4-1968

# Fertilizer-Insecticide Mixtures on Corn

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UNIVERSITY of KENTUCKY • COLLEGE of AGRICULTURE

# AGRONOMY NOTES

DEPARTMENT of AGRONOMY ═══ Lexington 40506



Vol. 1, No. 10 April 1968

## FERTILIZER-INSECTICIDE MIXTURES ON CORN

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Soil fertility and insects are major factors that affect corn yields. The proper kinds and amounts of fertilizers and insecticides when used properly 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? The following questions and answers describe the practices where time, rate and placement of fertilizers and insecticides are incompatable.

### 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, these insects are seldom all 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 also need treatment.

2. What Fields Need Fertilizer and When Can It Be Applied?

Most all corn land in Kentucky needs an application of 1, 2, or all 3 of the major nutrients (nitrogen, phosphorus, and potassium) for the most economical production. Phosphate and potash fertilizers can be applied in the fall, winter or spring. Nitrogen should be applied at or near seeding time.

3. What Insecticide Should Be Used, How Much, and Where Should It Be Placed?

Either aldrin or heptachlor will control soil insects in corn fields. (Dieldrin is no longer registered for use on corn as a soil treatment.) Aldrin and heptachlor



Agricultural and Home Economics Extension Service of the University of Kentucky, the United States Department of Agriculture cooperating. W. A. Seay, Director. Issued in furtherance of the Acts of May 8 and June 30, 1914.

as soil applications at or before planting time on corn are registered on a temporary basis until Jan. 1, 1969 or until a residue tolerance is established. If corn is to be followed by soybeans, use heptachlor in preference to aldrin. The granular or liquid formulation of either compound gives equally good control. One pound of actual insecticide per acre placed above the seed in the row, or 2 pounds of actual insecticide broadcast per acre should give control of most soil insects.

Diazinon and phorate (Thimet) granules applied as row treatments at planting time or after emergence are effective in controlling corn rootworms that have become resistant to other insecticides. Apply at the rate of 1 pound actual insecticide per acre, or as directed on the pesticide label. Treatments of either of these insecticides give only 1 year protection, but the soil is not contaminated for use for rotation crops.

Di-Syston is a systemic insecticide for the control of corn rootworms, aphids and leafhoppers. As 10 percent granules or emulsifiable concentrate it can be applied at planting time, as a side-dress treatment, or as a foliar treatment. Do not apply Di-Syston to corn more than twice a season, regardless of the method of application, or within 40 days of harvest.

4. What Fertilizers Should Be Used and At What Rates?

The kind and amount of fertilizers to use 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.

5. Where Should the Fertilizer Be Placed?

A row application of fertilizer on some 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. When 50 pounds or less of nitrogen plus potash is used at the row, it can be banded on each side, but on the same level as the seed without harming germination. Part or all of the corn fertilizer may be broadcast and plowed down or disked in with good results. If corn is planted in sod (no-tillage), part or all the fertilizer can be broadcast on the surface or applied at the row.