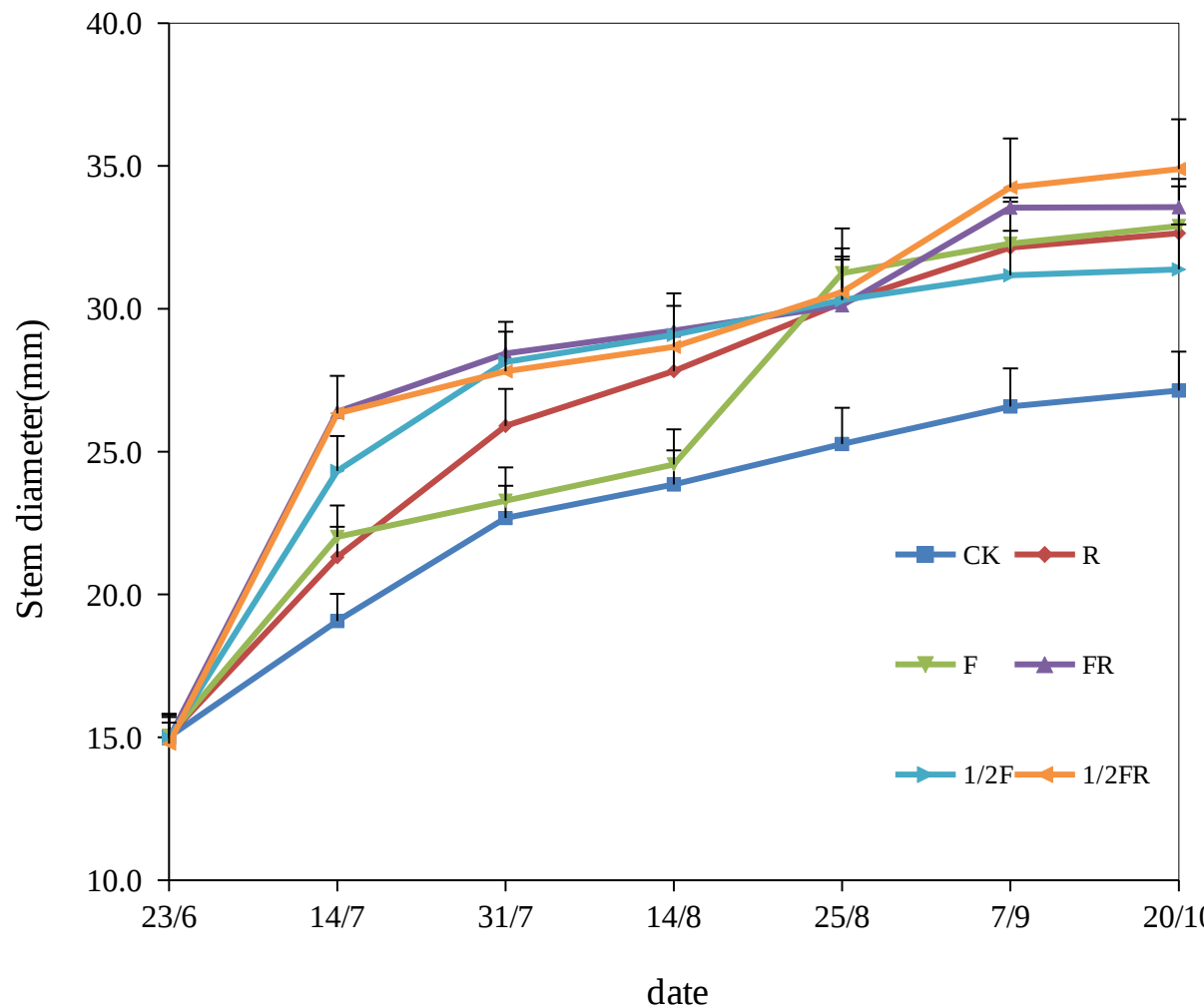
Location: Fisher, MN

Product	Volume/Acre	bu/A	+/- (bu)
Riser/Radiate/Accomplish	1.5gal 10-34-0 + 2.5gal Riser + 1pt Accomplish + 4floz Radiate (in furrow)	238.2	32.4
Levitate/Radiate/Accomplish	3gal Levitate + 1gal 10-34-0 + 1pt Accomplish LM + 4floz Radiate (in furrow)	227.5	21.7
REV (foliar)	4gal 10-34-0 (in furrow) + 1qt REV (foliar)	227.1	21.3
Optify Stretch	4gal OptiStart Pro + 10 floz Optify Stretch (in furrow)	224.5	18.7
Ascend	4gal 10-34-0 + 4.5 floz Ascend (in furrow)	224.5	18.7
U.S. Toggle	4gal OptiStart + 10 floz Optify Stretch (in furrow) + 40 floz U.S. Toggle (foliar)	222.6	16.8
10-34-0/Zn	4gal 10-34-0 + 1qt Zinc (in furrow)	220.5	14.7
OptiStart Pro	4gal OptiStart (in furrow)	213.5	7.7
