Onions

Effect of Converted Organics™ LC on the Yield of Processing Onions (2)

California is the largest producer of Onions in the United States with 44,000 acres and more than 950,000 tons harvested each year according to the California Department of Food and Agriculture statistics (2003). At over $200 million sales annually it is a major crop for the State, ranking behind Celery (#24) and before Cauliflower (#26). Growers are constantly looking for ways to improve harvest yields, crop quality and plant uniformity, in addition to reducing fertilizer and pesticide usage plus protecting the largest investment of all – their soil.

BACKGROUND

Commercial field trials were conducted on conventional processing onions in Coalinga, California. The primary objective was to evaluate the benefits of a microbially-based organic fertilizer product (*Converted Organics™ LC*) against the growers' standard program and quantify the effects on onion production.

The field trial divided an 80 acre field into two regions, 65 acres and 15 acres. In addition to the growers' standard program using Actagro products - the 65 acre region had four applications of *Converted Organics™ LC* of 4 gallons per acre (gpa) each, at 3-4 leaves, 7-8 leaves, 11-12 leaves and at the onset of bulbing. The 15 acre region received only one application of *Converted Organics™ LC* of 4 gpa at the 3-4 leaf stage. An 80 acre region with the same onion variety was planted in December 2002. This field also used Actagro products as the growers' standard program, served as the control field for this trial (see Table 1).

Table 1: Conventional Processing Onions Trial Conditions

Product Tested	Converted Organics™ LC
Crop	Processing Onions
Planting Date	01/03/03
Application Date	03/25/03
Application Schedule	65 acres had 4 gpa x 4 (3-4 leaves, 7-8 leaves, 11-12 leaves, bulbing); 15 acres had 4 gpa x 1 application
Growers Standard Program	Uses Actagro products
Application Method	Sprinklers
Treatment Location	Section 10-4 treated, Section 10-1 control
Field Location	Coalinga, CA

DATA COLLECTION and ANALYSIS

One month before harvest all bulbs in 50 inch bed lengths were dug up, counted, weighed and compared between the treated areas and control. During harvest, the onions from each section were kept separately and data compared

Table 2: Field Data One Month Before Harvest

Ctrl # Bulbs	**Ctrl** wt. (g)	**Ctrl** g/ Bulb	**4 BLC** # Bulbs	**4 BLC** wt. (g)	**4 BLC** g/ Bulb	**16 BLC** # Bulbs	**16 BLC** wt. (g)	**16 BLC** g/ Bulb
113[1]	790	7.0	95	790	8.3	100	820	8.2
105	540	5.1	94	460	4.9	106	775	7.3
95	624	6.5	88	470	5.3	88	645	7.3
102	495	4.9	90	680	7.6	104	670	6.4
			80	620	7.8	93	660	7.1
			96	760	7.9	95	940	9.9
						83	830	10.0
						94	885	9.4
						81	810	10.0
						91	761	8.4
103.8[2]	**611.5**	**5.9**	**90.5**	**630**	**7.0**	**93.4**	**779.6**	**8.4**
lbs/ac[3]	**2959**			**3,049**			**3773**	

[1] Each reading represents all bulbs on 50 inch length of a 40 inch wide bed
[2] Average values for numbers above
[3] Calculated assuming 70% of the total field area was covered with onions

Table 3: Yield Data at Harvest

Attribute	**Control**	**4BLC**	**16BLC**
Yield, tons/acre	18.40	16.57	21.03
Solids Content, %	21.1[a]	22.4[b]	21.4[a]
# Bulbs/lb	7.3	5.9	6.4
Lb/100 bulbs	13.7	16.8	15.7

[ab] Numbers followed by the same letter are not significantly different

CONCLUSIONS

Sixteen gallons of *Converted Organics™ LC* per acre resulted in an increase of 2.63 tons of onions per acre (see Table 3). Assuming a price of $88.00/ton for onions, this amounts to an additional $231.44 per acre as a result of using *Converted Organics™ LC*. Subtracting the cost of 16 gallons of *Converted Organics™ LC* at $2.00/gallon, the **net return was $199.44 per acre** of processing onions. Other benefits notable benefits included larger bulbs, higher solids content

and better disease resistance (which results in lower pesticide usage).