*Chart 8*

FIELD PERFORMANCE
AVERAGE $250,000

1. PESTS CONTROLLED
2. MINIMUM EFFECTIVE RATES
3. LENGTH OF CONTROL
4. EFFECT ON QUALITY
5. EFFECTS OF ENVIRONMENT ON PERFORMANCE
6. COMBINATIONS WITH OTHER PESTICIDES
7. PHYTOTOXICITY TO CROPS INVOLVED AS WELL AS VARIETAL DIFFERENCES
8. EFFECTS OF FORMULATIONS
9. FARMER DEMONSTRATIONS
   or
   EXPERIMENTAL SALES

*Chart 8—FIELD PERFORMANCE*—consists in the evaluation of the new compound on many species of pests over a wide range of crops. State and Federal workers carry on the major portion of this work load estimated to cost these Government agencies around ½ million dollars for the five-year period.

Cyanamid's average cost for maintaining technical field and supporting biological specialists during this phase—for that portion of their time devoted to one pesticide—is around $50,000 a year, or a total of $250,000 for the full five years. Our Animal Development Staff is responsible for investigating the use of pesticides on animals. Although they work through Experiment Stations, they also do considerable field evaluation work at Company test farms scattered throughout the United States. Here, answers are found for types of pests to be controlled, minimum effective dosage rates; length of time required for control; effect of the chemical on the quality of fruits and vegetables; such as flavor, color, appearance, and odor. Environmental factors such as temperature, moisture, and soil type are also tested for their effect on the chemical's performance. The way the compound acts in combination with other pesticides is also studied. Phytotoxicity to crops plus varietal differences are most important. Last, but certainly not least, formulations which will be used by the farmer must be examined in terms of all the above factors. For this reason it is desirable to develop an acceptable formulation as early as possible, since any drastic changes mean re-evaluating the whole field performance phase. During the last year of this program it is often desirable to test the new pesticide under farmer conditions, where timing and method of application may vary considerably from the ideal. This is usually accomplished through large scale field demonstrations or limited experimental sales.