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R. L. Miller

University of Kentucky

George D. Corder

University of Kentucky

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FERTILIZER-INSECTICIDE MIXTURES ON CORN

Soil fertility and insects are major factors that affect corn yields. The proper kinds and amounts of fertilizers and insecticides properly placed will make corn production more economical on fields where either or both are needed.

Is a fertilizer-insecticide mix the best way to meet the fertility needs and the insecticide needs on corn? This method is not recommended and the following questions and answers should show how this decision was reached.

Soil Insects that Attack Corn

Soil insects may attack seeds, seedlings, and roots of corn. Seed-corn maggots, seed-corn beetles, and wireworms attack the seed, while corn rootworms, grubworms, and certain cutworms attack the roots. However, all these insects seldom are a problem in any one year.

1. What fields need insecticides?

Fields that have been in grass for 2 or more years are likely to be infested by several of the insects listed above. Thus, if grass sods are plowed for corn, soil insecticides should be used. Bottomlands and fields that have been planted to corn several years in succession will probably be infested with root-feeding insects and may need treatment.

2. What fields need fertilizer?

Most all corn land in Kentucky needs an application of one, two, or all three of the major nutrients (nitrogen, phosphorus, potassium) for the most economical production.

3. What insecticides should be used and at what rate?

Either aldrin, dialdren, or heptachlor will control soil insects in corn fields. The granular or liquid formulation of either compound will give equally good control when used properly. One pound of actual insecticide per acre placed above the seed in the row or 2 pounds actual per acre broadcast should give 2 to 3 seasons control of most soil insects. To be effective, soil insecticide must be disked into the top 3 to 5 inches of soil immediately after it is applied.

4. What fertilizers should be used and at what rate?

The kind and amount of fertilizers used on corn should be determined by a soil test and past cropping and treatment history. Thus, it is apparent that each field may need a different kind and a different rate. Treat each field according to its need.

Always Use the Recommended Amount of Insecticide-No More, No Less

1. Where should the insecticide be placed?

Insecticides used at the row should be placed in a band above the seed but below the soil surface to give good control of seed-and root-damaging insects. Insecticides placed in bands on one or both sides of the seed, on the same level or below the seed, will not protect the seed or young plants from insects. Row application needs to be applied each year.

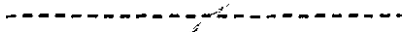
When broadcast applications of insecticides are made, apply the insecticide after the land has been plowed, and mix it with the top 3 to 5 inches of soil by disking immediately after application. Insecticides will not give satisfactory insect control when broadcast and plowed under. This practice will place the insecticide too deep in the soil and a thorough

disking will not distribute the insecticide evenly throughout the top 3 to 5 inches of soil.

Broadcast applications of insecticides should not be made every year but every 2 to 3 seasons in fields planted to corn 2 or more seasons in a row. Make row applications every year.

2. Where should the fertilizer be placed?

A row application of fertilizer on most corn land in Kentucky will give good results. When more than 50 pounds of nitrogen plus potash per acre is used at the row, place it in one or two bands 2 inches to the side and 2 inches below the seed to avoid harming germination. For placement use the side placement fertilizer applicator. When 50 pounds or less of nitrogen plus potash is used at the row, place it in bands on each side but on the same level as the seed without harming germination. The split-boot applicator gives this placement when operated properly. Part or all of the corn fertilizer may be broadcast and plowed down or broadcast and disked in with good results.



These questions and answers bring out the areas where time, rate, and placement of fertilizers and insecticides are not compatible. Thus, the Kentucky Agricultural Experiment Station does not recommend application of a mixture of the two materials.

R. L. Miller

George D. Corder