

going to be increasing their shipments to the U. S.

Indications are that there may still be a temporary oversupply of potash in 1957, when a situation similar to that outlined for nitrogen, (AG AND FOOD, March, page 187) might develop. The fertilizer industry consumes from 90 to 95% of potash production and there may be a time lag between the full production of the potash producers and consumption by the fertilizer industry. The year or two of possible surplus will probably be ended by 1960 when all present and projected production of the Carlsbad area should find a ready market.

Presence of Phillips in Farmers Chemical should work out to mutual advantage of both groups, with Phillips producing all three major fertilizer ingredients and Farmers Chemical probably marketing some of its production through the Farmers Union which may go into fertilizer business.

The big five of Carlsbad may well be a big seven by 1960, and indications are that the newcomers will not be the smallest members.

Ag Chemicals Prospects

Outlook for the industry's future is good, but leaders admit business practices need improvement

BUSINESS APPEARS to be getting better in the agricultural chemicals field but isn't being handled very well. Leaders were emphasizing the second point at the industry's trade association meeting in St. Louis last month, while the tenor of the meeting held a noticeable amount of guarded optimism. Some of the problems that continue to be tough were emphasized by National Agricultural Chemicals Association's president William Allen, of Dow Chemical:

(1) Public Education—"No manufacturer, on grounds that he is small, or late to enter the field, or just because he has no inclination in that direction can excuse himself from a share in this responsibility."

(2) Industry Information—"Manufacturers who are considering whether to enter or leave the production of some item have, at present, no way to determine whether existing plant capacity is adequate with respect to possible markets."

(3) Credit Policies—"Credit is an indispensable part of the conduct of

modern business. Yet there comes a time when operation of unusual credit systems becomes a greater burden than the production and distribution of chemicals." Emphasizing that he was not suggesting industry use a stiff-arm on dealers and distributors, Allen obviously was taking a whack at consignment selling which has become a plague on the industry.

An even sharper blast at the industry's business practices was let go by John Gillis, Monsanto's marketing vice president. He offered some basic commandments: "First, 'thou shalt make a profit.' Second, 'thou shalt study thy costs so thou wilt know a profit when thou seest it.' Third, 'thou shalt not covet thy neighbor's profit.' " The third was no encouragement to price fixing, merely elementary advice to go after competitors hammer and tongs, but not to be suicidal in eagerness to grab his business in a price war.

Is the Market Potential Holding Up?

Always important to the pesticides industry is the farmer's buying power. The NAC group heard from Fred V. Heinkel, president of the Missouri Farmers Association that the prosperity of its \$400 million industry might take a beating if something better isn't done for the farmer. The average price of farm products has gone down 25% since 1951, he declared, and many farmers have left the farm while others have gone broke. He proposed a federally supported food-stamp plan to get rid of farm products surpluses by giving them to low income groups, school lunch programs and other social institutions.

True Morse, Undersecretary of Agriculture, presented a different story in pointing to a rise in farm equities last year from \$144 billion to \$145 billion, while debt remained about the same. He argued that debts of \$17 billion with assets of \$162 billion present a strong position and clear evidence of the financial soundness of agriculture. Furthermore, the need for more and better agricultural chemicals hasn't abated. Morse still rates the loss to crops, pastures, ranges, livestock, and products at \$13 billion a year, with help more urgently needed every year as agriculture becomes more businesslike.

Products Getting Better, But Costs Up

The industry is by no means at a standstill on product development. Actually, the pace is so fast that some are concerned about the risk of the investment required to get into the market in the face of rapid obsolescence. But there is evidence that the old standbys are not dead (10 years is old among organic pesticides) as is seen

in weedkiller 2,4-D's sales of 23,175,000 pounds last year.

Some of the more impressive facts make the picture look lucious. But as Du Pont's Arne Carlson pointed out, it takes a lot of doing and spending. Du Pont's bill in effort and money to get its first substituted urea on the market commercially: "more than four years of concentrated laboratory and field work, preparation, and testing of more than 700 related compounds, and a research expenditure of about \$2 million." NAC president Allen estimated that the costs of discovery and development of a new chemical easily can run to \$1.5 million.

