

BLACKJAK TRIAL
Marathonas Greece, March – July 2010
Greenhouse tomato

Subject: The effect of BLACKJAK vs. other humate product in the crop yield

Products tested: BLACKJAK vs. ENERGO
Area: Kato Souli, Marathonas, Greece
Grower: Mr. Thanos Anthousis
Variety: Formula
Plant density: 2000 plants per 1000 m², 1 m distance between rows and 40 cm on the row.
Plot size: 250 m² per treatment – low plastic tunnel
Replications: 2
Treatments: The grower used exactly the same products, rates and cultural techniques in all plots with the only differentiation on the use of humate product. He normally uses ENERGO as humate product at a rate of 2.5 lt./1000 m² and replaced it with BLACKJAK at a rate of 500 ml/1000 m² at the specific plots.
A1 = BLACKJAK at a rate of 500 ml/1000 m²
C_{A1} = ENERGO at a rate of 2.5 lt./1000 m²
A2 = BLACKJAK at a rate of 500 ml/1000 m²
C_{A2} = ENERGO at a rate of 2.5 lt./1000 m²
Planting date: 2/3/2010
Applications no.: 11 on each plot, the first 4 applications (starting from planting date) every week and the other 7 applications every 15 days.

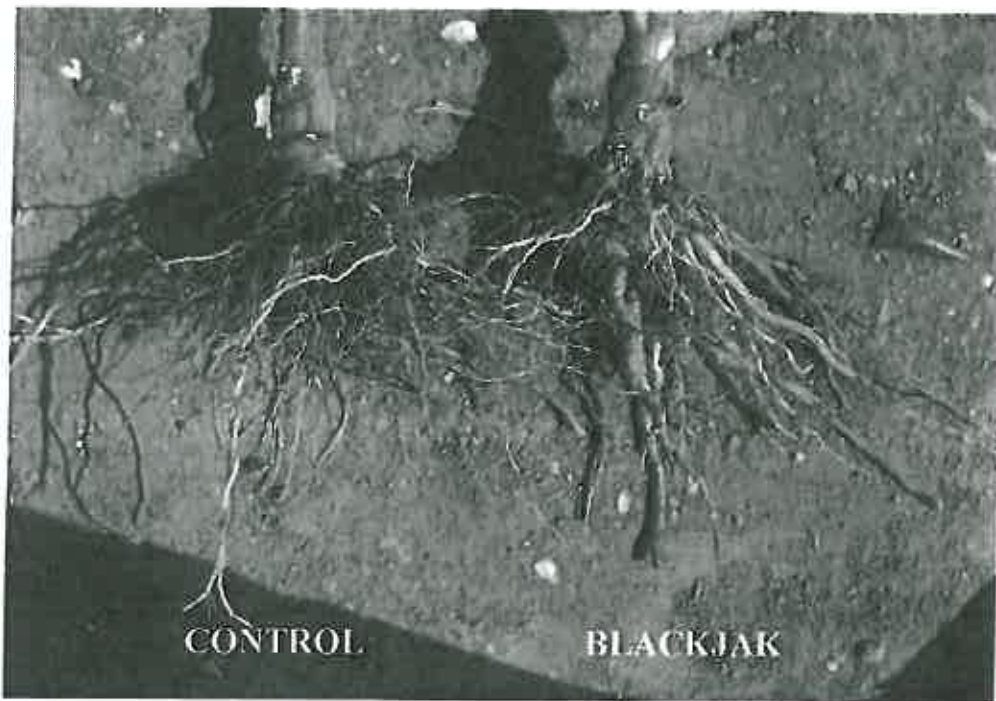
Results:

The yield at each picking was measured in number of buckets.
Average weight/bucket = 10 kg

Harvest	A1		C _{A1}		A2		C _{A2}	
	Buckets no.	~ kg	Buckets no.	~ kg	Buckets no.	~ kg	Buckets no.	~ kg
1 st	14	140	14	140	26	260	20	200
2 nd	15	150	16	160	44	440	34	340
3 rd	17	170	14	140	24	240	20	200
4 th	24	240	22	220	11	110	13	130
5 th	17	170	8	80	12	120	10	100
6 th	11	110	9	90	10	100	8	80
7 th	9	90	7	70	5	50	6	60
8 th	5	50	6	60	8	80	7	70
Total	112	1120	96	960	140	1400	118	1180
% dif.	A1 = +16.67% vs. C_{A1}				A2 = +18.64% vs. C_{A2}			

