New York State Flower Growers

INCORPORATED

BULLETIN 31 Secretary, Harold B. Brookins, Orchard Park, N.Y. MARCH 1948

SOILS and FERTILIZERS for FLORISTS' CROPS

JOHN G. SEELEY

SOIL PREPARATION

Object - To prepare a soil of good structure with plenty of organic matter and a suitable acidity.

Compost Pile

1. Pile alternate layers of sod, soil, and manure 8-10" of soil and 3-4" of manure.
2. Spread superphosphate on each layer of manure, using 10 pounds per 100 square feet.
3. Top layer should be of soil; make it concave to catch rain. Keep pile moist.
4. Don't add lime unless a soil test shows the need for it.
5. Turn the compost every 3-4 months. Soil will be ready for use in 9-12 months.

Field Composting

1. Many different methods. Combination of perennial grasses and manure is best.
2. Prepare seed bed. Apply fertilizer and manure after harrowing. Also apply lime if soil test indicates need for adjustment of soil reaction. Plant timothy, blue grass, rye grass, or other grass.
3. Top dress with nitrogen fertilizer each spring.
4. Cut grass each fall and let it lay on surface of soil.
5. Turn sod under and disk harrow four to six weeks before use in greenhouse.
6. More manure, peat, and so forth can be added to the soil in the bench to increase the organic matter if necessary.

SOIL REACTION

Most greenhouse crops grow well if the soil pH is between 5.5 and 7.0. Aim for pH 5.8 to 6.5, except for crops like gardenias, azaleas, camellias, which do better at 5.0 to 5.5. Hydrangea soil is adjusted according to color desired; below 5.5 - blue; above 6.3 - pink.

To increase alkalinity

present pH	pH 5.0 to 6.0	desired 6.0-7.0
4-5	10 lbs.	15 lbs.
5-6	none	5 lbs.
6-7	acidify	none

Apply this quantity of ground limestone. Apply per 100 square feet of bench area to obtain a given reaction. If hydrated lime is used, only three-fourths as much lime is needed.

To increase acidity

present pH	pH desired		
	4-5	5-6	6-7
5-6	3 lbs.	none	add lime
6-7	6 lbs.	3 lbs.	none
7-8	10 lbs.	6 lbs.	3 lbs.

Apply this quantity of aluminum sulphate to each 100 square feet of bench area to obtain a given reaction. Sulphur gives a slower reaction and only one-sixth as much is needed.

Check the pH after 3 to 5 weeks and make further adjustments if necessary.

Fertilizers

Bench Crops

1. Mix superphosphate (5 pounds per 100 square feet of bench area) into the soil before planting. Then apply 3-4 pounds every 12 months.

2. Potassium fertilizer will probably not be needed if manure was used in the soil preparation. If little or no manure was used, mix potash fertilizer into the soil before planting. After six months make a light application every 3-4 months.

3. Generally no nitrogen fertilizer need be added to newly prepared soil. The time and frequency of application of nitrogen fertilizers depend on the crop being grown. Can best be determined by soil tests and observation of plants. For most bench crops, make first application of nitrogen fertilizer three months after planting; then at four to eight week intervals, depending on growth of plants, time of year, etc.

4. When preparing the soil for one crop following another crop such as mums, especially if the soil is sterilized (pasteurized), do not add fertilizer because the nutrient concentration is frequently high and further applications may be toxic to the plants.

****

IN THIS ISSUE

****