Nucleus O-phos/Kickstand Zn	4gal Nucleus O-phos + 1qt Kickstand (in furrow)	213.3	7.5
REV (in furrow)	4gal 10-34-0 + 1qt REV (in furrow)	208.9	3.1
Nucleus HP/TraFix Zn	4gal Nucleus HP + 1qt TraFix Zn (in furrow)	206.8	1.0
Check		205.8	

In a 2016 independent corn trial that featured numerous leading crop input products – the data clearly shows that the yield gain from combining REV with fertility is impressive (21.3 bushels per acre more than Control). It is equally important to note that the only two combinations that generated a higher yield increase - Riser+Radiate+Accomplish and Levitate+Radiate+Accomplish - would each result in 4X the input cost compared to REV.

# Asia Trials & Research

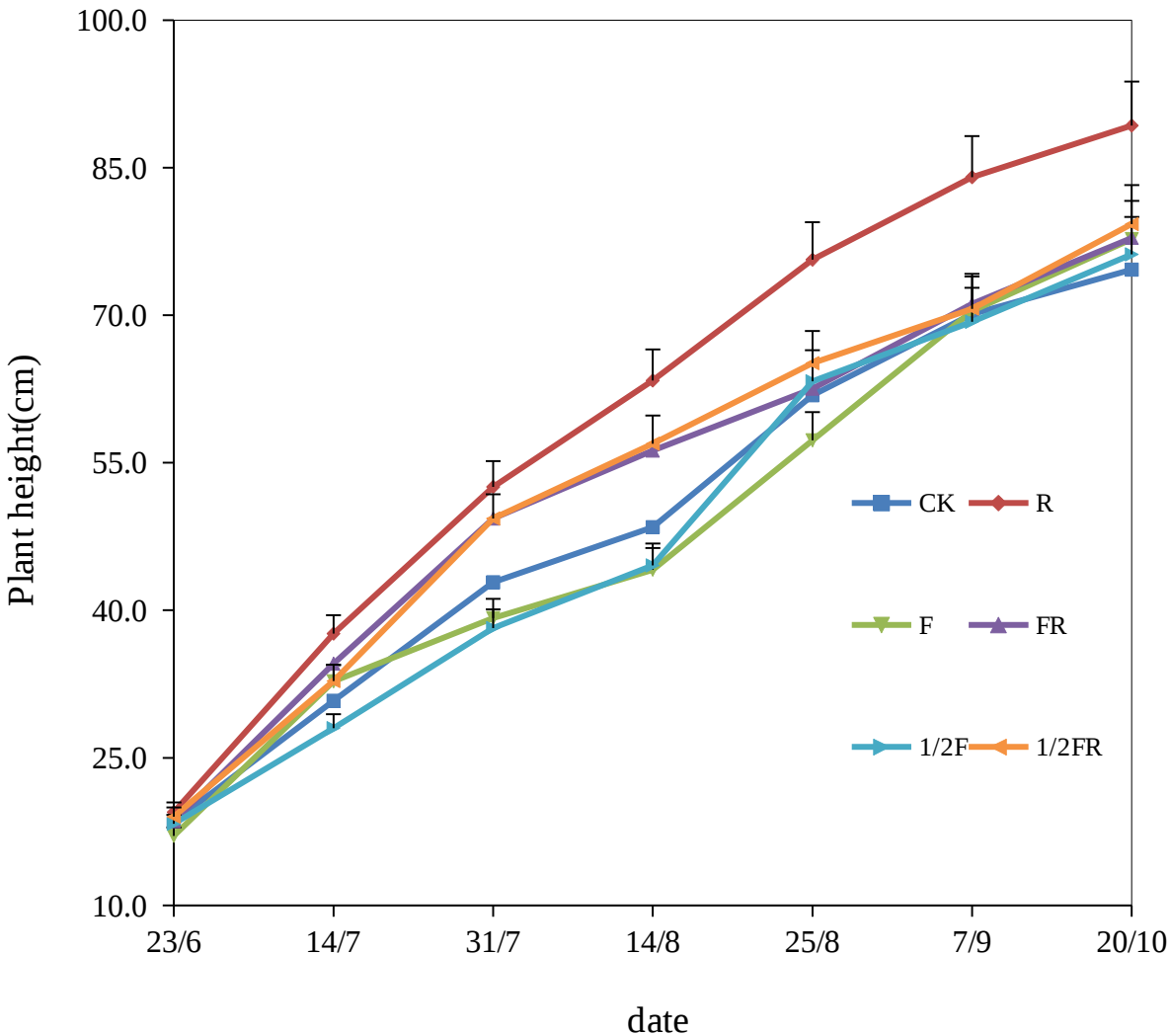
# 2017 CAAS Tomato Trial – Stem Diameter



