

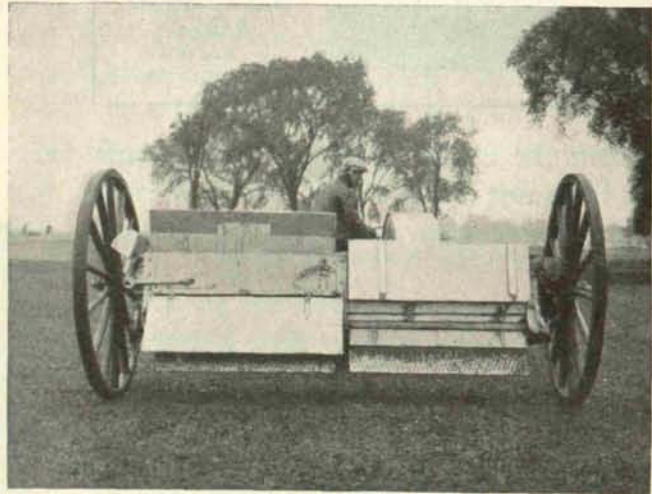
# Fairway Fertilization

Uniform Distribution is Necessary for Success

By O. J. NOER

## ALBION FERTILIZER DISTRIBUTOR

*This machine imported from England was demonstrated last year by George Davis of Chicago. It applies from 28 lbs. to 2800 lbs. per acre.*



**T**HE increasing scarcity of stock yard manure, its rising cost, and the danger of introducing foul weed seeds, is compelling the wider use of other more concentrated plant food materials for fertilization of new and established fairways.

Instead of applications at the rate of ten to thirty tons per acre, a ton and more frequently one-half ton or less is applied. These lighter rates suffice because of the higher content and greater availability of the plant food in commercial products.

Neglect to insure uniform distribution over the fertilized area results in disappointment. Strips or patches of luxuriant turf surrounded by starved grass simply necessitates further expenditures for fertilizer to promote growth on poor areas. The gratifying results accruing from fertilization in some cases and the poor results in others is often traceable to the care exercised in applying the fertilizer.

### Plant Food Movement is Vertical

**T**HE fact that plant food movement in the soil is vertical and not horizontal is not generally recognized and sufficiently appreci-



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ated. Experimental plots which have received the same fertilizer treatment continuously for more than half a century, show that lateral movement is negligible, certainly not more than several inches. The reason is evident when the mechanism of plant food movement in the soil is considered. The soil water is the vehicle for the carriage of dissolved materials, and since water movement is almost wholly vertical there can be little lateral movement of soluble plant food.

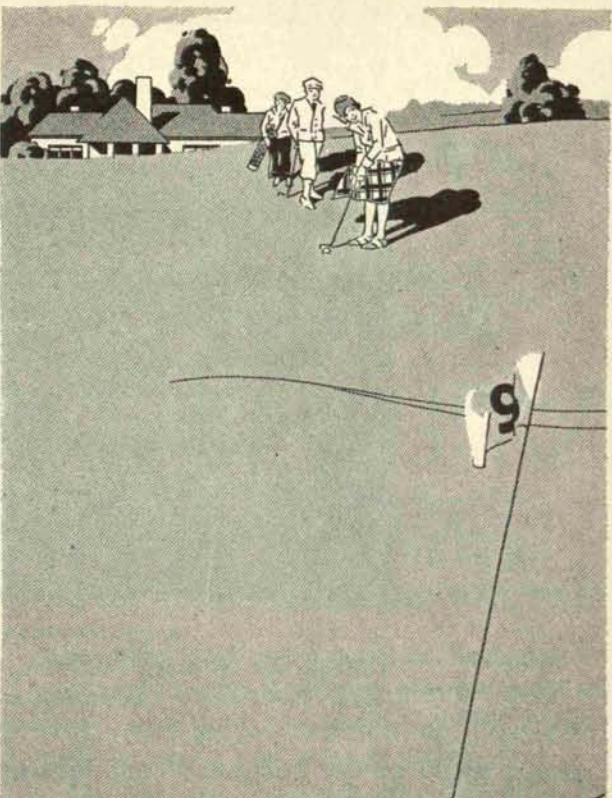
Uniform application depends primarily upon the mechanical condition of the fertilizer and the method of application, although the rate has some effect for obviously it is far easier to apply one ton to an acre than one hundred pounds.

Progressive farmers recognize the modern manure spreader as more than a labor saving device. The shredding and tearing of the larger lumps results in much more even distribution than is possible by hand. It is never possible to apply a coarse lumpy fertilizer as uniformly as one consisting of fine particles only. The smaller the individual particles the larger the number in a given quantity and hence the better chance of obtaining even distribution. Some fertilizers tend to absorb moisture from the air and become lumpy. When in such condition they should be ground before attempting their use. A discarded feed grinder is advisable for this purpose.

It is extremely difficult to apply fertilizers uniformly by hand, and also unpractical to cover extensive fairway areas by this means. When strong arm methods are resorted to on small areas it is best to divide the fertilizer into two equal quantities and apply one portion while walking in one direction and the other while walking in a direction at right angles to the first. Thus areas failing to receive fertilizer the first time usually are covered subsequently.