Conclusions:

Blackjak obviously increased the total tomato yield by 16.7-18.6%. In addition the tomato plants treated with Blackjak were shown to have thicker roots as shown in the photos below:



: BLACKJAK tomato trial

Sujet: RE: BLACKJAK tomato trial-
De : "Karamagioli Maria" <markar@lanceslink.gr>
Date : Thu, 5 Aug 2010 15:35:10 +0300
Pour : <lanceslink@lanceslink.ch>

Dear Bruce,

In Greece, the common practice by the greenhouse farmers (crops growing on soil and not hydroponic) concerning humate products is to use them especially during the winter every week and occasionally every 3 days (under very low temperatures or poor soils & water). All the other seasons, they use them every 1-2 weeks and occasionally less depending on weather, soil and irrigation water conditions and commodity price level. During the last 5 years, it is common to alternate humate use with amino acids.

Please, remember that greenhouse tomato crop is an intensive crop with a growing and producing period ranging from 5-8 months with extremely high inputs in general for achieving yields min 80 tons per ha. It is very important for all intensive crops to have very good feeding program (fertilisers, bio regulators, etc.), very good medium to grow (i.e. soil) and good quality of irrigation water. In general the soil is aggravated by intensive cropping and what is best to use in such cases other than humus in order to improve soil conditions and be able to obtain a good yield all the year round.

In this specific trial, the grower sells directly to the grocery shops, catering and super markets (achieving even better prices since avoids the intermediates) and grows tomato all year round by breaking the crop season depending on commodity prices and other factors such as pathogenic (e.g. Tuta absoluta - a serious pest on tomato).

I mention this pest because during the last 2 years Tuta absoluta is present in Greece and has caused a complete disaster on tomato crops (especially outdoor crops). In the case of our trial, we had a problem with this pest (present in all greenhouse areas anyway) and for this reason the total yield is nearly half of the normal yield.

Anyway, I had to follow his standard practice by just differentiate the brand of humate used. The specific farmer applies humates in drip irrigation every week for the first 3-4 weeks after transplanting and then reduces applications to every 2 weeks.

Now, as far as the cost is concerned, please find below some calculations that explains this:

The average tomato price for the specific farmer and season was € 0.85/kg.

A1 = 1120 kg x 0.85 = € 952 (per 250 m²) x 4 = € 3808 (per stremma) x 10 = € 38080 (per ha)

A2 = 1400 kg x 0.85 = € 1190 (per 250 m²) x 4 = € 4760 (per stremma) x 10 = € 47600 (per ha)

CA1 = 960 kg x 0.85 = € 816 (per 250 m²) x 4 = € 3264 (per stremma) x 10 = € 32640 (per ha)

CA2 = 1180 kg x 0.85 = € 1012 (per 250 m²) x 4 = € 4046 (per stremma) x 10 = € 40460 (per ha)

The grower price for each humate is as follows:

Energo - packings 250 ml, 1 lt., 12 lt. & 20 lt. - Grower price ranges from € 2.78-8.02/lt.

Blackjak - packings 250 ml, 1 lt. & 5 lt. - Grower price ranges from € 11.55-20.12/lt.

Normally, in greenhouses the growers are using the biggest packing because they use them in drip irrigation system.

Therefore, the cost for 11 applications is:

Energo - 2.5 lt. x € 2.78 = € 6.95/str. x 11 = € 76.45/str. or € 765/ha

Blackjak - 0.5 lt. x € 11.55 = € 5.78/str. x 11 = € 63.53/str. or € 635/ha

A1 vs. CA1 - + € 5620/ha extra revenue and paid € 635/ha for Blackjak (€ 130/ha less than Energo)

A2 vs. CA2 - + € 7140/ha extra revenue and paid € 635/ha for Blackjak (€ 130/ha less than Energo)

The cost for humates in this trial vs. grower's sales revenue represents 1.3-1.7% for Blackjak and 1.9-2.3% for Energo. If he had a very good yield, this cost would have been in half of the above figures. For intensive cropping, a good soil is a "must" since it is the medium where the plant grow.

Now as far as grower's reaction:

Indeed the grower was surprised by the results because he could not believe that Blackjak can increase his yield and its cost in the end is less by nearly 17% than Energo. Of course, he mentioned this that he will continue using Blackjak.