

How to Save the Manure.

No. IV.

2. *The use of other absorbents without fermentation.* In speaking of the use of straw as an absorbent we stated that it should be fermented under cover; but this may be taken with some degree of modification. Shelter is only necessary to ward off heavy rains which usually take place in autumn; but if the rainfall is not great, or if the heap can be temporarily topped off previous to heavy showers, little or no damage will be done.

In considering the saving of the manure with straw as litter, we dwelt on the question at considerable length, for this system can be utilized by every practical farmer, but absorbents other than straw can only be used to the best advantage by some farmers. The most valuable, and usually the most accessible, of all other absorbents is muck. Many farmers have the impression that the only value dry muck possesses lies in its use as an absorbent. When it is considered that muck is the product of decayed vegetation, it will be seen that it must contain all the elements of plant food, so that it is as much of a complete fertilizer as animal manure, but it is chiefly valuable for the nitrogen it contains. Comparing peat of average composition with the manurial value of straw, the former will be worth \$3 a ton, while a ton of the latter will scarcely be worth \$2. It has been further estimated that a ton of dry peat will occupy two cubic yards of space, so that every farmer can now reckon that it will not require a very large bog to produce the value of his whole farm. The farmer who owns a swamp that can be easily drained has a mine of wealth. When the soil is clayey or sandy, muck can be used with great advantage by putting it directly on the cultivated land, mixing it well with the soil, or it may be put on the meadow or pasture, and a small quantity of lime, say a bushel to every load, will hasten its conversion into plant food. But this mode is great extravagance compared with utilizing the muck as an absorbent in the stables. In the latter case the muck must be dry. When fully saturated, seven-eighths of its weight is water, and when it is considered that straw will only absorb twice its own weight of moisture, its value as an absorbent, compared with that of straw, will readily be seen. The farmer's own judgment, under the varying circumstances, is the best guide as to the best mode of securing the muck in a dry condition. The most economical manure savers not only use muck in the stable gutters to absorb the liquid excrements of the stock, but when straw is used for littering some of the animals, it is also put in layers on the manure heap for the purpose of taking up the gasses which would otherwise escape during the process of fermentation. Amongst other absorbents available for some farmers may be mentioned sand, road dust, saw dust, ditch cleanings, scrapings of dry stable manure, clay, etc. Sand is especially valuable when put on clay soils, as it greatly improves its mechanical texture. In using the different kinds of absorbents for various soils it should be the aim of the farmer to bring his field as near as possible to the condition of a loam.

In the application of manure saved by the use of earthy absorbents, much labor may be

saved compared with the straw system. It may be drawn directly from the stable to the fields and immediately spread. By this method the loss is reduced to a minimum, and the only danger to be avoided is the spreading of the manure on steep hill sides, where the spring rains are liable to wash the substance away before the frost is sufficiently out of the ground to enable the soil to absorb the drainings.

3. *The construction of tanks to gather the liquid.* This method is accessible to every farmer, but its utility is more questionable than that of the other modes of saving the manure. The barn yard should be paved with some water tight material, slightly concave, so as to prevent any drainings from flowing out of the yard. In the centre a tank or cistern is built, the size depending on the quantity of stock. The quantity of urine produced by the stock can be calculated from figures given in No. I. of these articles, and the size of the cistern to be built thus ascertained, making due allowance for the quantity of rainfall in case the yard is not under cover. The liquids from the stable gutters may be led into the cistern by means of aqueducts, and the drainings from the solid manure will run into the tank by means of the concave nature of the foundation. The liquid may be disposed of (1) by pumping it on the manure heap, using plenty of straw for the purpose of retaining it, and (2) by sprinkling it on the fields with a watering cart. The first objection to the tank system is that the pipes or drains leading the urine into the cistern are apt to freeze and stop the flow. In cases where the liquids are sprinkled on the fields, the work must be done about the time of sowing or planting; otherwise, except in a retentive soil, much of the liquid may be lost. Every farmer who contemplates the erection of new barns and stables should take the manure question into serious consideration.

Every farmer should now commence to save at least a part of his manure. He will soon work into a system best suited to his conditions. Indifference cannot be indulged in much longer. In the Northern and Eastern States, where the soil was originally as fertile as ours, farmers are now compelled to travel 12 to 15 miles to the livery stables of the large cities, and team the manure to their farms, paying three to four dollars a ton therefore, and scarcely ever wait to inquire whether the substance is leached out of it or not. Other farmers are compelled to restore the fertility of their land by feeding large numbers of animals for the manure alone, scarcely ever waiting to calculate any other source of profit from feeding. Still others are making extensive purchases of commercial fertilizers, running great risks of their being adulterated. And yet, with all these facts before their eyes, thousands of our farmers still regard their manure heap as a nuisance.

(TO BE CONTINUED.)

SIR,—I had almost made up my mind not to take the *Advocate* for this year, as I have so many papers coming weekly, but as I have been looking over the last magazine I have concluded to take it another year. I wish you success.

J. E.
UNION ROAD

Constitution and By-Laws for Farmers' Clubs.

For farmers contemplating the organization of clubs, the following rules will be found useful. They are not given for the purpose of being copied, but merely as a general guide. Each club should take into special consideration the circumstances and modes of agriculture in its locality, and make these the guiding features:—

CONSTITUTION.

ARTICLE I.—This organization shall be known as———(insert the name here.)

ARTICLE II.—The objects of this club shall be the cultivation of friendship amongst its members, the improvement of their minds by discussions, essays, and readings on subjects pertaining to agriculture, the amelioration of the farmers' condition, and especially the acquisition of such knowledge as will be of practical use to the club in their daily pursuits. It shall be their endeavor to cultivate friendly intercourse with other farmers' clubs with the view to advancing the interests of the farmers collectively, and for the purpose of obtaining acquaintance with those influences which are brought to bear against the farming community, and are prejudicial to its advancement.

ARTICLE III.—The membership shall consist of two classes, viz., active and honorary. The former shall include all persons over the age of ——years who are actively engaged in the pursuit of agriculture or any one or more of its branches, and shall have paid an annual fee of ——cents. The honorary members shall consist of such persons as take an active interest in agricultural affairs or in the success of farmers' clubs, whether they are engaged in agriculture or not. All new members shall be elected by ballot at a regular meeting, having first been duly proposed and seconded by members of the club at the last meeting preceding their election. Active members shall be elected by a two thirds vote, and honorary members shall require the unanimous vote of the members present.

ARTICLE IV.—The officers of the club shall consist of a president, vice president, secretary, treasurer, and a committee of management, consisting of three members. (Here the usual duties of these officers may be copied as separate articles from any society.)

ARTICLE V.—In the absence of any officer a substitute may be appointed, *pro tem*, by the club. Any officer or member guilty of misconduct or neglect of duty may vacate his office or be expelled by a vote of two-thirds of the members present at a regular meeting, and office vacancies may be filled by the same majority.

ARTICLE VI.—Additions to or alterations in the constitution, by-laws or rules of order, may be made by a two thirds vote of the members present at a regular meeting providing specific notice of the same shall have been given in writing at a previous regular meeting; and any by-law or rule of order may be suspended for the time being by a two-thirds vote of the members present.

BY-LAWS.

I.—Regular meetings of the club shall be held at———on———, unless otherwise ordered; and special meetings shall be held at such times and places as shall be determined