
Look into
what research
has proven...
KF PURE
PROFIT
V-G-I
ISRAEL

KF

The various KF series products are tested in studies initiated each year by VGI, in Israel and abroad, across a wide variety of crops.

We advise/guide growers based on the findings of these studies.

At the same time, additional studies are conducted on the preparations we develop, by research institutions and growers.

Tens of studies carried out over the last two decades have shown that use of KF preparations is effective in increasing harvests and improving their quality.

The main studies and findings can be found in this catalogue.

Nevertheless, the practical facts in the field speak for themselves.

Farmers and growers have testified that use of KF products has resulted in higher yield, and landscape experts and gardeners have told that they achieve healthier, more beautiful plants.

In short, pure profit for all.

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The KF Family of High-Quality Biostimulants for Agriculture

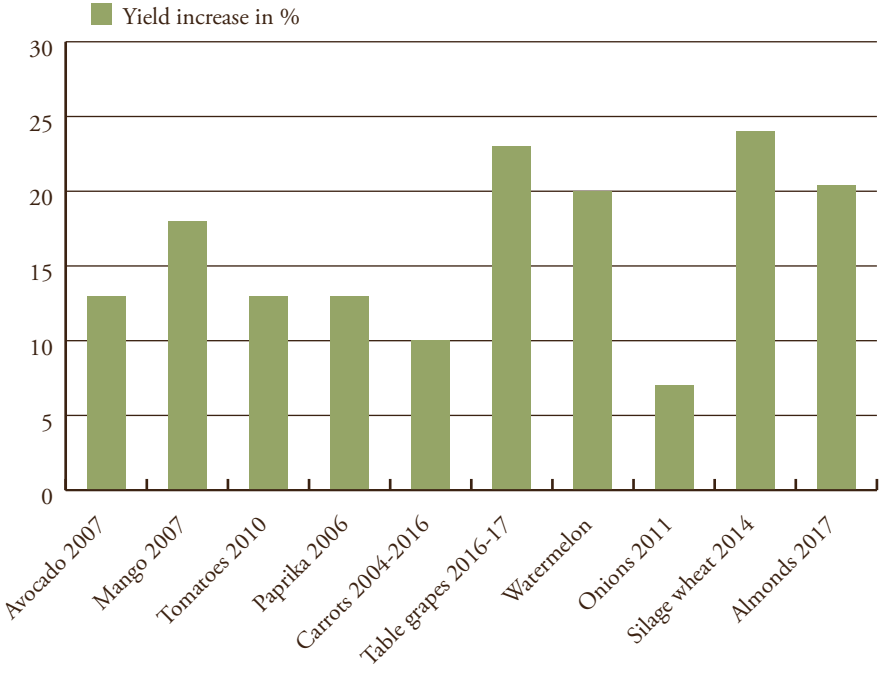
VGI Israel is one of the world's pioneers in the innovative field of biostimulants for agricultural use. VGI's preparations are designed to help farmers achieve higher yields of better quality produce year after year.

The KF products are manufactured in Israel using natural raw materials. The products are designed to stimulate the natural processes that occur in plant tissue, and enhance the interface between plant roots and soil biota.

All products are non-toxic to humans and animals, and are compliant to sustainable, regenerative and organic agriculture standards.

Used correctly, our products will increase yields, improve quality of fruit and green crops, improve fruit and vegetables strength, increase shelf life of fruits and vegetables, improve taste and color of produce, and much more. VGI is proud to present results of selected field trials and experiments that were done by the company in Israel, by its subsidiary in USA "VGI Americas" and by other institutes. The results demonstrate the effect of the KF biostimulants in variety of crops.

Yields increase as result of KF Applcations



Grapes

The effect of KF-10 and KF-Amino on commercial Table grape harvests of the Early Sweet variety.

Crop: table grape vineyard, Early Sweet variety. Region: Jordan Valley. Crop year: 2017

Treatments: Control: Grower's standars treatment. T1: Grower's standard plus four 10-liter treatments of KF-10 per hectare. T2: As in T1 with the addition of KF Amino, 5 liters per hectare, one week before harvest.

Findings:

	Average weight	Average sugar	Average diameter
Std	174.455	13.77	1.908
T 1 :	219.7	13.95	2.065
T 2:	219.135	14.3	2.077
Contribution in % T1 vs Std	25.6%	4%	8.8%
Contribution in % T2 vs Std	25.9%	1.3%	8.2%

Illustration 1: Average weight of 30 berries

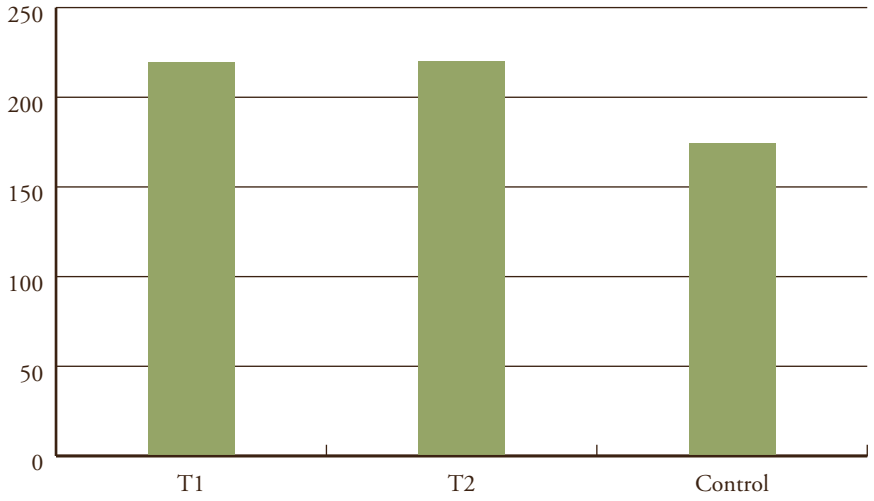


Illustration 2: Average diameter, plot 06, 2017.

