Jerseys on Rape Pasture at the Medicine Hat Experimental Station in Alberta.

High Grain Prices Increase the Value of Manure

How to Handle Manure for Best Results

MANURE is worth more now than ever before. Anything that assists in producing larger yields of grain, has greatly increased in its value with the increase in the price of the various farm products. No thrifty farmer will waste a forkful of manure this year. He will get it all back on the land as quickly as possible and make it assist him in producing larger crops from the amount of land he is able to look after.

The value of manure from different animals varies with its composition. Sheep manure is richest in plant-food elements; hog manure ranks second; horse manure third; and cow manure, fourth. A ton of barnyard manure contains on the average, 10 pounds of nitrogen, 2 pounds of phosphorus, and 8 pounds of potassium, having a plant-food value at present prices of about $3 per ton.

The agricultural value of manure is usually greater than the plant-food value. For example the application of 12½ tons of manure per year for 15 years at the West Virginia Experiment Station gave increased crop yields valued at $40 per acre per year or $3.12 per ton for the manure used. During the period of ten years, the Ohio Experiment Station has obtained an increase of crops valued at $4.69 per ton for the manure used. The application was made at the rate of eight tons of manure per acre, during a five-year rotation of corn, wheat, oats, clover and timothy. Two applications of four tons each were made, one for corn and one for clover. Manure used in connection with continuous grain cropping did not maintain the yields, but when used in connection with crop rotation the yields of all crops were increased.

This high value of manure in the farm practice should make everyone more anxious to conserve such a valuable fertilizer. The best way to make use of manure is to get it on the land as quickly as possible after it has been made. It is not always possible to haul the manure direct to the fields. Unseasonable weather, a rush season on the farm, or deep snow in the fields may make it inadvisable to spread the manure direct from the stable. If it is not possible to haul the manure out every day some precautions should be taken to conserve its value. Manure is wasted by seepage of liquid manure in the stables, by leeching in the open yard and by heating in loosely formed piles about the barnyard and in the fields.

The waste of liquid manure may be largely prevented by the use of sufficient bedding. In the case of stabled cattle, some farmers conserve the liquid by manure cisterns. Conserving through bedding and hauling direct to the field is the best plan for the average farmer.

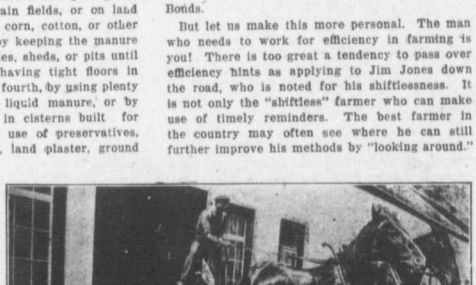
Manure left in the open yard through the summer may lose half its plant-food value due to fermentation and leeching. Rotted manure which has been carefully saved will be richer in plant-food elements, ton for ton than fresh manure. It requires 1½ to 3 tons of fresh manure to make a ton of rotted manure which means that the organic matter is greatly reduced and the total quantity of plant-food elements is also decreased by fermentation and exposure. Except in special cases and for certain crops or gardening conditions, there is no advantage in rotting the manure, better apply it fresh from the stable before any loss occurs.

Manure losses may be reduced to a minimum first, by hauling it directly to the field with a tight-bottom manure spreader and spreading it thinly and evenly as a surface dressing on grass, clover, alfalfa or small grain fields, or on land which is to be plowed for corn, cotton, or other intertilled crops; second, by keeping the manure compact and moist in stables, sheds, or pits until ready to haul; third, by having tight floors in the stable or feeding pens; fourth, by using plenty of bedding to absorb the liquid manure, or by saving the liquid manure in cisterns built for the purpose; fifth, by the use of preservatives, such as ground limestone, land plaster, ground phosphate rock, and acid phosphate. These materials not only absorb the liquid manure and take up ammonia, thus acting as a manure preservative but at the same time they reinforce the manure with phosphorus and lime, the very elements required to balance manure and make it a complete fertilizer.

The question is often asked as to whether manure should be spread on the land before plowing or afterwards. There is one danger in plowing under a heavy coat of manure, in that the manure tends to break the capillary connection of the soil with the sub-soil. During a dry spell the moisture in the sub-soil cannot be drawn up because of the broken connection and the surface soil burns out. Manure spread on plowed land and worked into the soil by cultivation, gives the best results. Where manure is plowed under, it is better to plow rather shallow, since deeply-buried manure will not decay so rapidly and the seed bed will be too open. A surface dressing of manure has both a plant-food value and a mulching value. It will conserve soil moisture in the summer and in winter will protect the crops which it covers.

For the most efficient handling of manure during labor scarcity the use of a manure spreader is necessary. The manure spreader not only saves labor, but it spreads the manure more evenly than can be done by hand, and usually it is the man with a manure spreader who covers most of his land with manure. In getting such a spreader the man who has a fairly large farm should purchase a three or four-horse machine, rather than a smaller one. Efforts should be made to cut down the man's labor in comparison to that done by the horses whenever an opportunity affords.

Some farmers who use a manure spreader, place it under a shelter and run the litter carrier from the stables out to where the manure spreader stands. The manure is therefore dumped directly from the litter carrier into the spreader and as soon as the latter is filled the team is hitched on and the manure is drawn to the field. This makes but one handling of the manure. Where such a system can be carried out, it is an ideal one. But no matter which system may be carried on, everything possible should be done to conserve the fertilizing value of the manure and to use it so as to get the greatest possible results in the way of increased production.



Hauling Manure Direct From the Stable to the Fields.

This is the ideal system for the conservation of the fertilizing value of the manure The illustration is from a photo, snapped by an editor of Farm and Dairy, on the farm of Gilbert McMillan, Huntingdon Co., Que.

Getting Ready for Winter

Prepare for Greater Efficiency Next Year

AFTER the "freeze-up" puts an end to plowing, there is usually a period before winter really sets in, during which many improvements might be made about the farm. Farmers should look back over the year's operations and see where they might have saved time, for time is money these days. It is the farmer who is able to make the most efficient use of the labor at his disposal who is able to invest in Victory Bonds.

But let us make this more personal. The man who needs to work for efficiency in farming is you! There is too great a tendency to pass over efficiency hints as applying to Jim Jones down the road, who is noted for his shiftlessness. It is not only the "shiftless" farmer who can make use of timely reminders. The best farmer in the country may often see where he can still further improve his methods by "looking around."