

“Effect of actosol[®] on the growth and soil nutritional content on two varieties of Blueberries

In recent years, commercial growing of both organic and traditional blueberries in northern and central Florida has increased in acreage. With this increase in production, determining improved cultural and nutritional practices are being evaluated to maximize yields. Since blueberries are grown on raised beds and in very sandy soils, it is important to improve organic matter content in the soil along with increasing nutritional retention and CEC in this soil.

actosol[®], a green organic bio-stimulant (**a certified OMRI product**) has shown to increase organic matter and improve growth and yield on a number of horticultural and agronomic crops. It has also been shown thru researchers in many countries that bio stimulant improve both macro and micro nutrient retention in especially sandy soils.

A study was conducted at Island Grove nursery, in Island Grove, Florida to evaluate the use of **actosol** (organic bio stimulant) vs. a grower standard program of organic products on two newly planted varieties of organically grown blueberries. The two varieties selected were Meadowlark, and Farthing. Liners were planted on raised beds in April of 2011 and both plots were treated identically as determined with any needed soil additives before the study was initiated.

TREATMENT

On april13, May 2 and June 1, a drench application of **actosol** at 12 oz per plant (equal to 7.5 gallons of **actosol**/300 gallons of water) was applied and replicated on 4/5 raised beds of the two varieties of blueberries understudy. In addition to the **actosol** a fish emulsion (1 gallon/100 gallons of water) was also combined to the actosol to provide equal nutritional levels compared to the grower standard. Soil samples were taken randomly in all beds to evaluate soil nutritional retention, plant quality, and survival rated of the newly planted blueberries.

RESULT

Variety 1. (Farthing)

Results from Table 1 indicated that plants treated with actosol showed a significantly improvement in organic matter using both the traditional method (ck 2.3 vs. 4.4 actosol) of measuring organic matter along with using a more accurate method call LOL (ck 2.6 vs. 4.5 actosol). In relationship to the effectiveness of maintaining (retention) in the soil, actosol maintained a significantly better retention with P, K, Mg, Ca, and Fe then did the grower standard. This is further supported by examining CEC with (actosol 5.4 vs. check of 3.8). In evaluating the plant quality of actosol vs. grower standard, actosol had significantly fewer plant losses than did the grower check. We believe that these plants had less stress (higher organic matter better water holding capacity) and better nutritional levels available during this period when the liners were planted. No significant differences were noted in pH of the soils as related to treatment. Plant quality was significantly better and less plant losses occurred with plants treated with actosol vs. the grower standard.

RESULT

Variety 2. (Meadowlark)

Our study showed similar results compared to variety 1, that when actosol treatments were made on this variety, there was an increase in organic matter content using the LOL and colorimetric method. We also noted that there was a similar response in maintaining a higher level of nutrient retention in the soil with actosol vs. the grower stand. Our study also showed actosol improved CEC (actosol 7.9 vs. check of 3.9). As noted in both varieties the soil pH was not significantly influenced with actosol. Plants treated with actosol showed greater root development and better top growth with less plant losses.

CONCLUSION

A study was conducted in the spring of 2011 using **actosol** on two newly planted varieties of organic blueberries. Our study showed that actosol improved organic matter content in the soil along with improving nutrient retention in the soil resulting in better plant growth and in lower mortality levels. actosol treated soil also increased CEC but had no influence in pH.

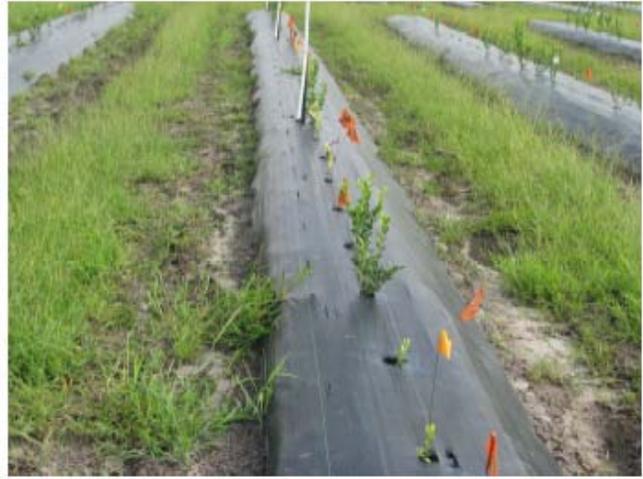
Effect of actosol[®] on Organic Matter and Soil Nutrient Content on two varieties of Blueberries Island Grove

	Variety 1		Variety 2	
	Check	actosol [®]	Check	actosol [®]
Organic Matter				
Soil LOL	2.6	4.5	3.1	3.7
OM (colorimetric)	2.3	4.4	3.1	4.0
Phosphorous (ppm)	77	146	112	356
Potassium (ppm)	139	189	155	150
Magnesium (ppm)	63	73	59	112
Calcium	492	736	792	852
Soil pH	6.5	6.4	5.8	6.0
CEC	3.8	5.4	3.9	7.9
Iron (ppm)	55	65	49	79
Manganese (ppm)	3	3	3	3
Souble Salts	.78	.62	1.2	.95

Variety 1 (Farthing)



actosol[®]



check

Variety 2 (Meadowlark)



actosol[®]



check