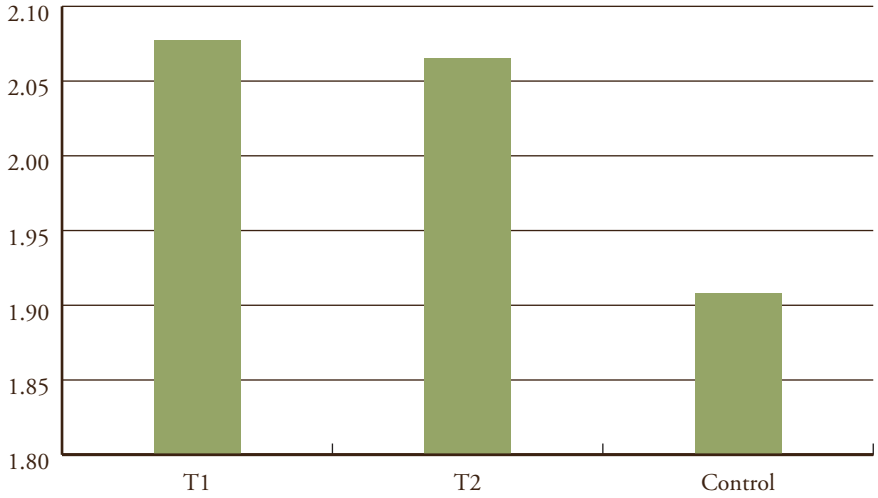
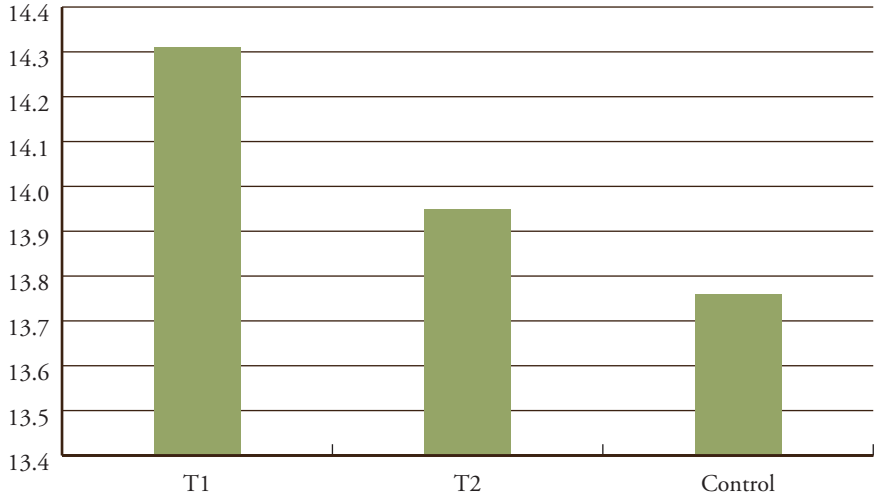


Illustration 3: Level of sugar in grape harvest, plot 06, 2017.



Summary:

The findings show that the KF-10 treatments according to the protocol recommended by VGI are an effective means of increasing yields in commercial Early Sweet type vineyards, as well as added sugar during the harvest. The additional yield obtained as a result of significant increase in seed weight.

Treatment with KF-Amino before the harvest contributes to further increase in seed weight; however, this increase slows sugar accumulation.

Mango

Effect of nourishment treatment on Kent mango yield and quality, Ramat Magshimim 2016-2017

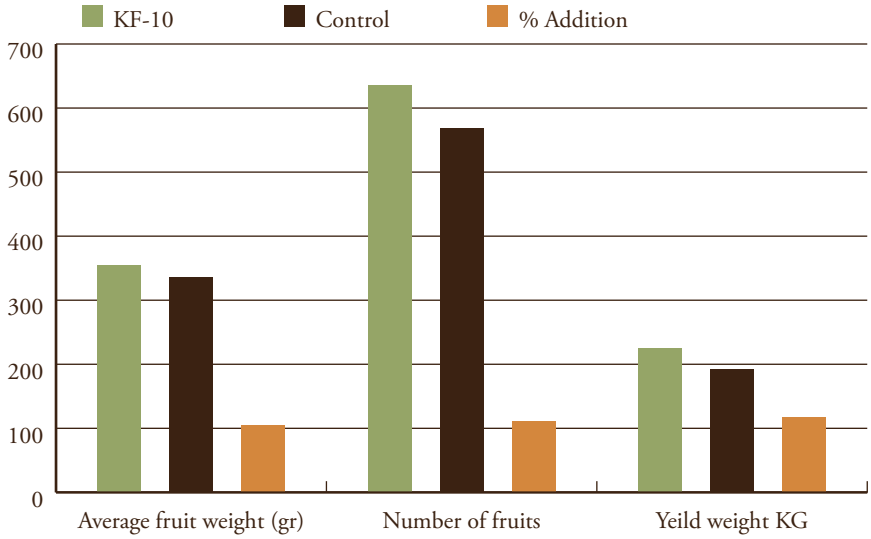
Type and location of fruit: Mango, Kent variety. Northern Sea of Galilee area

Years: 2016, 2017

Materials: Farm treatment according to grower's standard. In trial treatment, addition (beyond grower's standard) of KF 10 in five applications through the irrigation system. KF Amino sprayed before harvesting.

Main findings:

- Increase of 17.3% in average Yield per trial interval.
- Average increase of 11.8% in quantity of fruit per trial interval.
- Average increase of 5.4% in average fruit weight.
- Higher percentage of red cheek coverage with treatment as opposed to the control.
- Higher sugar levels with treatment as opposed to the control.
- Lower weight loss (1.9%) in treatment as opposed to the control (2.9%).