The latest concrete addition to the cost is one of meeting requirements of new control legislation, the Miller amendment to the federal Food, Drug and Cosmetic Act. The new legislation, to go into effect July 22, requires establishment of residue tolerances on any pesticides to be registered for use on food crops. This will mean companies will need to present to the Food and Drug Administration scientific data collected for their products in defense of suggested tolerance levels.

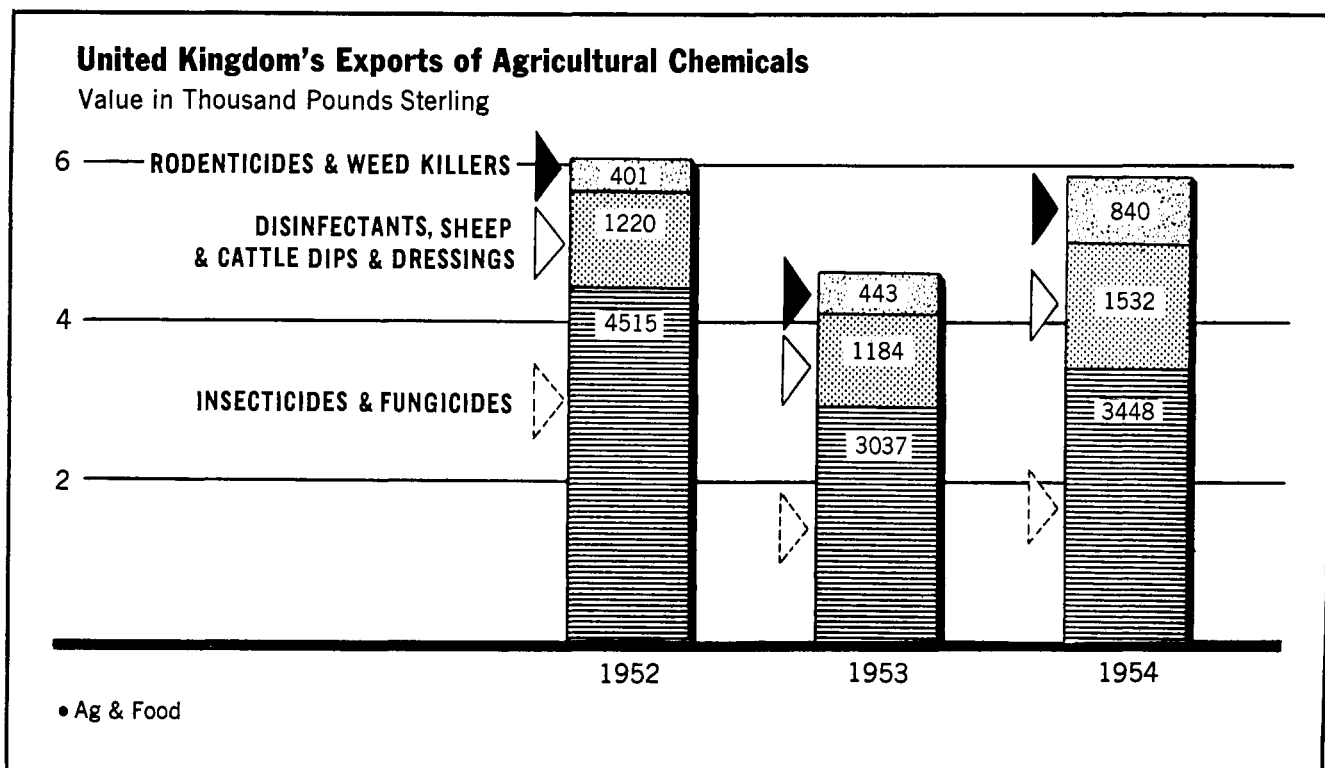
Questions submitted following a panel discussion of the bill and its administration at the St. Louis meeting were extensive and varied, the question period lasting well over an hour. One of the toughest problems is how to cope with the matter of zero tolerance, which has been set by the Department of Health, Education and Welfare for some compounds.

Despite some crying, the high cost of staying in the game, and the harm that has been done the industry by some careless business practitioners, the general tone at the meeting was optimistic. One oldtimer declared it the best meeting since San Francisco (1952). Another very active and very well informed figure, commenting that the picture looked bright at the moment, ticked off names of active industry members from almost every section of the country absent from the meeting and opined confidently that they were just too busy.

