

feet. In a lab experiment, using a polyethylene ground cover, one part of methyl bromide to 30,000 parts of soil gave 100% control for a two-foot depth.

Sweet corn wilt, spread by the corn flea beetle, was a serious problem last year, declared Haenseler. The most successful attempts to control the disease have been through the control of the carrier. DDT dust or spray is suggested when the first leaves unfurl.

Use of agricultural chemicals on forage crops is increasing and is being encouraged, according to R. S. Filmer. Spraying forage crops, even last year when infestation was not particularly severe, resulted in an average crop increase of almost 30%. For the greatest efficiency, the fields must be examined closely to determine the best time for spraying. For example, the number of spittle bugs in a field may be estimated by the wild carrot, which has a wide distribution in New Jersey and seems to be a favorite plant for this insect.

The speed of various insecticides varies widely and must be taken into account in evaluating their effectiveness, Dr. Filmer told the dealers. Lindane and oxychlor are fast killers, and dead insects may be observed within a half hour or so after application. Other chemicals, such as technical chlorinated camphene, are slow, and results may not be observable for several days. Farmers must realize that the slow acting chemicals may have a longer lasting effect than the others, and be more economical in the long run.

Parathion is not being recommended this year on the apple spray schedule, because it is suspected of impairing finish and lowering the efficiency of fungicides. Neither of these charges has been definitely proved, declared B. F. Driggers. The effect of dieldrin on finish is also in question, and methoxychlor and lead arsenate are to be recommended for curculio control.

Two spray schedules may be recommended for peaches in 1954. The Parathion schedule is considered more effective for the control of curculio, scale mites, and oriental fruit moth. The alternate consists of two benzene hexachloride treatments and a final spray with lead.

Peach Canker. Peach canker is becoming a serious problem in New Jersey, reported R. H. Daines. This disease attacks mostly the current season's wood, at the bud region. Another fungus frequently follows, infecting the healthy wood on each side of the canker. If the first fungus infection doesn't kill the branch, the second almost certainly will. Monocalcium arsenite, Bordeaux, and oil give good control of peach canker, Daines said. Ferbam, which is also used

for peach leaf curl control can also fit into the canker schedule.

Variations in varietal response may cause some changes in the recommendations for control of apple scab, warned Dr. Daines. A combination of Captan or Crag 341 with a phenyl mercury fungicide will probably be recommended. Carbamates were found to be weak in last year's severe attack.

Fly Control. Bad sanitation can make the best chemical fly control ineffectual, said E. J. Hansens. Malathion plus sugar, lindane, and methoxychlor are recommended for houseflies. If these chemicals do not give complete control, space sprays containing pyrethins or allethrin plus synergist are an alternative. There are many places where DDT-, lindane-, or methoxychloro-resistant flies do not exist, and these materials will give the best and cheapest control in farm buildings. Diazanone, manufactured in Switzerland, gave six to eight weeks control with a 1% spray, but the material will not be available in this country until next year.

Although Lindane is relatively expensive, it may be more economical to use on poultry pests in the long run, since it controls poultry mites, lice, and feather mites. Some less expensive chemicals do not have the same range, and so may be more costly.

Chickweed. Chickweed, the major weed pest throughout central and southern New Jersey alfalfa fields, is becoming an increasing nuisance in the northern half of the state. A new alfalfa stand was reduced 30% in places where chickweed was not controlled. Yield increases of a half to three quarters of a ton per acre have been obtained when chickweed control was practiced.

The dinitros (4,6-dinitro-*o*-sec-butylphenol), Chloro-IPC (isopropyl-*N*-3-chlorophenyl carbamate), and IPC (isopropyl-*N*-phenyl carbamate) have been most satisfactory for chickweed control. The ammonium and amine salts and the parent acid of the dinitro are being used.

Chemical Residues. Since there are no residue tolerances on the new organic insecticides, it is important that the farmer utilize proved materials and apply them according to application schedules which will result in the lowest possible residue levels at harvest. B. B. Pepper pointed out that in some instances it might be more appropriate to accept some insect injury and maintain a low chemical residue level.

