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Commentary

Mechanism of manure management: Different manure systems and calibration

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DESCRIPTION

Knowing how much manure is being put on farms is crucial for managing it. An adjustment to the amount of fertilizer required can be made by knowing the amount of manure distributed at the anticipated pace and the plant nutrients available from the manure. In order to prevent one area of the field from receiving too many nutrients while another area does not, it is crucial to spread the manure as uniformly as possible. Spreading the manure over the entire farm is equally crucial since some of the nutrients in the manure come from crops that were grown across the entire farm. This will prevent any potential nutrient build up in fields around the barn.

Solid manure systems

Solid manure is defined as manure that contains greater than 20% solids by weight. Solid manure and semi-solid manures are generally handled by tractor pulled or truck mounted box spreaders. The manure is disseminated using a dispensary mechanism that extends out the back of the box spreader, and their capacity range from two to twenty tonnes.

Flail, side discharge, and spinner spreaders are a few different types of solid spreaders. Chain flails aid to handle manures with varied moisture levels by dispersing them out the sides of the spreader, while flail spreaders are utilized for drier manures. Augers in the hoppers of side discharge spreaders direct the manure toward a revolving panel or expeller, where it is then disseminated evenly as the tractor advances. Similar in design to hopper spreaders, spinner spreaders discharge manure through the spinning of discs at the back of the auger. Adjustments can be made by changing the disk speed or angle.

Liquid manure systems

Manure that has a solid content of less than 10% is referred to as liquid manure. Surface broadcasting of the manure is normally done with a tank waggon equipped with splash plates. However, this approach frequently results in an odorous, uneven dispersion. There are various kinds of attachments that can be utilized to enhance tanker performance and consistency. Booms can be added to the dispenser with nozzles and drop hoses to carry the manure slurry closer to the ground, helping to spread the manure more uniformly and reducing odour issues. Direct injection or immediate assimilation of manure into the soil are examples of other types of liquid manure applicators. Because they increase manure utilization by lowering nutrient loss from volatilization, runoff, and odour, these spreader types are swiftly gaining appeal in the dairy business. This approach has a variety of applications. Adaptors like aerators (knives), cultivators, or concave discs can be installed on the tank truck. Manure is then directly pumped into the soil grooves created by areators like the AerWay. After application, culitvators and concave discs aid in incorporating manure.

Calibration

To ensure that each system is working to its best capacity, different calibration techniques must be employed depending on the manure spreader system in use. By calibrating, you can make sure that the crops are receiving the right amount of nutrients. You may not be distributing fertilizers efficiently if your spreader has not been adjusted. Keeping records is another aspect of good management. Keeping track of your calibrations and applications will help you troubleshoot issues and increase the overall fertility of your agricultural operation.

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