British Exports

1954 shipments of Ag chemicals from U. K. up 25% over previous year . . . Exporters mainly larger companies with world-wide connections

BRITISH MANUFACTURERS of agricultural chemicals increased the value of their exports last year in spite of keen



foreign competition. Statistics now available show a good recovery from a lean 1953. The value of agricultural chemicals (not including fertilizers) exported last year was up 25% over the previous year. Biggest gains (86%) were registered for shipments of rodenticides and weed killers.

A major proportion of these exports are going to Commonwealth countries, but South American and European markets are slowly opening up. The under-developed areas of Southeast Asia offer a potentially large market. Most companies polled say sharpest competition for new markets is coming from American producers, but German competition is increasing in South American, European, and Middle Eastern areas. One producer of DDT reports a severe price battle with Italian manufacturers. The Swiss and the French are also offering some competition, particularly for specialized products.

ICI Company

Today, basic manufacture of agricultural chemicals in the United Kingdom is in the hands of relatively few of Britain's larger chemical companies. The largest, ICI, got into the agricultural chemicals business several years ago, when it acquired control of Plant Protection, Ltd. Plant Protection is now exporting a complete range of insecticides based on BHC, lindane, parathion, and DDT. The company is also pro-

ducing for export weed killers, fungicides, and seed dressings. Weed killers are MCPA, 2,4-D, and 2,4,5-T formulations; fungicides are based on cuprous oxide, TMT, and salicylanilide; and seed dressings are formulations of organo-mercurial, lindane, and TMT. Approximately 50% of the total value of Plant Protection's business now goes to the export trade, principally to Commonwealth countries.

One of the Britain's largest EHC producers is ICI's general chemicals division. The range of products exported by this division are trade-named Gammaxane and include an insect powder, a dispersal powder, an emulsion concentrate, and smoke generators.

Monsanto Chemicals, Ltd., is producing 2,4-dichlorophenoxyacetic acid and its sodium and amine salts, as well as pentachlorophenol. As much as 90% of Monsanto's production of 2,4-D products is being exported and the company is now expanding production in this field.

Commonwealth Countries Take DDT

Hickson & Welch is exporting 50 to 100 tons per annum, or about 30% of total U. K. exports, of DDT. Principal markets are Australasia and other British Commonwealth countries. The company is also producing for export DNOC and the ammonium salt of DNOC, as well as pentachloronitrobenzene and small quantities of a new range of prod-

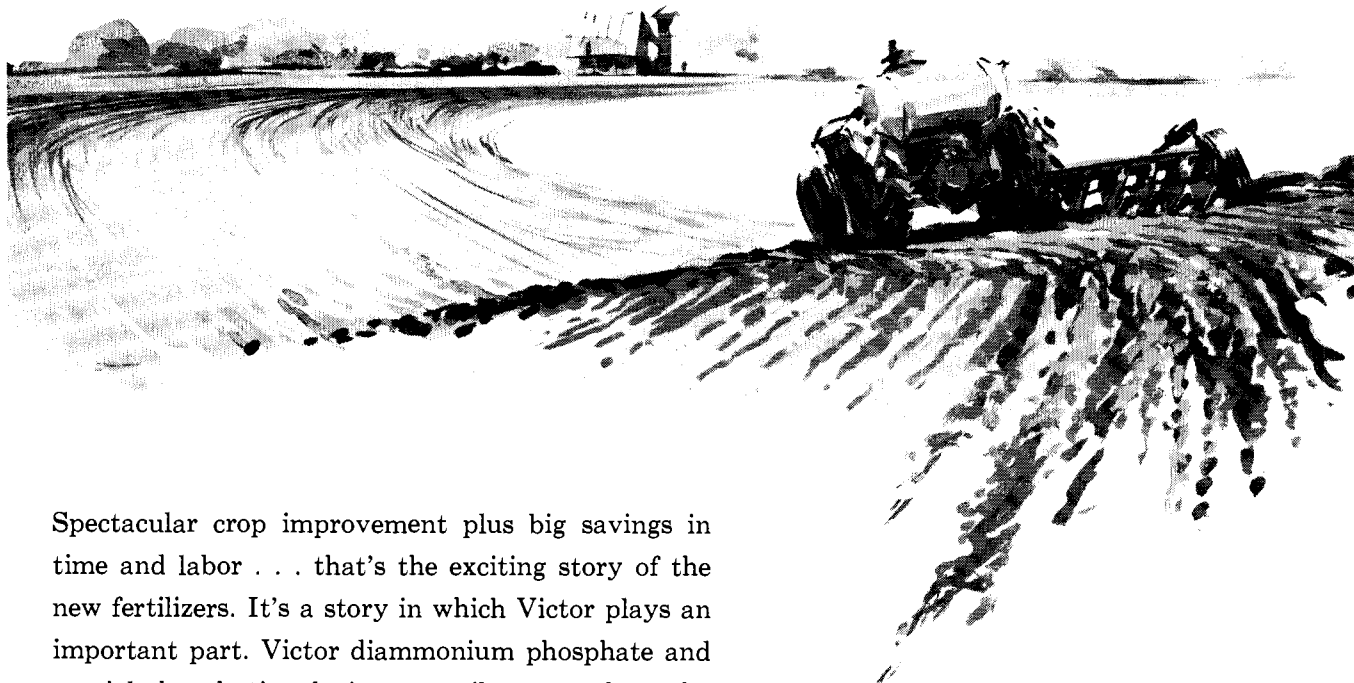
ucts for the control of red spider. Company officials point out that competition in the sale of DNOC in Europe is now severe and British manufacturers are experiencing difficulty, due to the comparatively high price of *o*-cresol in the U. K.