Treated fruit after 21 days of storage:




Almonds

KF-200 Benefits for Almonds - Demonstration Trials

Trial Details:

Almonds	Monterey
Kern County	Harvested October 2017

Trial Design:

1. Trial #1	Demonstration trial on 39 acres, half treated with KF-200
2. Trial #2	Demonstration trial on 37 acres, half treated with KF-200

Trial Metrics:

1. Nutmeat yields in pounds per acre
2. Return in dollars per acre using $2.25 per pound paid to the grower

Materials and Methods:

Treatments:

1. KF-200 at standard label rates 2 applications ($30.00 per acre each: $60.00 total per acre)
2. Grower Standard is Untreated Control (UTC)

Application methods:

1. Chemigation via drip system, 2016 postharvest 16 ounces per acre
2. Tank mix at mid bloom, 100 gpa: 16 ounces per acre

Data Collection:

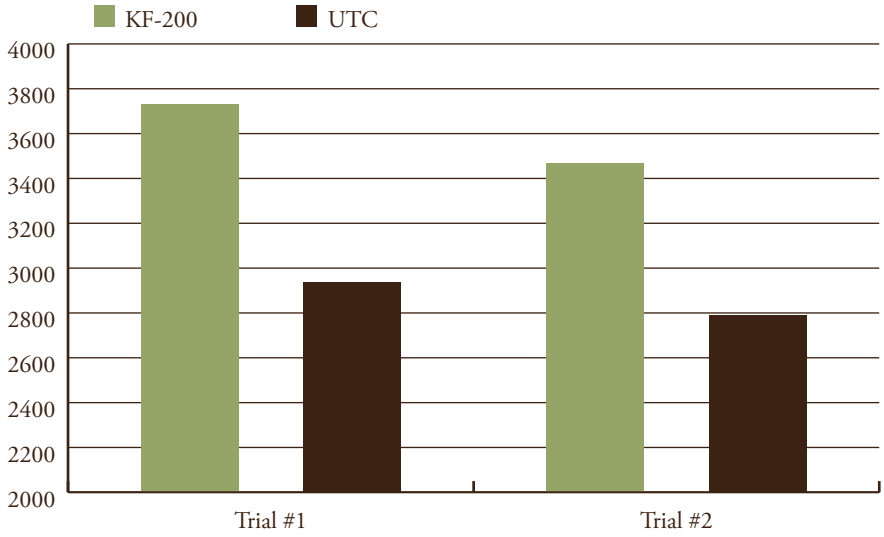
1. Cart counts per plot
2. Truckload weights per plot

Results and discussion:

Nutmeat yields in pounds per acre

	Trial #1	Trial #2
KF-200	3,730	3,469
UTC	2,936	2,789
Net Gain:	794	680
Percent Gain	21.28%	19.60%
Average Percent Gain:	**20.44%**	

Figure 1: Nutmeat yields were statistically higher in KF-200 treatments by an average of 20.44%.

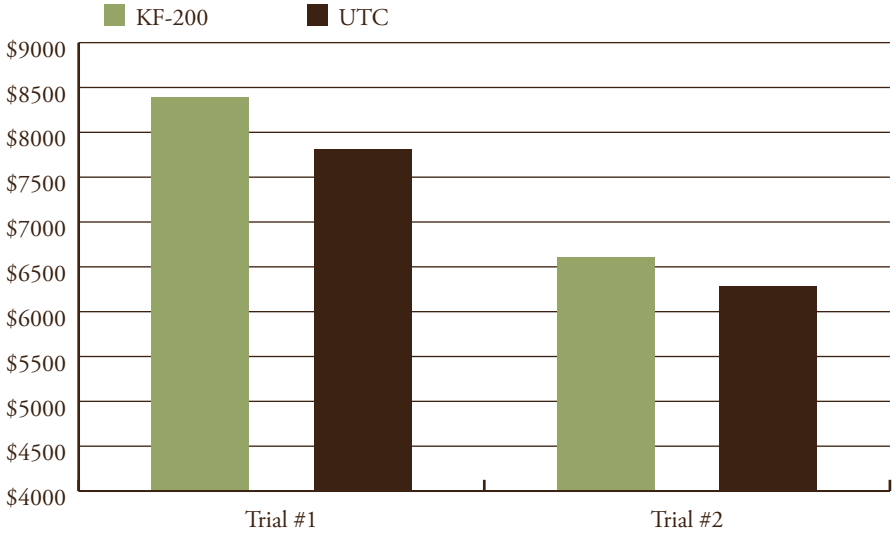


Results and Discussion (cont'd):

Return in dollars per acre

	Trial #1	Trial #2
KF-200	$8,392.47	$7,805.68
UTC	$6,606.79	$6,275.81
Net Gain: $	$1,785.68	$1,529.87
Average Net Gain:	**$1,657.78**	

Figure 2: KF-200 treated blocks had an average net gain of $1,657.78 over UTC



Return on Investment (ROI) in dollars per acre

For each dollar spent on KF-200, the following dollars were returned:

	Trial #1	Trial #2
ROI $	$29.76	$25.50
Average ROI: $	**$27.63**	

Conclusions:

The use of VGI America's KF-200—soil applied post-harvest in 2016, foliarly applied once during the bloom period, at label rates—significantly (P=0.05) increased yields per acre at an average of 20.44%.

The return in dollars per acre that KF-200 produced exceeded the grower's standard average of $1,657.78 per acre. For each dollar spent on KF-200, an average of $27.63 was returned, i.e., an ROI of $27.63.

KF-200 Benefits for Almonds - Demonstration Trials

Trial Details:

Almonds	Butte and Padre varieties, harvested together
Kings County	Harvested in September 2017

Trial Design:

1. Trial #1	Demonstration trial on 32 acres, half treated with KF-200
2. Trial #2	Demonstration trial on 15 acres, half treated with KF-200

Trial Metrics:

1. Nutmeat yields in pounds per acre
2. Return in dollars per acre using $2.00 per pound paid to the grower

Materials and Methods:

Treatments:

1. KF-200 at standard label rates (four applications at $15.00 per acre each: $60.00 total per acre)
2. Grower Standard is Untreated Control (UTC)

Application methods:

1. Chemigation via drip system, pre-bloom & after petal fall: 8 ounces per acre each application
2. Tank mix at 5% bloom and at full bloom, 100 gpa: 8 ounces per acre each application

Data Collection:

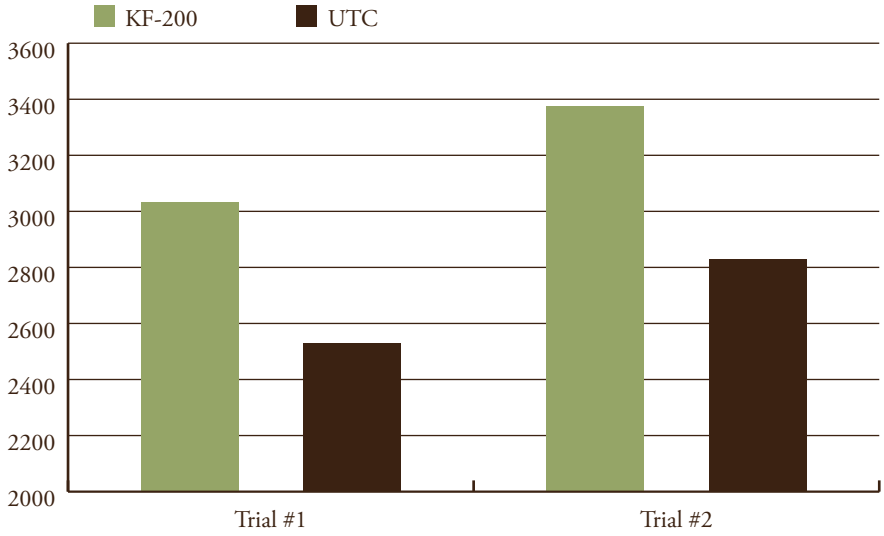
1. Cart counts per plot
2. Truckload weights per plot

Results and Discussion:

Nutmeat yields in pounds per acre

	Trial #1	Trial #2
KF-200	3,034	3,375
UTC	2,531	2,831
Net Gain:	503	544
Percent Gain	16.58%	16.12%
Average Percent Gain:	**16.35%**	

Figure 1: Nutmeat yields were statistically higher in KF-200 treatments by an average of 16.35%.

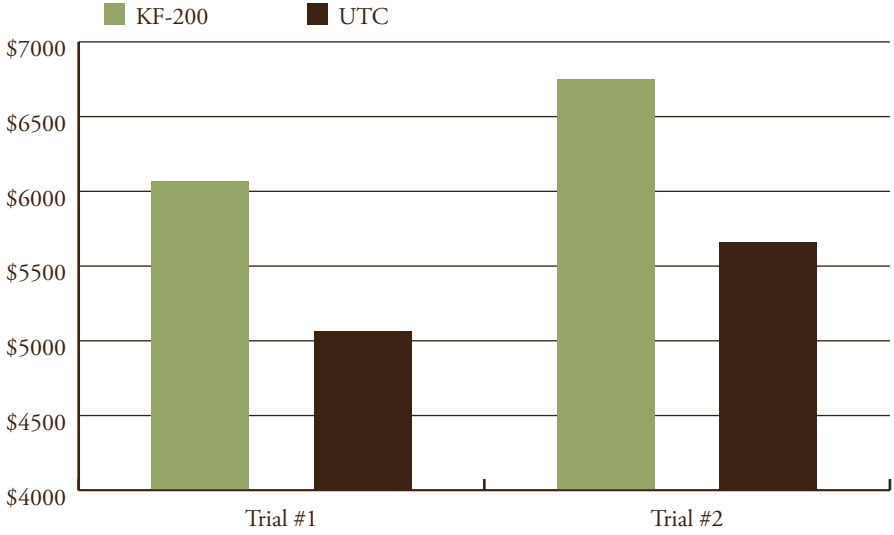


Results and Discussion (cont'd):

Return in dollars per acre

	Trial #1	Trial #2
KF-200	$6,068	$6,750
UTC	$5,062	$5,662
Net Gain: $	$1,006	$1,088
Average Net Gain:	**$1,047**	

Figure 2: KF-200 treated blocks had an average net gain of $1,047.00 over UTC



Return on Investment (ROI) in dollars per acre

For each dollar spent on KF-200, the following sums (dollars) were returned:

	Trial #1	Trial #2
ROI $	$16.77	$18.13
Average ROI: $	**$17.45**	

Conclusions:

The use of VGI America's KF-200 soil applied twice early in the season and foliarly applied twice during the bloom period, at label rates significantly (P=0.05) increased yields per acre at an average of 16.35%.

The return in dollars per acre that KF-200 produced as exceeded the grower's standard average of $1,047.00 per acre. For each dollar spent on KF-200, an average of $17.45 was returned, i.e. an ROI of $17.45.