中国农业科学院

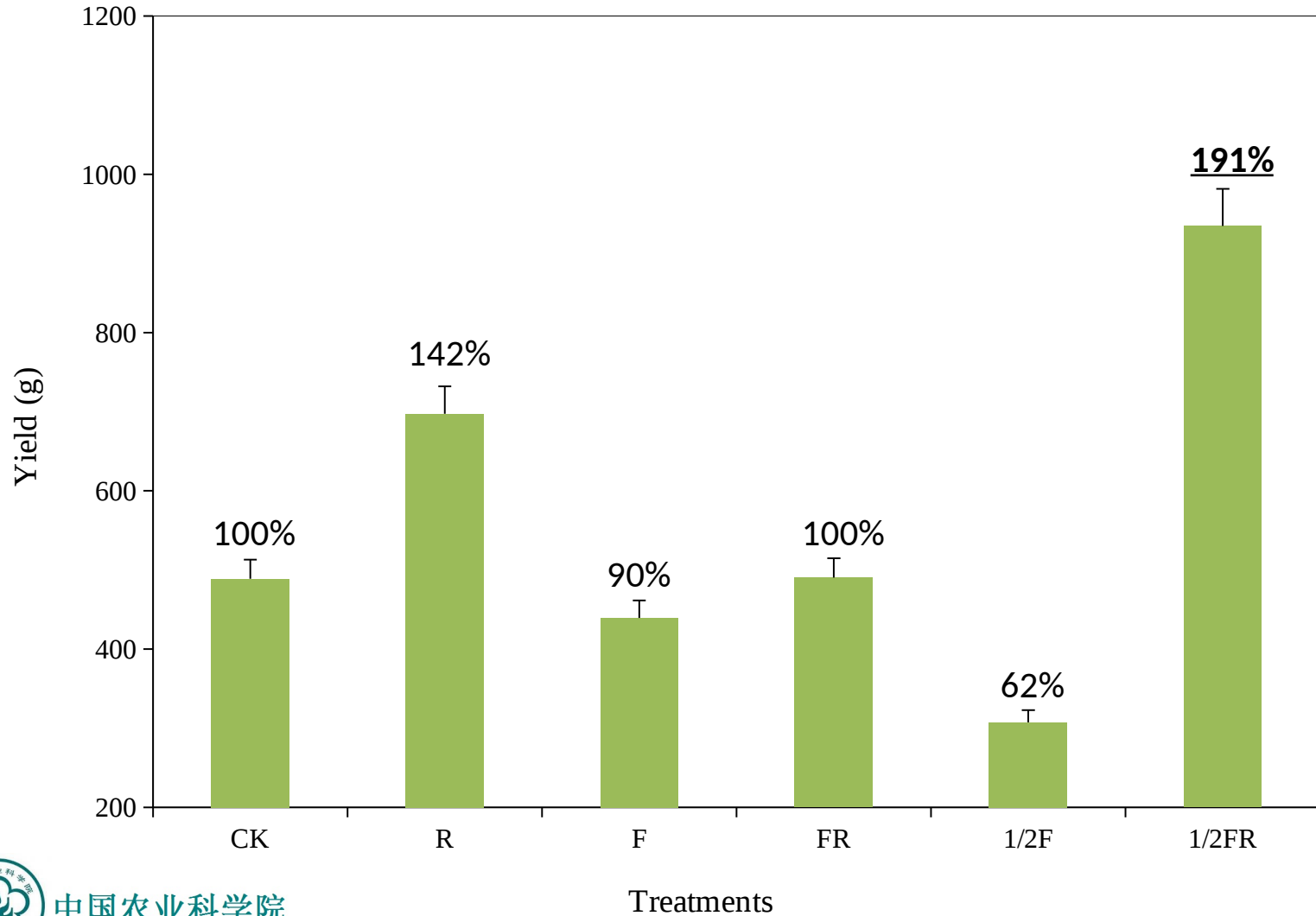


# 2017 CAAS Tomato Trial – Plant Height



中国农业科学院

# 2017 CAAS Tomato Trial – Total Yield



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# 2017 CAAS Tomato Trial – Total Yield

