

1. Use of Corn Gluten Meal (CGM) to Reduce Weeds in Beet Production - FNE02-402
2. Determine if CGM can be used to suppress weeds without reducing beet production.
3. No major changes on farm. Beet and perennial production will continue this year, if it ever stops raining.
4. I received great cooperation from the Fertrell Company (who provided the CGM free of charge), and advice from Nick Christians, Iowa State University, and Caragh Fitzgerald, Ag agent, Maryland Cooperative Extension Service.
5. Selected beet beds were treated with and without CGM and at various times (at planting and after seedlings were up). An attempt was made to measure both the amount of time spent weeding and the amount of beet production for the differently treated beds.
6. The results were incomplete at best. Due to last year's drought, it became impossible to successfully and consistently irrigate the various beds. Consequently, results were so meager and skewed as to prove practically worthless regarding the time spent weeding, let alone to try to determine which types of weeds were affected and in what way. Surprisingly, hairy galinsoga, a weed that was the bane of my existence the previous year due to its pervasiveness, never was a factor. I can only speculate that since this was a new bed, it is less apt to take hold in beds not previously cultivated. (Complete soil tests were taken (and will be submitted with the final report) and although no significant magnesium and potassium or minor nutrient differences were indicated and the soil compositions were comparable, the organic level in the prior bed was 7.5%, in the new bed 5.2%, and the phosphorous level in the prior bed was rated "excessive", the new bed "medium". Perhaps this contributed to the difference in the hairy galinsoga incidence.) Upon closer examination of what data was obtained, there was what appears to be a statistically significant difference in the yield; the average non treated bed yielded 59% more beets by weight for the test period (14 pounds) than those treated with CGM at the time of planting (8.8 pounds).
7. See above
8. No major changes in expenses or income were indicated.
9. The drought made an already very ambitious and detailed study of weed suppression impossible. I think even without the drought, it would have been very difficult to determine exact effects on specific weeds. The next step is to simplify the study. The difference in yields I believe warrants further study. While I do not intend to fully give up the idea of examining weed suppression, this year I will do so with less complicated means, more by observation than statistical analysis, and concentrate on the yield aspects. I will concentrate on looking at the differences between yields on beds not treated with CGM, treated with CGM at the time of planting, and treated only after seedlings were up. I believe determining if CGM applied at time of planting reduces beet yield, but does not if applied when seedlings were up alone would be a worthwhile finding. At that point, further study at determining the extra cost involved in using CGM as an organic nitrogen source if it also suppressed weeds, would be warranted.
10. I made a presentation about my CGM pilot to the Future Harvest conference in January 2003. The conference was attended by over 230 organic growers from the Mid-Atlantic States.
11. David Baryliski, 12120 Triadelphia Rd. Ellicott City, MD 21042, 410-531-5065/