Principal exports of F. W. Berk & Co. are organo-mercurial seed dressings and various formulated sulfur fungicides. Value of these exports is currently running as high as £100,000 per year. The biggest market is Canada. Berk's expansion plans lie in introducing combinations of mercury with other fungicides such as copper, for which it foresees enormous potential markets.

Principal exporter of sheep and cattle dips and disinfectants is Britain's Cooper, McDougall & Robertson. Over 50% of the company's U.K. production is exported. The company has associates or branches in Australia, South Africa, East Africa, Argentina, Uruguay, United States, France, Eire, Colombia, Brazil, and New Zealand. In the first eight of these areas all or part of their range of products sold were manufactured locally.

Fisons Pest Control exports both services and supplies. Since 1945, Pest Control has offered helicopter spraying service; today its spray-copters and -planes operate from Scotland to Ceylon. A phenoxylene plant designed to produce over a million gallons of hormone weed killer annually, was completed last year near Cambridge. Other export products include a DNOC formulation, Pestox, and Blitox. Biggest markets are

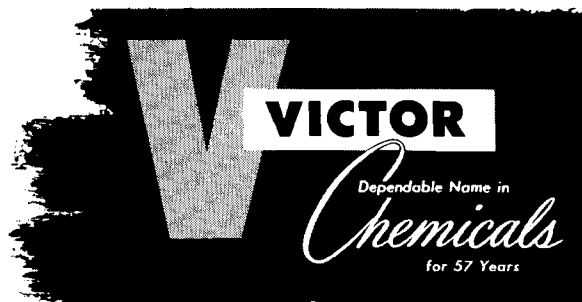
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British Empire and Europe. Company is contemplating expansion of production facilities for its copper fungicide, Blidust. In the latter product, copper oxychloride is coated on the outside of the particles of calcium carbonate filler, ensuring even distribution of the active ingredient.

Pharmaceutical Concerns

Companies that in previous years were only producing pharmaceutical products have now expanded into the agricultural chemicals field. Case in point: Boots Pure Drug Co. In the ag chemicals field, Boots' principal product is its acaricide, trade-named Chlorocide, a formulated product containing 20% *p*-chlorophenyl *p*-chlorobenzyl sulfide. Boots is also exporting insecticides based on colloidal copper, mercurials, and colloidal sulfur. Biggest single market for these products is Australia.

Another pharmaceutical manufacturer May & Baker, has recently introduced a new selective weed killer, MCPB (γ -4-chloromethylphenoxybutyric acid). M&B officials are reluctant to comment on the export potential of this particular product, or of any of their range of agricultural chemicals. However, if field trials this year bear out preliminary tests, MCPB will undoubtedly become an important product for export.

