

PRODUCTION OF MANURE

A permanently successful system of farming must maintain soil fertility. While the keeping of live stock tends to improve the farm thru the necessity of keeping part of it in pasture and thus reducing the cultivated area, yet to make stock most effective in maintaining fertility, attention must be given to the proper handling of the manure. A conservative estimate places the production of manure in Kentucky at 16,246,000 tons annually. Not to exceed 60 per cent, and very probably less, of this amount is returned to the soil. The total loss on this basis, figuring plant food at commercial prices, would be nearly \$23,000,000, or about eight times the total value of fertility brought to the farms in commercial fertilizer. Such a loss is unnecessary.

Manure from different animals varies in character, and to conserve best the fertility, it must be handled differently. Horse manure is rich in plant food, partly because work animals are given rich feed and partly because the manure is comparatively dry. But it loses fertility readily because fermentation and heating occur. This is especially true if the manure is left in loose piles. Steaming and the odor of ammonia so often noticeable indicate that nitrogen is passing into the air. After heating, the manure has a low value. Heating not only wastes nitrogen, but destroys organic matter that is necessary to make humus.

Cattle manure contains much water, which excludes air and prevents heating, while horse manure, being porous, admits air and heats quickly. Therefore, mixing cattle manure with horse manure helps to prevent loss. The greatest loss of cattle manure occurs in feeding in open lots where rains leach out large quantities of soluble plant food. Little or none of the manure from barnyards gets back to the cultivated fields.

Apparently farmers do not value hog manure highly. Yet hogs consume very concentrated feed and produce rich manure. If corn is worth 75 cents per bushel to feed hogs, the 20 cents worth of fertility left in the manure is also worthy