Early experience with some of the organic chlorinated compounds clearly demonstrated that improper use of these materials could result in a very undesirable quality of food, particularly with some of the root crops. At the present time, research indicates that a great majority of the insecticides used experi-

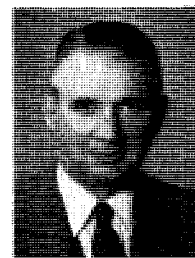
mentally give a flavor difference between treated and untreated crops, declared Dr. Pepper. The formulation of the insecticide, especially solvents and possibly emulsifying and other conditioning agents, may affect the quality of the crop.

There is also a relationship between taste and quality of fruits and vegetables and the fertilization program, soil types, irrigation, and weather conditions. There may be a correlation between plant nutrient levels and insecticide applications on the flavor changes, Dr. Pepper said.

Industry

Shell Chemical Forms Ammonia Division

Shell Chemical Corp. has announced formation of a new ammonia division with headquarters in San Francisco. The new division will handle manufacture, distribution, and sales of ammonium sulfate, ammonia, and related products for agriculture and industry.



George Monkhouse

George Monkhouse, vice president of Shell, will head the division. L. M. Roberts, general manager of manufacturing in Shell's New York headquarters, will go to San Francisco as the division's operations manager in charge of manufacturing, distribution, and marketing engineering.

Mr. Roberts will be in charge of the company's two ammonia plants—the older one at Pittsburg, Calif., and the recently completed one at Ventura, Calif. (AG AND FOOD, Dec. 23, 1953, page 1184).

V. C. Irvine has been named sales manager of the ammonia division.

R. C. McCurdy, president of Shell Chemical, said the decision to put all phases of the company's ammonia business under a unified management was made in view of the growing demand for ammonia fertilizer.

Reorganization of Monsanto's Inorganic Chemicals Division

More details on the reorganization of Monsanto's new inorganic chemicals division, which incorporates the company's former phosphate and Merrimac divisions, have been announced by the general manager, J. L. Christian.

Four operating departments—develop-

ment and engineering, production, sales, and research—have been formed to carry out the division's functions. All of the departments will be located in St. Louis, except for the research department which is to be located in Everett, Mass.

Department heads are: John R. Eck, development and engineering; H. F. Weaver, production; Erwin G. Somogyi, research; and Tom K. Smith, Jr., sales. Russell L. Jenkins, who has been director of phosphate division research, will continue to report to the division general manager at St. Louis as director of science for the inorganic division.

Niagara Chemical Ups BHC Prices

Niagara Chemical Division of Food Machinery & Chemical Corp. has increased the carload and truck load prices of technical grade benzene hexachloride, 14% gamma, to 9 cents per gamma delivered. Less than carload shipments take the carload price plus 1 cent per pound.

"These increases have been made to bring prices more nearly into line with increased raw material and distribution costs and to permit us to continue our comprehensive service to consumers," J. V. Vernon, president of Niagara Chemical said.

General Mills Plans Subsidiary for Canada

General Mills has announced plans to enter the Canadian market with a subsidiary headquartered in Toronto. A packaged foods plant is to be constructed on a fifty-acre tract in the Toronto area.

Feed Grade Dicalcium Phosphate Made by Monsanto in St. Louis

Production of 21% feed grade dicalcium phosphate by Monsanto Chemical's Carondelet plant in St. Louis started Dec. 15, it is announced.

Tom K. Smith, Jr., general manager of sales for the phosphate division, said the added capacity will in no way affect the present production of feed grade dicalcium phosphate in both the 18 and 21% strengths at the Trenton, Mich., plant. Production at both plants will be of the desirable low fluorine content material—less than 100 parts per million.

Smith said that increased consumer desire for the 21% strength material has made necessary this "rearrangement of facilities at the Carondelet plant to enable us to meet the demand."

