

cides will be **Russel H. Ashworth**, who has rejoined Dow after two years with Pontiac Mills, Inc. Irvine, who has been handling sales for Dow in Wyoming, Colorado, and New Mexico, moves into the post held by the late **Dan O. Sanford**.

C. Y. Haas has been appointed manager of sorptive mineral sales for Minerals & Chemical. He was formerly assistant director of research.

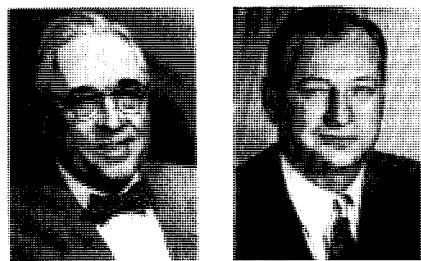
John E. Fletcher has been promoted to sales manager for U. S. Potash Co.

John V. Osmun has been named head of the entomology department of Purdue University, succeeding **J. J. Davis**, who retired July 1.

Frederick R. Anspach has been named sales manager of the Thomas Fertilizer Division of Pennsalt. He succeeds **S. R. Coale**, who has resigned.

Daniel MacDougall, former associate professor of chemistry at Ontario Agricultural College, has joined the research staff of Chemagro as supervisor of analytical research.

Daniel S. Dinsmore has been named vice president in charge of planning



D. S. Dinsmore **J. C. Schumacher**

and development for American Potash & Chemical. Succeeding him as vice president in charge of research is **Joseph C. Schumacher**.

Donald A. Shallock has been named extension weed control specialist at Rutgers. He was formerly extension farm crops specialist.

George L. McCall has been appointed assistant export manager in the Grasselli Chemical Department, principal agricultural chemicals department of Du Pont. He succeeds **Joseph P. Conlon**, who is being promoted to a new domestic assignment.

Benton H. Wilcoxon has been appointed manager of operations of the insecticide division of Olin Mathieson. He was vice president and general manager of Calabama Chemical before its acquisition by Olin Mathieson.

William F. Watkins has been named assistant manager of government services for the plant food, insecticide, and industrial chemicals divisions of Olin Mathieson. He will be located in the company's Washington, D. C.,

office. Mr. Watkins joined Olin Mathieson in 1953 after five years as chief of the Fertilizer, Seed, and Pesticides Branch, Food and Agriculture Division, International Cooperation Administration.

William F. Waldeck has joined Shea Chemical in the newly created position of technical director. Director of research for Wyandotte until late June, Dr. Waldeck will direct development of new products and processes for Shea, which is aiming at "horizontal growth." He will be located in New York.

Leon Cherksey has been named chairman of the board of American Chemical Paint Co. Succeeding him as president is **Gerald C. Romig**, who has been a vice president for the past 11 years.

ASSOCIATIONS

Food Additives Display at Atlantic City ACS Meeting

A display of food additives is to be set-up in Atlantic City during the AMERICAN CHEMICAL SOCIETY meeting next month. The display is to be illustrated with samples of new food products containing chemical additives. Manufacturers may submit samples to **R. M. Warren**, % Convention Hall, Atlantic City, N. J. The samples should be received not later than Sept. 12, 1956.

Influencing Buyers, Topic at NAC Meeting Next Month

Who and what influences growers to use agricultural chemicals is to be a featured topic at the meeting of the National Agricultural Chemicals Association meeting. NAC members are to meet at Spring Lake, N. J., Sept. 5 through 7.

The panel to discuss influences on the grower will include: **W. A. Hafert**, editor of *New Jersey Farm and Garden*; **John McDonald**, president of the National Association of Television and Radio Farm Directors; **Blanchard Smith**, vice president of Chipman Chemical; **Ellsworth Fisher**, extension entomologist for the University of Wisconsin; and a leading pesticides dealer. Moderator will be **M. R. Budd**, advertising manager of Hercules Powder.

Also to receive attention from panel discussions will be the highway expansion program and the Miller Amendment to the Food, Drug, and Cosmetic Act. On the highway expansion panel will be **C. O. Eddy** of the Niagara Chemical Division of Food Machinery and **R. J. McMahon** of McMahon Bros., commercial spray applicators of

Binghamton, N. Y. On the Miller Amendment panel will be: **Winton B. Rankin** of FDA, **John Coyne** of USDA, **George C. Decker** of the Illinois State Natural History Survey; and **J. A. Noone**, NAC technical adviser.