British capacity today is no match for American production, but people in the agricultural chemicals business there are determined to capture their share of new export markets opening up throughout the world.

Food Additives Bills

Legislation now in the hoppers favors strong FDA powers with little recourse on the part of additives manufacturers

FOOD ADDITIVES LEGISLATION hearings will be under way again before midyear. The pattern of legislative action is shaping up with the proponents of legislation discouraging to food additives once again ahead of other interested groups in the drive to advance points of view.

As yet there is no bill before Congress representing the viewpoint of the chemical industry. There are three major bills in the Congressional hoppers, introduced by Congressmen Delaney (D.-N.Y.), O'Hara (R.-Minn.), and Priest (D.-Tenn.) Hearings before the Health and Science Subcommittee, of which Priest is

chairman, appear likely to start by late May or early June. The three bills proposed all would increase the authority and responsibility of the Food and Drug Administration in the question of food additives, giving the commissioner a quasi-judicial power over the ingredients to be used or added to the national diet. Controversial point: the great amount of authority given to the Department of Health, Education and Welfare in deciding whether a proposed additive is safe.

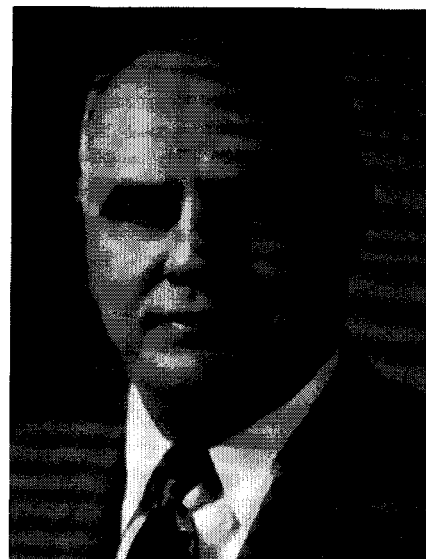
On the safety issue, the food processors may find that they will have to deal with the sort of problem the pesticide manufacturers are now facing with "zero tolerance" concept in the Miller pesticides bill. Scientists are left in a hopeless position on the possibilities of proving absolutely the complete harmlessness of a material (AG AND FOOD, March, page 191). They ask: "Is the lack of evidence that a material causes harm a proof of harmlessness?" Some research men say "harmlessness," "no detectable concentration," and "zero tolerance" are not in their idea of definitive legislation.

The three bills in Congress in late March would give the Commissioner of FDA the responsibility for the final decision as to whether or not a material can be added to a food. They offer no recourse for a manufacturer who wishes to argue that the FDA decision has been arbitrary, nor is there any formal procedure for a manufacturer to object to the Commissioner's decision.

Another bill may be on its way to Congress shortly. This bill is expected to contain provisions which would shift the basis of decision on safety from one of harmlessness to one of harm. Under the proposals embodied, the mandatory pre-testing of the other bills would be re-

Congressman Priest (D.-Tenn.)

Heads committee that will hear testimony on food bills



Congressman O'Hara (R.-Minn.)

Once again author of food additives bill

tained, but if the FDA turned down an additive, the manufacturer could go to court to require the FDA to show why the proposed material should not be used. The FDA would have to show that the evidence presented was insufficient to show safety.

Such a modification would overcome the logical question as to how it is possible to prove conclusively that a product is harmless and would give a sounder ring to the requirements. Salt, for example, is a poison to the human body if not used properly.

The Delaney Bill demands that any material used as an additive in food be a necessary constituent. It includes within the definition of food additive any chemical used in processing, packaging, transporting, or holding food. The bill also requires the manufacturer to present data on the acute and chronic toxicity and the capacity for harm of every chemical additive, apparently presuming that every additive must be harmful.

The Priest and O'Hara bills would include any chemical likely to become a component of food, including chemicals used in manufacture, wrapping, or packaging.

The legislative picture is not yet complete. Congressman Miller (R.-Nebr.), author of the Miller pesticides bill is now at work on a food additives bill which should be in the hopper any day and others may follow.

To add to the weight of backing for strong final authority on the part of FDA, a bill recently was introduced by Congressman Hale (R.-Me.) dealing with cosmetics, which is very favorable to the FDA Commissioner's powers. The bill apparently has the backing of a strong segment of the cosmetics industry.