

2004 Field Evaluation of Maui LCF (Liquid Compost Factor) Effect on Broccoli

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LCF is a California Registered Fertilizer consisting of Hawaiian pineapple juice, sugarcane molasses, papaya puree and mushroom spawn. The mushroom spawn composts the fruit juice slurry and the resulting liquid or Compost Tea is harvested, filtered and heat processed as a liquid fertilizer.

Date Transplanted: June 23, 2004

Variety: Brogan

Spacing: 24" in-the-row and 44" between rows with 10 plants per plot.

Production system: Raised beds(4" high) with blue plastic mulch (18" wide bed) and drip irrigation.

Statistical design: Randomized Complete Block with 4 replications

Harvest dates: Main heads - August 27 through September 7, 2004 for a total of 3 harvests.
Side-shoots – September 16 through October 8, 2004 for a total of 5 harvests.

Treatments:

- 1 – None
- 2 – LCF applied at time of transplanting at 1.0 qt./100 gallons of water.
- 3 – LCF applied as a foliar application every 2 weeks at 1.0 qt./A.
- 4 – LCF applied as a foliar application every 3 weeks at 2.0 qt./A
- 5 - LCF applied at time of transplanting at 1.0 qt./100 gallons of water plus as a foliar application every 2 weeks at 1.0 qt./A.

Number of Applications:

- Treatment 2 – one (May 27).
Treatment 3 – six (June 9 through September 3).
Treatment 4 – five (June 16 through September 3).
Treatment 5 – six (June 9 through September 3).

RESULTS:

The marketable yield of broccoli (both main heads and side shoots) was increased by the application of LCF applied at the time of transplanting at 1.0 qt./100 gallons of water plus as a foliar application every 2 weeks at 1.0 qt./A compared to the no application treatment (Table 1). Foliar application alone of LCF whether at the 1.0 or 2.0 quart/A rate did not result in any increase in broccoli yield. There was no visual difference in the appearance of the broccoli plants regardless of treatment. Both main head size and side shoot size were larger when broccoli plants were treated with LCF

compared to no treatment. The variety Brogan actually produced more side shoots on a weight basis than main heads. Side shoots were of equal or better quality than the main heads.

Table 1. The yield of marketable broccoli heads treated with Liquid Compost Factor grown at the Horticulture Research Farm, Rock Springs, PA – 2004.

Treatment	Heads		Heads	Sideshoots		Sideshoots	Total Mkt		total head
	#	wt.-lbs.	AvgWt. oz	#	wt.-lbs.	Avg. wt. oz	#	wt.-lbs.	Wt. -oz.
1	13.3	12.0	14.4	140.5	48.8	5.6	153.8	60.8	17.6
2	12.5	12.0	16.0	117.5	47.3	6.4	130.0	59.3	22.4
3	11.0	11.6	17.6	120.0	50.3	6.7	131.0	50.1	24.3
4	12.3	11.8	16.0	130.5	50.1	6.2	142.8	61.9	22.2
5	12.8	12.5	16.0	149.0	58.3	6.3	161.8	70.8	22.3