

Is Starter Fertilizer Necessary For Corn?

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One of the most common questions recently is when do I need to use a starter fertilizer for corn?

Starter fertilizer is usually most effective in cold, wet soils where nutrient release and root growth are slow. These conditions limit the ability of the seedling plant, with its small root system, to get enough nutrients to get off to a good start. This is especially critical for an immobile nutrient critical for an immobile nutrient like phosphorus.

Starter fertilizer provides

the seedling plant with a supply of easily available nutrients until it can establish an adequate root system and the soil conditions improve. Then, if the soil has good fertility, the plant will be able to take care of itself. The starter will have done its job.

The decision about whether a starter is necessary will depend on two main factors, the fertility level of the soil and the conditions at and immediately following planting. It is recommended that a starter always be used on soils which test low, especially for phosphorus. On soils with optimum to high fertility levels, this decision will depend more on the con-

ditions.

If the corn is being planted early in cold, wet conditions, and it will be cold and wet for a while after planting, it is likely that a starter fertilizer will be beneficial. However, if the corn is planted on soils with optimum or higher fertility, and the soils are warm and will likely stay warm, starter fertilizer will provide little or no benefit.

Starter fertilizers rarely provide a benefit on soils that test high or excessive unless the conditions at and immediately following planting are very adverse.

There are several important management considerations for starter fertilizer.



CORN TALK NEWS

PENNSYLVANIA MASTER CORN GROWERS ASSOC., INC.

The first consideration is the starter fertilizer material. Any good complete fertilizer which contains at least nitrogen and phosphorus will work as a starter fertilizer. Avoid materials containing urea. The physical form of the fertilizer, whether it is a blend, granulated complete fertilizer, or a fluid fertilizer does not make a difference in starter performance.

The second consideration is the rate of starter fertilizer. If the fertility level of a soil is good, then only a small amount of starter is required. Usually, 100

pounds of starter per acre is more than adequate. At low soil fertility levels the rate can be increased to meet more of the needs of the crop. However, the maximum rate should not exceed a total of 70 pounds of nitrogen plus potash applied per acre.

The final consideration is placement. The key to starter fertilizer performance is to place it where it is easily accessible by the limited root system of the seedling plant. Thus it should be placed near to the seed and preferably below the seed for best results.

Narrow-Row Corn Studies

(Continued from Page 21)

Compared to conventional rows, yields were increased by an average of 0.9 tons per acre when the population was increased in the narrow rows. As planting was delayed, there was an increased response to narrow row spacing. This may have been due to "improved light interception," based upon Penn State's findings.

This may be important in areas where corn is planted double-cropped after hay or barley, according to Roth.

According to Bob Anderson, Lancaster crops agent who participated in the study, narrow row corn planted later allowed the crops to canopy over earlier.

During the field day in August, growers had a chance to "eyeball" the crops to see the effects of the normal compared to the upright leafed hybrids and the effects of planting both conventional and narrow-row corn.

Research has found that grain yields improve generally by about 5 percent when using narrow row corn. Silage yields improve about 10-15 percent when using narrow rows.

In the studies, row spacing and plant population had no significant effects on forage quality.

The challenge facing growers, according to Roth, includes selecting the right types of planting and harvesting equipment.

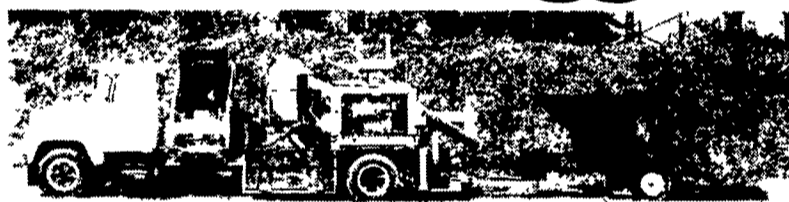
Anderson noted that it is relatively easy to obtain planters for narrow-row corn, but harvesting equipment is only slowly

coming into the hands of growers.

The large silage operators and the smaller custom harvesting businesses will be the first to see the benefits of

narrow-row corn, noted Roth. Roth noted that harvesting equipment technology is slowly adapting to the demand for use on narrow-row corn.

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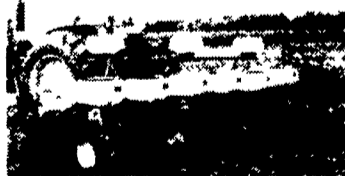
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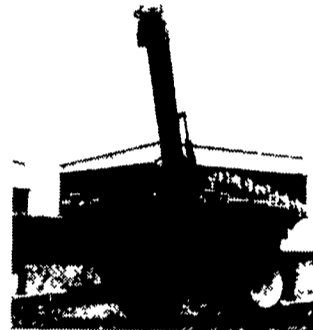
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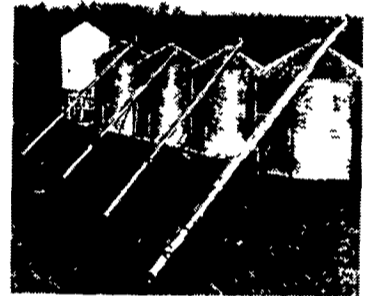
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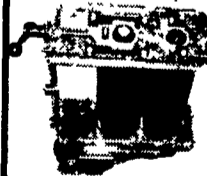
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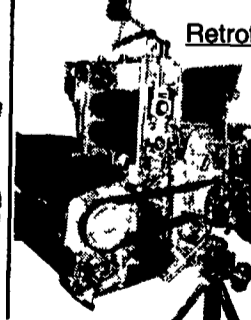
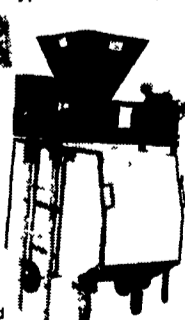
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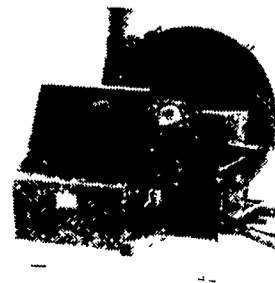


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