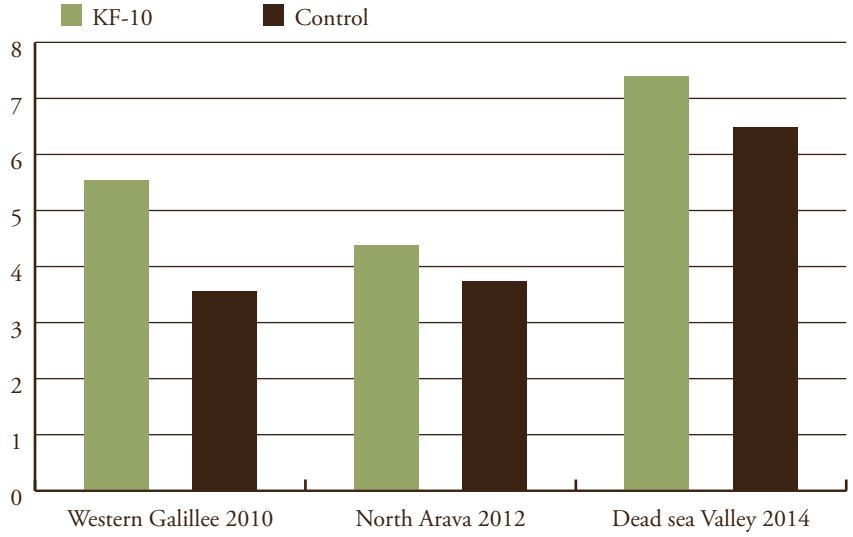
Watermelon

The Effect of KF-10 Treatments on Watermelon Yields

KF-10 biostimulant has been in use by many watermelon growers in Israel since the late 1990s. Growers attest to significant yield increase as a result of the treatment. KF-10 is applied through the irrigation system in doses of 15-20 liters per hectare, in addition to standard treatments.

The following chart shows the results of field trials conducted at several sites in Israel. The results demonstrate the significant effect of KF-10 on this high-value crop (yield values on the column are in 100 kg per hectare).

Influence of KF-10 on seedless watermelon yields, Israel

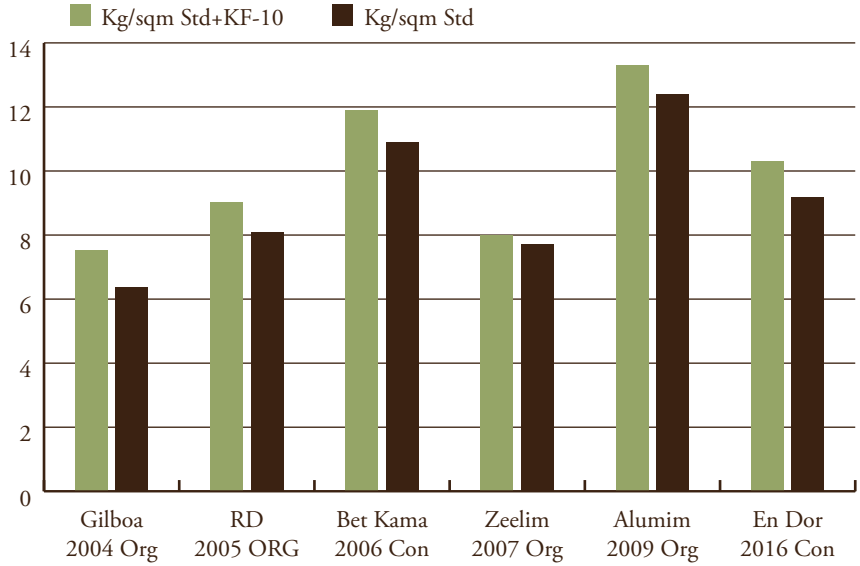


Carrot

Effect of KF-10 treatments on carrot yields

During the years 2004-2016, several experiments and observations were conducted on carrot farms in different areas of the country, on plots for commercial crops, in the aim of examining the effect of KF-10 biostimulant on organic and conventional carrot yields. In all observations, the preparation was applied by spraying, and given in addition to the regular nourishment treatments. To examine the treatments' impact, the crops were harvested manually on plots chosen at random from among areas given the regular agricultural treatment, and areas treated with KF-10.

The following diagram is a comparative presentation of observation findings in plots that received three KF-10 treatments of 10 l/ha over the carrot growing season.



In all of the experiments, it can be seen that a significant increase in yield was achieved as a result of KF-10 treatments of 30 l/ha.

* The work at Tze'elim was conducted as part of an experiment arranged in repetitions, as part of which the effect of treatment with 15 l/ha*3 was examined as well. The results obtained showed statistical significance. Further details of these observation and other papers have been published on the company website www.vgi.co.il.

You are welcome to contact us at any time to order and receive detailed recommendations for treatment.

Paprika

Effects of Fertilization with KF-10 on Paprica Yields

Prepared by: Solodar Natia (“Deshen Tov”), Moshe Zeevi (Extention service of the Israeli Organic Agriculture in Association), Uri Adler (Chief organic farming instructor of the Israel Ministry of Agriculture) and Avitsur Sela - VGI

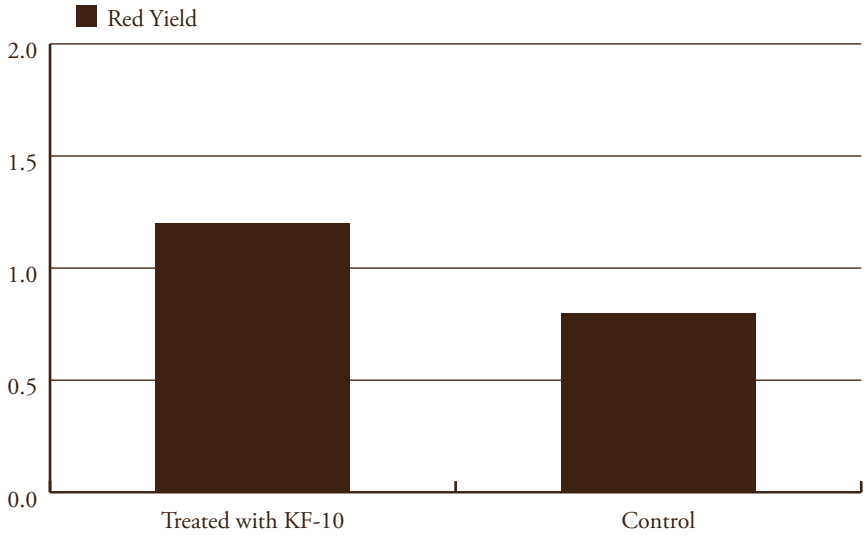
KF is a liquid organic biostimulant is manufactured by VGI Israel, Ramat Hasharon. The material has been in use for many years, and the examination of its effects has provided mixed findings. Nevertheless, this fertilizer biostimulant is in widespread use in California. We thought that several observations and tests should be conducted with the material in order to study its effectiveness and improve the available methods of application, for the benefit of organic and other farmers in Israel.