<u>Protocol</u>	<u>Total Yield Per Group (g)</u>
Control – No REV or Fertility	488.7
Half Normal Fertility Only	307.5
Full Fertility Only	439.4
REV w/ Full Fertility	490.3*
REV Only	697.2*
REV w/ Half Normal Fertility	934.8*



中国农业科学院

# China Sugarbeets



# 2017 Sugarbeets Trial

**Acreage per plot:** 24 M<sup>2</sup>

**Replications:** Four

**Cultivation and Farming:** Same with traditional

**Planting Date:** Apr 28

**REV application:** Twice in June and July



## REV small plot trial on sugar beet in Baotou Inner Mongolia

Baotou Trial	亩产量 Root Yield, kg/mu	较对照 From CK±	含糖 Sugar Content %	较对照 From CK±	亩产糖 Sugar Yield kg/mu	较对照 From CK±
REV	3548.30	19.60%	13.33	-12.80%	473.06	15.97%
CK	2967.46		13.75		407.93	

The data showed that REV can help increase the root yield, but decreased the sugar content. The sugar yield was increased. The beet here suffered serious cercospora and root rot, it is hard to tell difference by beet appearance in the seedling period, and both REV and Check roots harvested involved the similar amount root rot(fusarium).

# Philippines Sugarcane

# 2017 Sugarbeets Trial

PSR 02-247					
Field	C	W/Dakota	W/out Dakota	% Increase	Remarks
Area	0.83	0.5581	0.2719		
Tons milled	65.17	46.362	18.808		
Tons/ha	79	83	69	20%	Harvested at 10 mos, 14 days
Field	A	W/Dakota	W/out Dakota	% Increase	
Area	0.638	0.4274	0.2106		
Tons milled	41.651	29.17	12.48		
Tons/ha	65	68	59	15%	Harvested at 10 mos, 26 days
PSR 02-272					
Field	E1	W/Dakota	W/out Dakota	% Increase	Remarks
Area	0.24	0.2058	0.0342		
Tons milled	11.02	10.02	1		Harvested at 9 months
No. of lacs produced	5.2	4.2	1		Cane tops cut at 7th and 9th month
Tons/ha	68	69	58	18%	
Field	S	W/Dakota	W/out Dakota	% Increase	
Area	0.5484	0.377	0.1714		No data yet
Tons milled					To be harvested on May 2018
Tons/ha					
PSR 01-105					
Field	G	W/Dakota	W/out Dakota	% Increase	Remarks
Area	0.63	0.3822	0.2478		Without Dakota, harvested at 12 mos
Tons milled		14.12	6.654		With Dakota, harvested at 12 mos, 2 weeks
Tons/ha		37	27	38%	
Field	S	W/Dakota	W/out Dakota	% Increase	
Area	0.4116	0.28	0.1316		
Tons milled	17.655	11.873	5.782		Harvested at 9 mos
No. of lacs produced	10	7.5	2.5		Cutback at 8th month
Tons/ha	67	69	63	10%	
Assumption: 1 lacs = 1 ton					





# Vietnam Organic Produce

# 2018 Organic Bok Choy Trial

<u>Protocol</u>	<u>Total Yield/kg</u>
Organic Fertilizer Only	5.40
REV w/Organic Fertilizer	6.50*

**\*20% higher yield with REV**



# 2018 Organic Choy Sum Trial

<u>Protocol</u>	<u>Total Yield/kg</u>
Organic Fertilizer Only	14.3
REV w/Organic Fertilizer	22.3*

**\*56% higher yield with REV**







REV Treated

Untreated





REV Treated

Untreated

Dramatic difference in rootzone development in just 21 days between application of REV and harvest.

