

forget that every organic substance—every particle of animal and vegetable matter upon the farm is a manure. All excrements, solid or liquid ;—decaying vegetables—turf of grass lands ; mud and peat ; fallen leaves ; decaying bodies of animals ; every organic substance, animal or vegetable, should be carefully prepared or applied to aid reproduction at the earliest opportunity. Nature never intended that anything should be lost. She is our best preceptress.

Much valuable manure is constantly lost from depreciation, by heaping it together to ferment, and heat, and rot ; and as it decays there is too often a wasteful loss of valuable ingredients in the gaseous form, and these elementary ingredients, the first to escape, are precisely those most valuable as food or stimulants to the roots of plants.

As a general rule we would say *first*, preserve all the animal manures as nearly unchanged by heating as possible ; *second*, let them be kept under cover, secure from washing ; and third, let a regulated addition of muck, plaster, and ordinary soil be added, and intimately incorporated to absorb the various ingredients as they are freed and given off during the progress of decomposition. Muck, swamp and bog mud, may be brought into partial fermentation by mixing with them a small portion of easily fermenting farm yard manure, or, in default of this, a portion of alkaline substances, such as ashes, lime, potash, and this quantity will depend on the haste required, and the state of the material to be prepared. The alkalis reduce the muck or bog earth—the latter when composted with farm yard dung, acts as an absorbent, and becomes itself a valuable manure. We should take especial care that all dry long straw and coarse materials of all kinds should be so composted with excrements, or saturated with fertilizing liquid, as to fit it to become an enriching manurial contribution when buried by the plough in the soil.

Manures in a forward state of decay should be well incorporated with the soil immediately preceding to the deposition of the seed of the crop, they are intended to benefit. If there be not time, they can be applied as a top dressing. But unless in the case of soluble manures, before rain there is always a great loss in this mode of application.

Unfermented coarse manures may be mingled with the soil long before their effect is desired.

Let it be borne in mind that, with an animal, so with a plant,—the first food ought to be found ready prepared. The food must be abundant, nourishing and stimulating, to favour the rapid progress of organic development—expanding the stem, leaves and roots, and preparing them to appropriate with vigour, largely and even more quickly, abundant surplus of nutriment. If we wish to ensure a luxuriant crop, we must first secure a luxuriant and vigorous germ. In rich and fertile soils, the absence of abundant nourishment in the earlier stages of vegetation may be less felt ;—but in the poorer soils, we must by, a careful choice of seed samples and abundant manuring, seek to supply artificially what nature has withheld.