The observations were conducted at a commercial area on Kibbutz Ramat David, sown in May 2004.

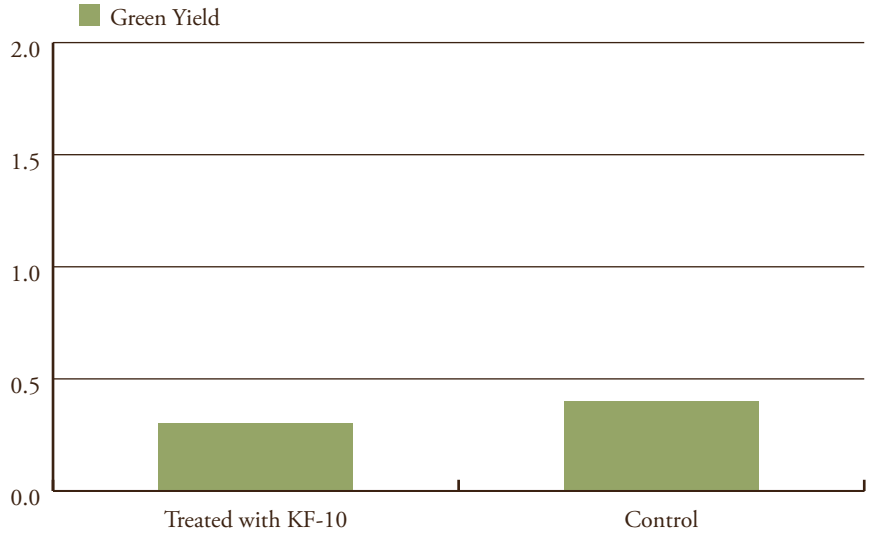
The 2 hecrtare area was treated through water, with a dosage of 20 liters KF-10 per hectare.

One day prior to commercial harvesting of the area, in October 2004 five plots from the treated area were sampled, with a control area of one-meter length and width of the bed, for yield and distribution per color as a scale of measure for ripening.

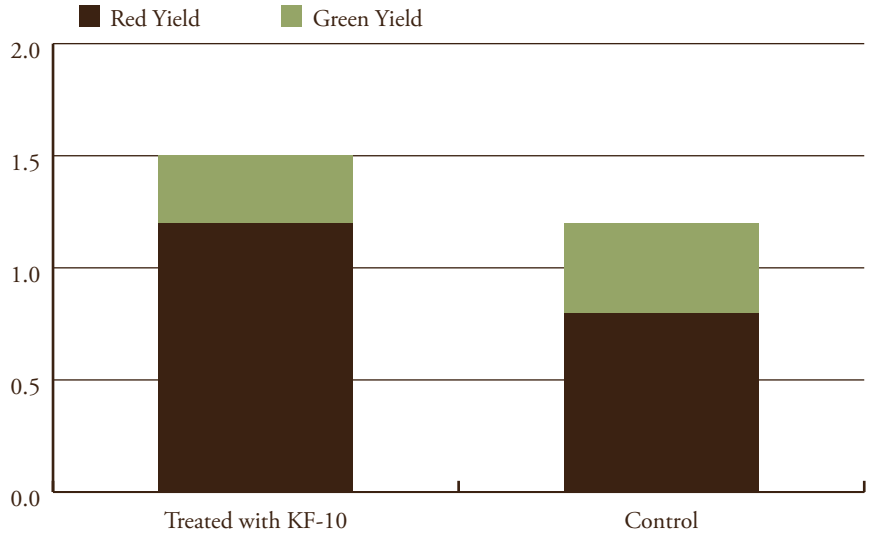
Red Yield



Green Yield



Effect of KF-10 on Paprika Yields - Ramat David, Summer 2004



Results:

An advantage was indicated with regard to yields from the area treated with KF versus the remaining untreated area. The advantage is expressed mainly in the redness of the fruits rather than in the overall yield, as a tendency for earlier ripening was observed, with fewer green peppers (not intended for marketing) from the treated plot.

An additional advantage observed in the field was less dropping of fruits in the treated areas.

Summary:

From the results of the observation it seems that KF has a positive influence with respect to increased yield, earlier fruition and more uniform fruits, as well as less dropping of fruits (significant for harvesting). As the above test case is an observation only, with no repetitions, a statistical analysis could not be conducted. We suggest repeating the observation within the scope of a well-ordered test, possibly in strips which could statistically prove the effectiveness of KF as an additive to paprika.

Thanks to Roy and Gilad from Ramat David for their help and cooperation which led to the success of the observation.

