

## Opportunities for Pesticides

BYRON T. SHAW, Administrator, Agricultural Research Service, USDA

THE OPPORTUNITIES I see for pesticides are—as you would expect—tied in with research. Some of these potentials can be achieved with only a little additional study. Others will probably take intensive and full-scale research. Here is my list:



Byron T. Shaw

One, farmers need effective controls for destructive pests that infest the soil. There is wide interest in chemicals that will control: various species of nematodes; insects such as the white-fringed beetle and southern corn root worm; and diseases such as foot rot in wheat and Texas root rot in cotton.

We've become more aware of the losses caused by soil borne organisms in the past five years. Tests with some of the new organics have reduced infesta-

tions and brought striking increases in yields. But we need to learn more about the effects of these chemicals on crops and soils—whether they accumulate in the soils or in the plants—what hazards, if any, they hold for human beings and livestock. Today's recommendations are limited by our knowledge.

Two, we need new materials and techniques for the control of range and grassland insects. The need becomes more urgent as we turn to improved grasslands. Today, insects are one of the main obstacles. We have no economic or effective controls for them.

Three, farmers are asking for new herbicides that hit the weed target like a rifle. They want chemicals that are specific for certain weeds. They would also like combinations of herbicides that will free a crop of a number of important weeds during the growing season. Experimentally, this has been done in sugarbeets with a combination of two herbicides.

Four, cotton growers across the Belt

would like a chemical that holds back regrowth after defoliation or desiccation. In the pink bollworm area this would enable growers to harvest late cotton. They can't do this now without risk to the control program.

Five, farmers want more combinations of pest control materials. They save labor when they can apply a number of materials in one treatment. One possibility in cotton is a combination of seedling protectants with a pre-emergence herbicide and a systemic insecticide.

In my opinion, the surest way to increase the use of pesticides is: first, to keep building our fund of knowledge of the nature of crop pests, the techniques that control them, and the "dollar-and-cents" value of using these techniques; and then, to keep growers continually informed of our findings.

The job of fighting crop pests is a big one. It will take pesticides and all other means we can develop through research to control them.

*Transcription of remarks by Byron T. Shaw before the National Agricultural Chemicals Association, Spring Lake, N. J., Sept. 8, 1954*

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