

Barnyard Manure Made Artificially

Manure from livestock is one of the oldest as well as one of the best known and most dependable fertilizers. Its beneficial effects have been the subject of much speculation and study because they are seemingly out of proportion to the relatively small amounts of phosphorus, potassium, and nitrogen it contains. However, the lack of knowledge regarding the secret of its effect on plant growth has not deterred farmers and gardeners from using it. The greatest difficulty in connection with its use is its scanty supply. Of the numerous investigations recently conducted, those of the Rothamsted Experiment Station are the most promising of practical results. They may be summarized very briefly. The Rothamsted station has found that straw may be converted into a good quality of manure by treating it with a soluble nitrogen compound, such as sulfate of ammonia or nitrate of soda. The former has been used at Rothamsted because of its availability. The method suggested by the investigators involves the composting of fresh straw with sulfate of ammonia at the rate of 100 pounds of the sulfate to one ton of straw. Since straw breaks down most rapidly in combination with a neutral or alkaline solution of nitrogen, and sulfate of ammonia tends to produce an acid reaction, it is recommended that 100 pounds of finely ground limestone be added to the formula to correct the acidity. Straw takes up moisture very slowly and consequently ferments slowly. This difficulty it was found could be overcome by watering the straw lightly. This starts fermentation, which renders the straw more absorbent. A second watering should be given at the end of two days, and when the pile of straw is uniformly moist the ammonium sulfate and lime should be scattered over the surface and water again applied freely. After this treatment fermentation takes place rapidly, especially if the pile be turned over frequently with a fork to admit air. When the straw is broken down thoroughly it is ready for use.

It is not contended that manure made by the foregoing method is equal in fertilizing value to good barnyard manure, but it offers a valuable source of humus and nitrogen and to this extent it is a very useful fertilizer. The object of attention to the Rothamsted experiments in THE BULLETIN at this time is for their bearing on the making of compost. Green-keepers will appreciate the possibilities in the new method of producing manure and doubtless will do a little experimenting of their own the next time they are in need of compost.

Notes

Tee markers.—Good tee markers can be made by using a polo ball or small croquet ball and a 20-penny round spike. Bore a hole in the ball, cut off the head of the spike, and insert in the hole about $1\frac{1}{2}$ inches. This marker will not injure the grass as does the plate.

Eradicating crawfish.—Clubs which are troubled by crawfish holes in low and wet spots may find relief in the method used on some of the aviation fields during the war. The crawfish puddle a little lake at the bottom of each hole. Either drop or squirt a couple of tablespoonfuls of gasoline down each hole and cover the top with the borings or with earth. The crawfish and eggs are destroyed by the fumes and oil.