KF-10 For Improving Harvests of Processing Tomatoes

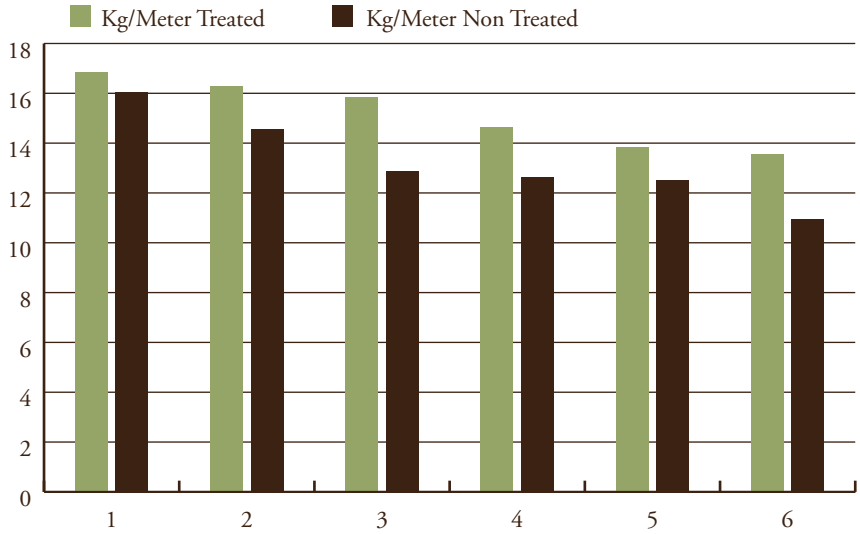
In the summer of 2010, two trials were conducted in processing tomatoes fields in Gadash-Haemek:

1. The effect of KF-10 treatments on organic tomato harvests.
2. The effect KF-10 treatments on non-organic tomato harvests.

In both observations, treatment with KF-10 was applied in addition to the standard treatment. The harvest was weighed manually in four repetitions of 20 sqm per observation.

Findings:

Trial No. 1 – treatment 30 liter/ hectare KF-10 - organic crop

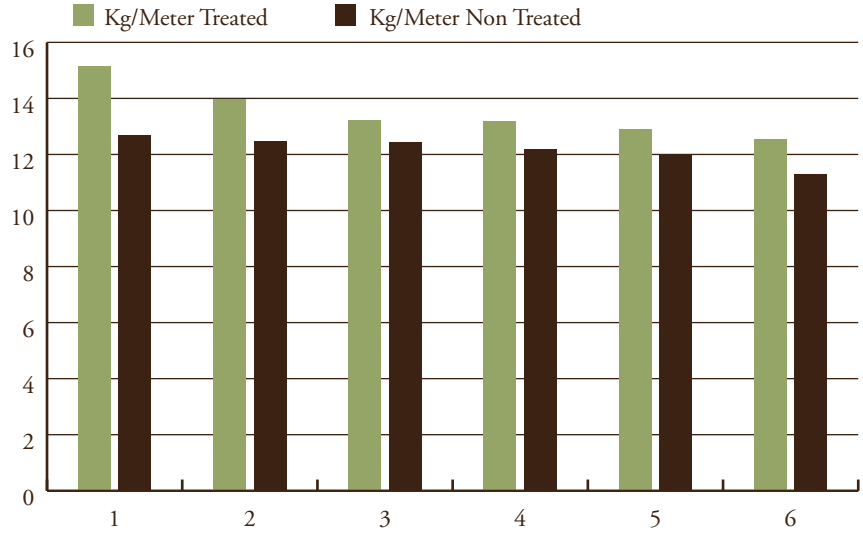


Statistical analysis (using the Newman-Keuls method) showed a significant difference between the treatments.

Average harvest in repetitions of the area treated with KF-10: 15.17 kg/sqm

Average yield in repetitions of the non-treated area: 15.17 kg/sqm

Trial No. 2 – treatment 20 liter/hectare KF-10 - conventional crop



Statistical analysis (using the Newman-Keuls method) showed a significant difference between the treatments.

Average harvest in repetitions of the area treated with KF-10: 13.5 kg/sqm

Average yield in repetitions of the non-treated area: 12.18 kg/sqm

Onion

Effect of KF-10 on Yellow Onion Yields – Trial Results

Influence of foliar applications of KF-20 to the yield of yellow (dry) onions was tested during the 2011 crop season, in the fields of Gadash Haemek Farm, in the central Jezreel Valley, northern Israel.

Soil type: heavy clay grumusol.

Onion variety: Mikado, oval.

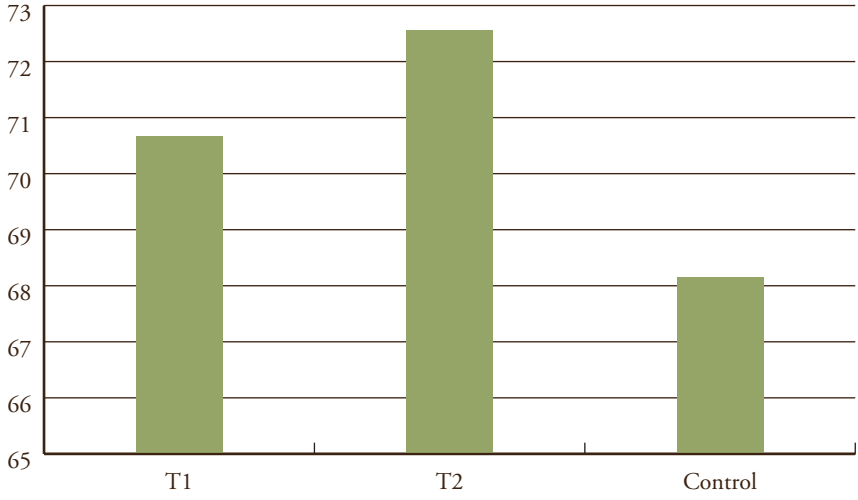
Cropping system: conventional, open field.

Sowing rate: 25 plants per meter, field-seeded on raised beds, 76 inches wide, 6 rows per bed.

Trial system: random test blocks inside a commercial plot; total of four blocks; each block 30 meters long, three beds wide (76*3 inches, 18 rows of onion). Each block divided into 3X10 meter sub-blocks – one for each treatment:

1. Control: standard farm treatment.
2. Std + three spray treatments of KF-20 in dose of 1 l/ha.
3. Std + one soil treatment of KF 20 in dose of 1 l/ha + two spray treatments of KF-20 2 l/ha.

Yield results in units of kg/ha:



Treatment 1 yielded the equivalent to 2.52 tons per hectare more than the control. Treatment 2 yielded 1.9 t/ha more than treatment 1. Statistical analysis of the trial results reveals no significant difference between the two treatments. Significance was found between the two treatments and the control. The quantity results and statistical analysis suggest that the added value for Treatment No. 1 (the commercial treatment recommended by VGI) vs the control is higher than that of Treatment No. 2 vs Treatment No. 1.

Green Acres – Wheat Trial Tissue Analysis

Background

A trial to demonstrate the efficacy of KF-200 on triticale wheat was designed by the undersigned. The test site was located near Bakersfield (35.25265999, -119.244771) at Green Acres Farm. Fields 12-1 ("Untreated") and 12-2 ("Treated") were selected based on consistent soil series (Garces Loam, 0-1 percent slopes) established via USDA NRCS Web Soil Survey. The KF-200 had been applied two times by harvest in April 2015. Tissue samples were initially collected and analyzed in January 2015 by Agriserve to evaluate the nutrient content (see previous report). Tissue was collected again in April to evaluate nutrient content, biomass, and silage quality. The reported data for April from Agriserve is attached. From each plot (Untreated and Treated), a three foot by three foot area was harvested. Statistical evaluation on the nutrient content, biomass, and silage were performed using Mann-Whitney U, which is best for non-normal data.

Results and Discussion

Nutrient Content

No significant differences in nutrient content were found between the Treated and Untreated plots. The Untreated plots tended to have slightly higher nutrient content in the plant tissue than the Treated plots. Treated plots had higher boron and copper. Calcium and magnesium were very similar between the two treatments. A few outlier data points were found using Grubb's Test. These were in Untreated #1 and #4 for nitrate-N and zinc, respectively. In Treated #4 the sodium value was an outlier. Statistical analysis was performed again without these anomalies, but the results remained the same.

Biomass

The Treated plots produced more biomass than the Untreated plots. Average dry weight biomass for the Treated areas measured 1.53 kg per 9 square feet while average dry weight biomass for the Untreated areas measured 1.09 kilograms per 9 square feet. If these values were to be scaled up this would equate to the Treated area producing 16,339 pounds of biomass per acre and the Untreated at 11,661 pounds biomass per acre. These values were also found to be statistically significantly different. This suggests the KF-200 increased plant growth in tricale wheat by 34%.

Silage

For the silage analysis, when evaluating the percent Modified Crude Fiber, Crude Protein (Dry Basis), Digestible Protein (DP)) and between the treatments no significant differences were found. However, when incorporating the silage data and evaluating it by biomass produced each parameter was found to be statistically different and higher in the Treated plots. This is beneficial for the protein analysis, but not necessarily for fiber. That being said, both fiber values were noted to be in a favorably low range (<20-25%). The increased protein content harvested from the Treated plots due to the higher biomass is favorable and likely reflects the application of KF-200.

TISSUE ANALYSIS

DESCRIPTION	NO3-N	TOT-N%	P	K	CA	MG	B	FE	MN	ZN	NA	CL	CU	
	PPM	%	%	%	%	%	PPM	PPM	PPM	PPM	%	%	PPM	
TREATED #1	1577	2.54	0.21	1.23	1.32	0.12	61.65	76	11.80	10.16	0.07	0.74	1.61	
TREATED #2	2387	2.18	0.27	1.99	1.18	0.18	76.07	490	79.29	17.47	0.18	0.70	4.01	
TREATED #3	1282	2.64	0.23	1.52	1.45	0.18	71.60	339	38.54	14.76	0.11	0.71	3.21	
TREATED #4	995	2.48	0.28	1.23	1.29	0.14	107.71	1104	31.09	10.70	0.18	0.96	1.61	
TREATED #5	2443	2.42	0.25	1.59	1.37	0.12	79.85	602	24.82	6.94	0.42	0.75	2.41	
UNTREATED #1	5469	2.32	0.30	1.06	1.57	0.17	100.90	310	30.52	10.43	0.19	0.74	1.61	
UNTREATED #2	1770	2.56	0.47	2.93	1.23	0.14	102.71	928	37.39	12.59	0.23	0.88	4.82	
UNTREATED #3	1986	2.80	0.30	1.75	1.28	0.14	41.08	297	16.88	12.32	0.12	0.96	0.80	
UNTREATED #4	1312	2.45	0.51	1.99	1.32	0.20	59.39	445	79.88	24.03	0.13	0.70	0.80	
UNTREATED #5	2618	2.48	0.53	2.08	1.11	0.15	67.32	1818	47.75	11.78	0.20	0.84	1.61	
AVERAGE VALUE	2184		0.34	1.74	1.31	0.15	76.83	641	39.80	13.12	0.18	0.80	2.25	#DIV/0!
MIN PREFERRED	600	2.00	0.20	2.50	1.00	0.30	35	100	25	20	0.05	0.05	15	25
MAX PREFERRED	1200	3.00	0.50	6.00	3.00	0.60	85	300	50	70	0.50	0.50	30	75

All figures that are in red are values that are too high: if there are predominately red figures, you are wasteing money on fertilizer.
all figures that are yellow, are values that are too low: if there are predominately yellow figures, you are missing production.
All figures that are in green are values that are just where they should be. we should try to get a completely green sheet

* NA means “not applicable” (not analysed)

KF
PURE PROFIT

for the soil and roots

for the garden and the environment

for the gardener and the farmer

for the land and the crops

for all!

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