People

New Officers, Directors Elected by Hercules

John E. Goodman has been elected treasurer of Hercules Powder, succeeding Francis J. Kennerley who is retiring. John M. Martin, general manager of the explosives department, and John R. L. Johnson, Jr., director of the legal department, were elected to the board of directors.

William R. Ellis, vice president and director of Hercules Powder Co., has retired after 39 years with the company. He has been connected with the company's explosives department during most of his career with Hercules and served as general manager of that department during World War II.

John J. Powers has been promoted from vice president to senior vice president by Chas. Pfizer & Co. Jasper H. Kane, director of research and development for the company, has been elected to a vice presidency. Thomas J. Winn, general manager of Pfizer laboratories, has also been elected a vice president.

Howard Bauman has joined the research and development division of Pillsbury Mills, Inc., as head of the microbiological section in Minneapolis. He received his Ph.D. at the University of Wisconsin last year.

William H. Winfield has been appointed to Monsanto's newly created post of director of marketing research. Shea Smith III is assistant director of marketing research.

William B. McCloskey, vice president of Davison Chemical, has been assigned responsibility for directing the company's operational groups—engineering, production, traffic, purchasing, and industrial relations.

John R. Eck, former plant manager of Monsanto's Trenton, Mich., plant, has been granted a leave of absence to attend the spring session of the advanced management program at the Harvard University Graduate School of Business Administration. N. F. Patterson, general manager of production for Monsanto Chemicals, Ltd., in London, will also attend the school.

Lee V. Dauler has been elected president of Neville Chemical Co. Edwin Hodge, Jr., former chairman and president, continues as chairman. D. W. Kelso has been elected vice president and also continues as treasurer. W. F. Eberle was elected assistant secretary and R. E. Dingleberg, assistant treasurer.

R. H. Dorsett has been appointed administrative assistant in the sales service department of the Mathieson agricultural chemicals division at Little Rock, Ark. J. W. Murphy has been appointed district sales supervisor for the division at Jackson, Miss. C. S. Schoolfield has been promoted to assistant sales manager in Baltimore. O. L. Robertson is to become irrigation service representative at Williamston, N. C. D. R. Stoneleigh has been named agricultural specialist for the commercial development division in Baltimore. New sales representatives are Thomas Warren in Williamston, N. C.; Earl Abbott, Decatur, Ill.; Lee Hays, Richmond, Ind.; and Paul Marshall, St. Louis, Mo.

E. E. Clayton of USDA has received a plaque and certificate from the Cigar Manufacturers Association for his "outstanding research in the development of disease-resistant strains of leaf tobacco."

Edwin C. Clark has been appointed junior insect pathologist at the University of California experiment station at Berkeley. He replaces Clarence G. Thompson, who has transferred to USDA.

Leon A. Kelley and Walter G. Jennings have joined the dairy industry staff of the University of California at Davis to investigate the sources of off-flavor in milk.

Donald E. Hope has been appointed sales promotion assistant for Pennsalt's agricultural chemicals department. He was formerly technical sales representative for Pennsalt agricultural chemicals in the Northeast.

Robert A. Larsen has resigned as head of the cereal and baked products division of the Food and Container Institute to become assistant manager of the research and development department of Pillsbury Mills, Inc.

Murray Berdick has been appointed coordinator of research for Evans Research & Development Corp.

David L. Eynon, Jr., has been named assistant to Felix N. Williams, vice president in charge of manufacturing for Monsanto. Eynon has been assistant general manager of the organic chemicals division.

Charles J. Krister, manager of the agricultural product development section for Du Pont, is the 1954 chairman of the AMERICAN CHEMICAL SOCIETY'S Division of Industrial and Engineering Chemistry.

Earl C. Lenz has been elected vice president of sales and advertising for Morningstar, Nicol, Inc., and its subsidiaries. He was formerly vice president and general sales manager of Paisley Products, Inc., a subsidiary.