#### Fertilizer Spreader is a Necessity

**T**HE common lime and fertilizer spreader reproduced herewith is ordinarily used for fairway fertilization. The hopper holds about five hundred pounds of fertilizer and can be set to apply from about four hundred to four thousand pounds per acre. The fertilizer flows out through slots, spaced about



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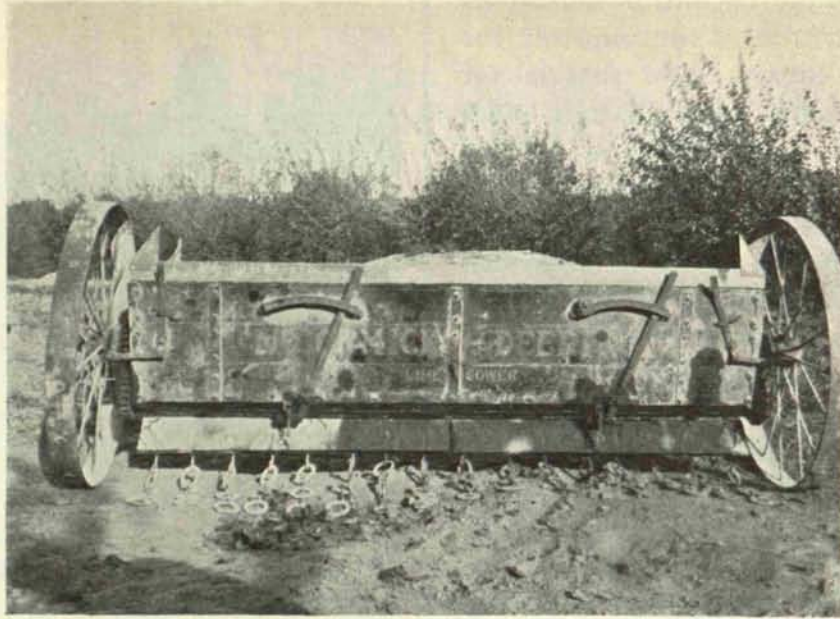
Being purely mineral it carries no obnoxious weed seed to sprout and cause unnecessary labor later in the season. It, unlike compost and manure, carries no disease germs. It is balanced so the grass receives complete nourishment. Ammonia sufficient to produce growth and that dark green luxuriant color so much desired, phosphate in such form and amount as to develop a wonderful root system which all grass must have to withstand the hard usage to which all greens are subjected and potash in the proper form and amount to insure a healthy growth. Packed in 50 pound paper bags.

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FAIRWAY FERTILIZER DISTRIBUTOR

*This is the ordinary low-slung type, lime and fertilizer distributor. Note grain seeder chains suspended from drop board to insure more uniform distribution*

six inches apart in the bottom of the hopper. It hits a sloping spreader board and then drops to the ground. While the spreader board tends to improve distribution, unfortunately it is not altogether effective. Its shortcomings are

frequently evident some days after applying the fertilizer. Burned strips appear about six inches apart if injury results from soluble constituents, or darker green strips due to localized fertilizer applications.

Some greenkeepers have overcome this successfully by staggering nails placing them close together on the spreader board. Colonel Goetz of the Algonquin Club at Saint Louis devised a better method. He procured grain seeder chains from a local implement dealer. Each consisted of three rings linked together with short chain. They were attached to the spreader board, one directly below each outlet spout, making it necessary to use sixteen chains. The chains were fastened to the upper outside edge of the board so that the first ring fell just below the lower edge of the board, and the two bottom rings rested on the ground. The chains were attached to the outside edge of the board so as to be drawn up against the board when the distributor moved forward. The two rings on the ground causes the suspended rings to move sidewise and effectively spread the fertilizer as it drops off the spreader board. The method of attaching the chains can be worked out by inspection of the accompanying illustration.

This method possesses distinct advantages and is superior to dragging mats behind the

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distributor. After the fertilizer reaches the ground it is almost impossible to spread it effectively. Furthermore, the two rings dragging on the ground brush off any soluble fertilizer adhering to the blades of grass and minimize the danger of burning.

Tractor drivers must be cautioned to overlap the distance from the center of the wheel to the edge of the hopper or streaks of poorer turf will result due to the absence of fertilizing prior to seeding.

It is almost impossible to apply less than four hundred pounds of fertilizer to the acre. In such cases the fertilizer should be mixed with dry sand, cottonseed meal, activated sludge or some other suitable material to give the desired bulk. Soluble materials such as sulphate of ammonia should never be applied when there is dew on the grass, because burning almost invariably results.

Spilling fertilizer when filling the hopper should not be tolerated for killed areas almost invariably result. The danger can be avoided by placing the fertilizer in the rough alongside the fairway.

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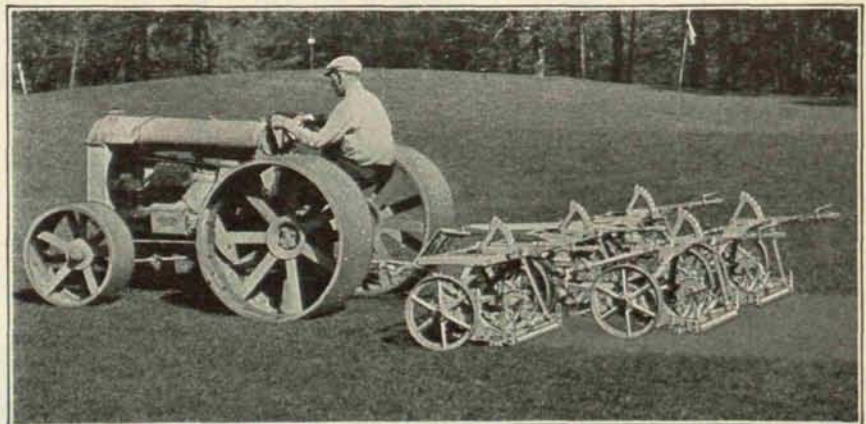
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