THE OBSERVATION POST

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Crop Insurance and Crop Protection

PRUDENT PEOPLE CARRY INSURANCE. Most folks know that health, property, and crop insurance are essential protection against disaster. Such investments put realism into the expression "the Lord helps those that help themselves." And it doesn't cost much to do it.

Insuring Your Possessions

In recent weeks we had to renew some policies and used this occasion to make a few calculations and observations. It costs $12 per year to insure the automobile against fire, theft, and windstorm. These are factors over which car owners have little or no control although the element of negligence may sometimes be involved. It is more expensive to get protection against your own actions. Thus, it costs $15 for property damage liability ($5000) and $39.15 for bodily injury liability ($50,000 to $100,000). Spending an additional $90 for a $50 deductible policy will provide relatively complete but costly protection. Altogether, the cost of automobile insurance is about 6% of the value of the car if you want full protection, while the cost of fire, theft, etc. is less than 0.5%.

Extended coverage on real property or household goods in the District of Columbia costs about $1.00 per year per $1000 of insurance. That is only about 0.1% of the property value—not counting taxes paid to maintain alert and efficient fire fighting and police forces.

The preceding studies led to inquiries regarding the cost of crop insurance and crop protection. Farmers can obtain crop insurance against crop failures. They can also provide their own partial protection for crops by the use of agricultural chemicals. The former corresponds to a deductible type of policy and naturally is more expensive. It provides disaster insurance for specified crops in certain areas against drought, floods, windstorms, insects, plant diseases, and the like. The latter relates to the types of protection that alert and prudent farmers can obtain by the use of pesticides and other agricultural chemicals.

Crop, property, and automobile insurance have many similar characteristics. In each case, the cost depends largely on: (1) the incidence of hazards such as fires, accidents, or pest invasions; (2) available means of combatting such threats to home, property, or crops; (3) the investment in and nature of insured possessions; and (4) frequency of occurrence of "Acts of God" such as floods, droughts, windstorms, and others.

Federal Crop Insurance

The Federal Crop Insurance program provides basic protection of a specified amount of money that must be spent to produce crops. It protects the producer against loss of this money from unavoidable causes. It does not protect against avoidable losses (factors over which he has control) such as poor farming practices or neglect. It is not a substitute for good farming practices—in fact, the policy holder is obligated to carry out practices that have been established as economically sound in the face of threatened loss due to such causes as insect infestation. In the table below, are recorded some of the salient data pertaining to the 1951 program of the Federal Crop Insurance Corporation.

This type of insurance appeals to those who feel they could not survive a disastrous "Act of God." It is feasible only when carried out on a nationwide scale because a regional calamity could very well undermine a firm doing business in a limited area.

We come now to that segment of crop insurance which is of greatest interest to scientific workers—that is crop protection through the use of chemicals. Although man has only minor control over the visitations of insects and plant diseases, he does have at his command the chemicals to control these pests. Practically all farmers recognize the merit of using pesticides, but only the more progressive ones realize that they cannot afford not to use chemicals to improve both the quality and yield of crops.

Economics of Crop Protection

It is not easy to ascertain the cost of crop protection. It depends on the nature of the crop, the pests involved, the geographic location, the importance of quality of product, the number and kind of applications, the cost of pesticides, and other factors. Some years ago, during the days of the War Food Administration, the writer, in collaboration with Harold H. Shepard of the U. S. Department of Agriculture and Clyde Hamilton of Rutgers University, made a study of this subject. It was found that the cost of insecticidal sprays and dusts to the grower for protection of 44 million acres of crops subject to chemical protection was about $100 million or slightly more than 2% of the $4,657,340,000 estimated value of the crops. The actual annual loss due to insects ranges from 5 to 20% or more, depending on the crop. Without protection by pesticides, the estimated loss caused by insects on the subject crops would have been about $538 million or 11.5% of the value of the crops.

Crop protection by the use of chemicals can, therefore, be considered an inexpensive and essential form of insurance. The practice of using chemicals as a preventive measure in advance of presence of considerable number of insects is increasing. This is an encouraging trend which augurs well for the economic welfare of the farmer as well as the availability of adequate food, feed, and fiber supplies.

(In the next issue, Harold H. Shepard will continue this discussion.)

Crop	Approximate Premium per Acre	Maximum Indemnification per Acre	Ratio Cost % to Maximum Indemnification	Ratio No. Contracts to Indemnities	Loss Ratio
Wheat	$1.00	$12.00	8.3	3.2	1.04
Flax	0.80	8.00	10.0	7.0	0.49
Cotton	1.72	27.20	6.3	5.5	0.82
Tobacco	5.90	185.00	3.2	14.0	0.47
Corn	0.66	16.50	4.0	4.2	2.31