

EFFECT OF MONTY'S PLANT FOOD ON SUGARBEET YIELD AND QUALITY

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Introduction and Objective

Monty's Liquid Plant Food is a specially formulated fertilizer that can supply and enhance existing natural nutrients to be better used by the plant thus promoting better production. Monty's Plant Food can be used in the root zone or as a foliar application. Monty's Plant Food products are comprised of naturally derived ingredients. According to Monty's Plant Food Company, Monty's 8-16-8 increases plant growth after germination and 2-15-15 increases plant yield. The objective of this trial was to determine the effect of Monty's Plant Food on sugarbeet yield and quality.

Materials and Methods

Research was conducted at Foxhome, MN. Beta 3800 sugarbeet seeds were planted with a John Deere MaxEmerge 2 planter into plots 11 feet in width (6 22-inch wide rows) and 30 feet in length on April 26. Seeds were placed 1.25 inches deep and spaced 3 inches apart in rows that were 22 inches wide. Counter was applied at 11.9 lb/acre at planting to control sugarbeet root maggot. Fertilization was done according to standard recommendations for sugarbeet. Plots were kept weed free using micro-rates of herbicides recommended for sugarbeet, hand-weeding, and cultivation. Fungicide was used to control *Cercospora* leaf spot.

Treatments were manually thinned to 150 plants per 100 foot of row during the four to six leaf stages. The experiment was a randomized complete block design with four replicates. Treatments were applied to the four middle rows of plots using a hand held, four nozzle sprayer using 8002 spray nozzles. The treatments were Monty's Plant Food 8-16-8 and 2-15-15 applied at 16 ounces per acre in 12 gallons of water per acre and compared with an untreated check. Monty's Plant Food 8-16-8 was applied on June 15 and 21, and 2-15-15 was applied with Eminent 125 SL at 13 fl oz per acre on August 3. Eminent was added first to the spray tank followed by 2-15-15.

The middle two rows of each plot were harvested on October 4. Yield was determined and quality analysis performed by American Crystal Sugar Company Quality Tare Laboratory, East Grand Forks, Minnesota. Data was analyzed for differences by analysis of variance and LSD using Agriculture Research Manager, version 6.0.

Results and Discussion

There was no significant difference in recoverable sugar, net tons per acre, percent sugar or percent sugar loss to molasses between Monty's Plant Food treatment and the untreated check ([Table 1](#)). This data suggests that Monty's Plant Food did not impact sugarbeet quality and yield.

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Table 1. Effect of Monty's Plant Food on Sugarbeet Yield and Quality at Foxhome, MN 2004.

Treatments	Sugar Content (%)	Sugar loss to molasses (%)	Root yield (tons/A)	Recoverable sugar	
				(lbs/A)	(lbs/T)
Untreated Check	14.50	1.17	27.2	7210	267
Monty's Plant Food	14.65	1.13	27.8	7443	271
LSD (P=0.05)	1.22	0.28	4.1	1783	29