# India Organic Produce



# 2018 Organic Hyacinth Bean Trial

Protocol

Avg. Yield/Row in kg

Organic Fertilizer Only

8.0

REV w/Organic Fertilizer

10.0\*

**\*25% higher yield with REV**



**M N Chemicals Ltd.**  
GMP Certified & ISO 9001:2008 Certified



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SCIENCES - BANGALORE**

# 2018 Organic Tomato Trial

Protocol

kg/Picking

Organic Fertilizer Only

87.5

REV w/Organic Fertilizer

125.0\*

**\*42% higher yield with REV**



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**REV TREATED**



**UNTREATED**





REV TREATED



UNTREATED

# 2018 Organic Chili Pepper Trial

Protocol

Kg/Picking

Organic Fertilizer Only

\_\_\_\_\_

REV w/Organic Fertilizer

\_\_\_\_\_



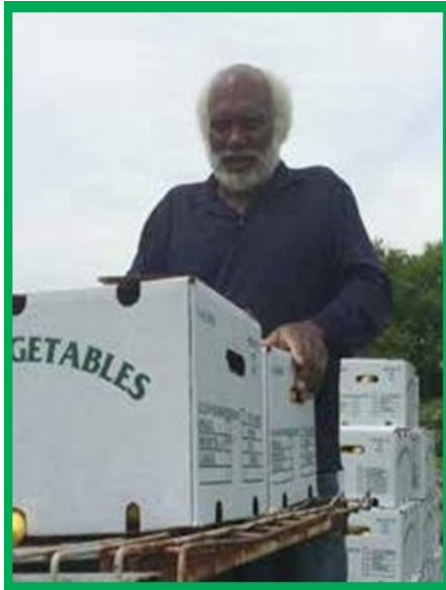
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# U.S. Grower Testimonials





**Jackie Fraiser** owns and operates a produce farm on St. Helena Island, South Carolina.

Intrigued by the idea that REV could increase yield on collard greens, Jackie mixed 12 ounces of REV with 5 gallons of water and applied that to his greenhouse collard greens flats.

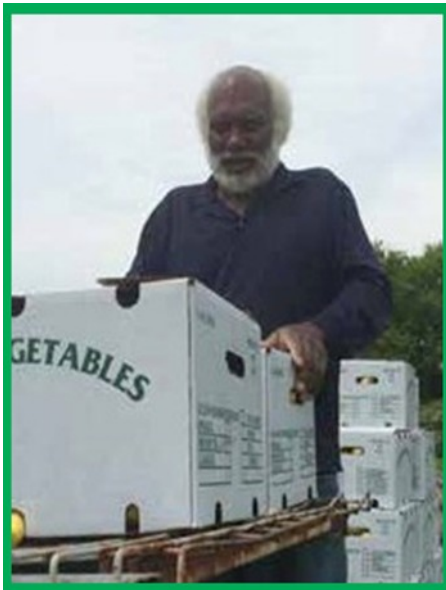
Three weeks later, Jackie saw that the REV treated plants were bigger and greener than those that had only been treated with just fertilizer.



*Collard greens treated with REV  
in the greenhouse*



*Untreated collard greens*



During transplanting, Jackie used a mixture of 100 gallons of water with 1 gallon of 5-10-15 fertilizer and 1 quart of REV.

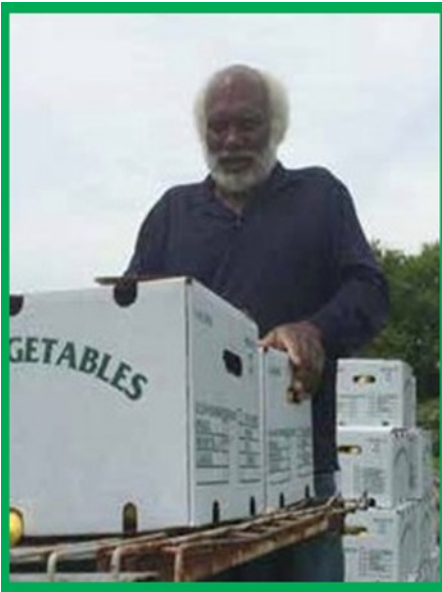
By mid-March, even in unseasonably cold weather, there was a big difference in the treated vs. untreated plants. The REV plants were twice as big and were ready for harvest three weeks before neighboring farmers.



*No REV*



*Treated with REV*



For squash & zucchini, **Jackie** transplanted the 2-3" starter plants on March 21<sup>st</sup> with a mixture of 150 gallons of water, 5 gallons of 5-10-15 fertilizer and 1/2 gallon of REV.

Less than five weeks later, he did his first pick - **two weeks ahead of the rest of the farmers in the state**. Not only was his crop earlier, it was larger than he had ever seen. Normally, a squash plant would give him eight quality picks. With REV, Jackie **had 22 picks per plant, almost three times more yield**.







**Bob Brewster's** irrigated corn was planted with one quart of REV with the fertilizer mix in an in-furrow application and saw a **25 bushel per acre** increase with REV.

*"The response difference between the treated and untreated was noticeable – I did tests with other products like a foliar blend, APS 80 and other soil adjuvants but REV worked better than any of the other tests."*



**Paul Tally**, a dry land corn farmer, applied REV in-furrow at the rate of one quart per acre with a 10-34-0 fertilizer.

*"I was pleased with REV – the plants were healthier, had better standability and stayed at 20 moisture versus 17 moisture compared to my other plants. So they took a little longer to dry down but I saw a **20 bushel per acre** boost in yield at harvest."*