

With the use of liquid manure, proper agitation before unloading and complete emptying to prevent solids from settling onto the bottom and incorporation as soon as possible, is a must to conserve nutrients and to reduce odors. A spreader tank with injectors is the ideal way to handle liquid manure if your soil is not too stony.

Coming about shortly will be the installation of a methane generator where the manure passes through a digester, methane gas is produced from this breakdown of the organic matter and the remaining manure from this is stored for field application.

If you are going to substitute manure for commercial fertilizer, I feel that you are going to have to know how much manure you are applying per acre and to better determine its nutrient content. With N at 30¢ per lb and a potential loss of at least 50%, the amount applied per acre and how it is stored and how soon it is incorporated, will all determine how much commercial fertilizer you will be able to save without affecting yields.

COMPUTERIZING MASSACHUSETTS SOIL TEST REPORTS

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Soil samples being sent to the Suburban Experiment Station in Waltham for analysis will now have reports generated by the computer. In working on this project we hope we have made soil testing more meaningful to growers and home gardeners. On the following page is an example of a soil analysis report for agronomic and vegetable crops. The upper half of the report presents the actual soil test results generated from the soil sample you sent in to be analyzed. Recommendation provided to commercial growers are presently limited to the amount of limestone needed to adjust the soil pH in the plow layer to the desired level. In the future we hope to be able to incorporate recommendations for fertilizer applications. Until then advice can be sought from your regional specialist.

Comments about this report are welcomed by the authors. We realize there will be factors we have not taken into account, but these can only be detected and resolved as the system is put into operation.

SOIL ANALYSIS REPORT FOR AGRONOMIC AND VEGETABLE CROPS

07/19/81

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02769

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SOIL AND PLANT TISSUE LAB
240 BEAVER STREET
WALTHAM, MA 02254

__BAG_NO.____|__LAB_NO.____|__DATE_SENT____|__SOIL_TYPE_____|__CROP_____
018604 | S062681114 | | SANDY LOAM | CUCUMBER

SOIL TEST RESULTS : FOR FIELD SAMPLE NO. 1

SOIL_PH_|_BUFFER_PH_|_CATION_EXCH_CAP_|_PERCENT_SATURATION_____
6.1 | 6.9 | 7.3 MEQ/100G | K= 2.5 MG=10.5 CA=61.6

NUTRIENT_LEVELS_: PPM_|_LOW_____|_MEDIUM_____|_HIGH_____|_VERY_HIGH_____
PHOSPHORUS (P) 19. |XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
POTASSIUM (K) 71. |XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CALCIUM (CA) 903. |XXXXXXXXXXXXXXXXXXXXX
MAGNESIUM (MG) 94. |XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
AMMONIUM (NH4) 12.0 PPM NITRATE (NO3) 50.0 PPM

MICRONUTRIENT	PPM	SOIL_RANGE	MICRONUTRIENT	PPM	SOIL_RANGE
BORON (B)	.3	0.5-2.0	COPPER (CU)	<0.1	1-8
MOLYBDENUM (MO)	<0.1	1.0-3.0	IRON (FE)	2.0	3-40
ZINC (ZN)	8.2	3-70	MANGANESE (MN)	1.1	3-20

APPLICATION OF MICRONUTRIENTS SOLELY ON THE BASIS OF THIS SOIL TEST IS NOT RECOMMENDED.

SUBSTANCES THAT CAN BE TOXIC TO PLANTS

ALUMINUM (AL) 18. PPM SOIL RANGE 0-200 SOLUBLE SALTS 14.0

ELEMENTS THAT ARE NOT REQUIRED BY PLANTS BUT CAN BE TOXIC TO PEOPLE

ARSENIC (AS) 0. PPM SOIL RANGE 0-? CADMIUM (CD) 0. PPM SOIL RANGE 0-?
LEAD (PB) 2. PPM ESTIMATED TOTAL LEAD IS 45. PPM WHICH IS LOW

RECOMMENDATIONS FOR AGRONOMIC AND VEGETABLE CROPS

APPLY 1.2 TONS GROUND LIMESTONE PER ACRE OR 50 LB PER 1000 SQ. FT.
WHEN SOIL PH IS ABOVE 6.4 NO LIMESTONE IS RECOMMENDED. FERTILIZER
RECOMMENDATIONS WILL BE PROVIDED BY YOUR COUNTY EXTENSION OFFICE.

YOUR SPECIAL INSTRUCTIONS WERE : S.S

COPIES OF YOUR RESULTS WERE SENT TO: