

**BIRDS EYE**



**GERBER**



**STOKELY**

**LIBBY'S**

**GREEN GIANT**

**DULANY**

**ATHENS**

## **Pesticide Policies of Food Packers**

**As growers and packers of foodstuffs cooperate more closely, packers issue definite specifications for growers' use of pesticides and fertilizers**

**A STAFF REPORT**

**C**ANNERS, frozen food packers, and other processors are tending toward a much closer cooperation with the growers who produce their raw materials. Close cooperation has been the rule for many major packers for some time, and it is becoming increasingly so for the medium- and smaller-sized packing companies.

Today most food processors issue definite recommendations to their cooperating growers—primarily those farmers under contract to the packer. These recommendations cover plant food needs, generally based on company soil tests, as well as spray and other pesticide application requirements. A few processors, particularly among the major packers, issue definite pesticide specifications which growers must follow; otherwise, their crops are rejected.

Several factors account for the trend. Basically, as one major packer points out, the processor must be able

to recommend sound growing practices to his producing growers. Certainly the provisions of the Miller Pesticides Amendment have made everyone far more aware of pesticide residue problems, and have resulted, to some extent, in more specific recommendations. However, the extent to which the Miller Amendment is responsible for this growing trend is a matter of differing opinions.

Many packers specifically cite the legislation as a major reason for their residue awareness. There is no doubt that it did lead directly to crash programs for developing and adopting good residue test procedures, lack of which was a severe handicap in past years. Bioassay residue test methods are now standard operating procedure throughout the major part of the industry.

However, many others in the industry do not feel the legislation changed their residue analysis work or general

concept. Some of these companies had followed the problem of insecticide residues quite closely for a number of years, and even prior to the discussions leading to the Miller Amendment had maintained strict policies with respect to pesticide applications on contract crops. Many feel that as a business necessity proper practices were largely followed before its enactment. But there is no doubt that this law has brought great progress in making the grower, as well as the packer, aware of the responsibility he must share in using the various insecticides, fungicides, herbicides, and other agricultural chemicals.

The problem of residues is by no means the only reason for the closer relationship between processors and growers in their approach to pesticide decisions. The possibility that pesticides may induce abnormal or off-flavors in the processed product has always been of paramount importance,

## CAL PACK



## CAMPBELL

## BEECH NUT

## SEABROOK FARMS

and today it is checked thoroughly before any change in pesticide usage is recommended. Some fertilizers as well as pesticides have been shown experimentally to affect flavor. All concerned agree that a closer relationship between grower and processor helps solve this problem.

### **Who Does What?**

In each processor-grower cooperation setup, there are several key personnel. The representative who maintains direct contact with the farmer is the company field man. Generally he obtains the soil samples (unless the farmer submits them himself), and personally delivers the company recommendations to the contract farmer. Usually the field man has a farm background himself; today more and more have formal technical training in the state universities and agricultural colleges. Each goes through some sort of company training program, often under the direct supervision of an experienced field representative. In the major companies, the new field man will normally have a brief stay at the firm's test farm and testing laboratories.

Company policy on field men varies from place to place. In most cases they are responsible for several dozen farmers in large-acreage farm areas, or a proportionate amount of acreage

in other areas. Campbell Soup widely advertises the fact that it has 67 field men who "keep an eye on every growing field."

However, the field man generally does not decide what recommendations he should pass on to the farmer. In almost all of the larger companies, and many of the medium-sized concerns, this decision is in the hands of a technically trained, experienced individual; director of research, director of agricultural research, director of farms, horticultural research manager, and divisional research manager are a few of the titles of those responsible for such decisions. Their recommendations are based, naturally, on the experience and test results of their technical staffs.

This is seldom the case with the smaller processors, most of whom do not have company research staffs and laboratories. Their field men get the information from technical personnel at the state agricultural experiment stations, from extension specialists, professors at the agricultural colleges, and county agents. Considerable help comes from bulletins and other publications. There has been a trend in some sections toward wider use of consulting organizations, and toward formation of cooperative research laboratories by the smaller processors. Naturally experiment station informa-

tion is available to the larger packers as well, and is often widely used.

Following the testing of a contract grower's soil samples, the field man is provided with a laboratory report showing the soil analysis and the company's recommendations for plant food. The grower generally does not have to be convinced—by now most farmers realize that test farms, whether operated by the processor or the Government, have vividly demonstrated the dollar advantages in proper plant food use.

Captions for photos above, from left to right:

1. Beech-Nut field man examines produce in contract grower's field
2. Food processor's field man (right) keeps constant check on progress in contract grower's field
3. Beech-Nut field man checks nozzle on sprayer before application of insecticide to contract field of broccoli
4. Another example of how closely processors' field men watch the contract acreage for which they are responsible

**THE G. L. F.-SEABROOK FARMS RAW PRODUCTS RESEARCH DIVISION,  
Soil Report**

Grower's Name..... J. Allen ..... Date..... February 10, 1955.....  
Address ..... Via ..... Contract..... Ewing.....

Laboratory No.	1557															
Field or Sample No.	1	2	3	4	5											
Soil Texture																
Crop to be Grown	Asp.	Lima Beans	Alfalfa	Lima Beans	Oats											
Cover Crop	-	Barley	-	Rye	-											
Manure Available	(				No											
% Organic Matter	0.7 P	1.5 G	0.9 P	0.8 P	1.7 G											
pH	6.4 G	6.5 H	6.2 G	6.5 H	6.5 H											
Calcium*	1100 G	1350 G	1100 G	1100 G	1350 G											
Magnesium*	95 F	155 G	105 G	100 G	180 GG											
Limestone Recommended (Lbs. Per Acre)	<table border="0"> <tr> <td rowspan="2">                 Dolomitic High Calcium             </td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					Dolomitic High Calcium	-	-	-	-	-					
Dolomitic High Calcium	-	-	-	-	-											
Soluble Nitrogen*	9 P	3 P	5 P	5 P	7 P											
Phosphorus*	29 G	13 F	17 G	19 G	14 F											
Potassium*	105 G	65 F	130 G	70 F	60 F											
Fertilizer Recommended (Lbs. Per Acre)	5-10-10 2000	4-12-16 1000	0-20-20 800	4-12-16 1000	5-10-10 500											
Other Additions	1/2 after cutting		with borax													
Remarks																

\* Reported in lbs. per plowed acre. P = Poor, F = Fair, G = Good, H = High.

A portion of the detailed diagnosis of his soil received by contract grower from Seabrook Farms

Taking a soil sample on one of Seabrook's own fields



The pesticide picture is far more complex. Most processors issue detailed spray schedules including application date, amount, and type of material. Some major packers make it a definite requirement that the growers adhere strictly to these schedules. Many field men, as part of their job, regularly check the growing fields, as often as weekly, making sure that recommendations are being correctly followed. Over-application of pesticides can lead to rejection because of residues; insufficient application may lead to a low grade crop or to rejection due to insect damage or content. The farmer is naturally interested in his crop; he wants to know the best fertilizer practices and the proper kind of pesticide to use to get optimum results. The application of chemicals, particularly herbicides, can be a touchy business, and is often supervised by the field man.

Washing off residual pesticide is not always practical. Most processors have strong quality control programs and regardless of intended washing operations reject incoming materials with residues above FDA tolerances. Many processing companies which routinely check crops for residues will drop a grower permanently if their tests turn up anything harmful that can be traced back to the grower's not following recommendations.

The major packers advise pesticide formulators and distributors in their areas concerning their intended recommendations for the coming season. Some packers set up standard formulas which they have tested and recommend. Usually the distributor will formulate a product to meet the packer's specifications.

Generally speaking, most processors try to provide the brand names of all products known to be suitable when making a recommendation. However, when there is only one producer or brand name for a specific formulation they do not hesitate to suggest its use. In many cases, packers find it easier simply to tell a grower to use "A" fertilizer mixture or "B" pesticide formulation, rather than give a chemical name, but some are reluctant to do so.

Almost all packers are willing to help the grower finance his pesticide purchase, if he desires to follow the recommended practices and cannot otherwise arrange credit. Either the packer makes payment or guarantees it to the chemical distributor or custom applicator. In many cases the smaller packer is also a grower himself and will arrange to do the spraying. This is particularly true in those areas where the growers are small and it doesn't pay each to buy his own equip-

ment; but it is significantly true in other areas as well. The price of the application in any of these cases is charged against the crop.

Many packers go further, buying the agricultural chemical and reselling it to the farmer at or below cost. In at least a few major cases the packing company has complete control. As one put it: "Insecticides and fungicides are pretty well determined by the company since in most cases we pay for the complete cost of these applications." This is not the usual case, but it may indicate the beginning of a trend.

Certainly it is true that packing companies rigidly follow their laboratories' recommendations on their own land—and there seems to be a trend toward more and more processors' doing a major part of their own farming operation, usually by leasing the land. This trend will continue, provided no federal or state laws are forthcoming to prohibit or severely regulate the practice of corporation farming. It would seem to be a natural projection of the older trend toward more and more contract farming, as a way to avoid buying on the open market where the processor has little control over pesticide application practices. There is no unanimity on this subject; several powerful packers feel this trend will not be felt in the immediate future.

In any event, the packer influence will become more complete, as the grower-processor relationship continues to move closer in the area of agricultural chemical decisions. There is little likelihood, however, that processing companies will start formulating

**New pest control chemicals are often put through the paces before being put on the market at test farms maintained by food processing companies**



pesticides on a large scale. To a limited extent this practice was undertaken a few years ago, but the trend has been toward dependency on the chemical companies and the many highly qualified and equipped formulation plants existing today. The feeling is that the people now in the field can do a far more complete job than the processor. However, as one put it, "we prefer to give the manufacturer our specifications and have him supply them. On the other hand, if the manufacturer will not cooperate we would not hesitate to make other arrangements."

There is, *AG AND FOOD's* survey indicates, a need to be filled in the marketing of agricultural chemicals, in view of the closer influence of processor upon grower. Closer ties are needed among the processor, the state universities, the industrial research departments, and the production heads in industry. The value of meetings, conferences, visits to packer laboratories, experiment stations, and the colleges cannot be overestimated. As one major packer put it, without university backing, an organization cannot expect much prestige.

Many agricultural chemical manufacturers cooperate with major packers in joint programs for testing new pesticides. Having proceeded in this way the processor is ready with its recommendation when the new product hits the market, and the chemical supplier has a good idea of how its new development will be received, and of the potential market for it.

The food processing market is considerable. In 1956, national production of vegetable crops for processing set new records; the USDA 10-vegetable crop total for processing exceeded 8.25 million tons, on harvested acreage of 1.80 million acres. The value of the crop was \$315 million. The ten vegetables included asparagus, and the nine cited below.

Latest USDA acreage-marketing guides, issued Feb. 4, 1957, indicate an 8% drop from 1956 in recommended acreage for vegetables for commercial processing (summer and fall). Nevertheless, the acreage is considerable—estimated at 1.63 million acres in lima beans, snap beans, beets, cabbage (for kraut), sweet corn, cucumbers (for pickles), green peas, spinach, and tomatoes. This figure includes only the acreages of these crops intended for processing.

Shell Chemical's F. W. Hatch estimated at the Atlantic City ACS meeting last fall (*AG AND FOOD*, December 1956, page 987) that two thirds of the total domestic pesticides sales are for agricultural market. The end-use pattern of agricultural pesticides in 1955 shows fruit and nuts taking

The following is a brief summary of the major packers' policies:

*On Pesticides*

25% specify, 50% recommend, 25% assist

*Key man in pesticide decisions*

Director of Farms, 20%  
Director of Research and various other research staff members, 70%  
Others, 10%

*Credit?*

30% purchase and distribute or apply pesticide (with credit)

20% extend credit or guarantee payment for pesticide

50% do not or prefer not to extend credit

To bring you this special report *AG AND FOOD* surveyed most of the major processors, and a significant number of the smaller packers, as well as many of the grower and processor associations. Complete anonymity was promised the participants and has been kept in the report.

22%; cotton, 15%; vegetables and melons, 7.5%; small grains, 9%; livestock and buildings, 4%; tobacco, 3.5%; farm pasture, 3.5%; miscellaneous crops, 15%. Thus, 37.5% of the total agricultural pesticide market is in fruit and nuts, vegetables and melons, and corn. A large portion of these commodities is raised for processing.

What will the future bring?

- Growers are going to adhere more closely to processors' suggestions, as both realize they'll all lose money under any other arrangement
- There will continue to be a further and more rapid breakdown in the long-standing mutual distrust between grower and processor
- There will be less hedging on spray applications near harvest time
- There will probably be more custom services performed by the processor for the grower
- There will be a lowering in percentage of open market purchases for processing with a consequent increase in contract acreage
- There will be an increase in crop raising by the processor, either on lease or directly
- The processor will exert a still greater influence on agricultural chemical and plant food purchases.

As one of the leading associations put it—"the grower-processor relationship will continue to become closer. After all, they are actually partners."