Scheduled to address the meeting on entomological research is **E. F. Knapling** of the Entomological Research Branch, USDA. **J. V. Vernon** of Niagara Chemical Division will discuss the industry outlook. **W. W. Allen** of Dow Chemical, NAC's president, will also address the meeting.

Chemicals in Food Production Symposium at ACS Meeting

The Division of Chemical Marketing and Economics will present a two-day symposium on "Chemicals in Food Production" at the American Chemical Society's national meeting in Atlantic City. The two-day symposium will take place on Sept. 18 and 19. General chairman for the symposium is **Hugo Reimer**, president of the Nitrogen Division of Allied Chemical.

The Division will sponsor a dinner on the evening of Sept. 17 jointly with the Division of Agricultural and Food Chemistry. The first half-day session of the symposium will be devoted to fertilizer, the second to pesticides, the third to synthetic nitrogen materials as feed supplements, and the fourth to food and drug laws as they apply in this area.

The programs of this symposium and the Division of Agricultural and Food Chemistry and the Division of Fertilizer and Soil Chemistry are listed below.

Sept. 18 (morning)

M. F. FOGLER, *presiding*

C. Y. THOMAS, Role of Nitrogen in Our Nation's Future.

EDWIN COX, Phosphatic Fertilizers—1956—How Far—Where to?

J. FIELDING REED, Potash in Food Production.

RUSSELL COLEMAN, Promoting Proper Plant Food Usage.

Sept. 18 (afternoon)

CARLTON A. SEARS, *presiding*

J. T. THURSTON, Planning Research and Development for the Successful Commercialization of Pesticides.

J. STEELE BROWN, Manufacturing for the Pesticide Industry.

ERNEST HART, Problems Related to the Successful Marketing of Pesticides.

Sept. 19 (morning)

H. B. HASS, *presiding*

C. GLEN KING, Present Status of the Protein Supply for Human Nutrition from a World Wide Standpoint.

D. F. GREEN, Urea in the Role of a Feed Ingredient.

H. R. ROSENBERG, Methionine and Lysine Supplementation of Feeds.

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News of the Month

L. F. WIGGINS. Ammoniated Molasses.

FRANK N. RAWLINGS. Ammoniation of Beet Pulp.

Sept. 19 (afternoon)

JOHN H. FOULGER, *presiding*

L. R. COLEMAN. "The Chemist, the Administration, and the Police Gazette."

ROBERT P. PARKER. Procedure and Economics of Testing New Drugs.

LLOYD HAZELTON. Procedure and Economics Involved in Biological Evaluation of Food Chemicals.

GLENN G. PAXTON. Proposed Amendments on Food Additives.

DIVISION OF AGRICULTURAL AND FOOD CHEMISTRY

A. L. Elder, *Chairman*

F. M. Strong, *Secretary*

Monday Morning

General

D. M. Doty, *Presiding*

D. M. DOTY. Introductory Remarks.

C. H. BURNS, L. E. BROWNELL, A. PENDILL, F. GUSTAFSON, AND R. MARTENS. Some Biochemical Effects of Gamma Radiation on Potatoes.

ROBERT L. CLEMENTS AND F. E. DEATHERAGE. A Chromatographic Study of Some of the Constituents of Coffee.

HENRY R. ROBERTS. A Rapid Horizontal Paper Chromatographic Method for the Quantitative Analysis of Lactose and Monoses in Lactose Hydrolysates.

THOMAS R. DAVIS, OLEG K. KONONENKO, KARL M. HERSTEIN, AND HENRY B. HASS. Fugacity of Aromatic Materials from Sugar Solutions.

J. NAGHSKI, LAWRENCE L. REED, AND C. O. WILLIAMS. Maple Sirup. X. The Effect of Controlled Fermentation of Maple Sap on the Color and Flavor of Maple Sirup.

HERMAN J. MORRIS. Test Paper for Detecting Peroxidase.

CARL R. FELLERS, SHOU-SHIK YANG, AND MING S. CHAN. Toxicity Studies on Ethylenediaminetetraacetic Acid (EDTA).

EDITH J. CONKERTON, WILDA H. MARTINEZ, C. E. MANN, AND V. L. FRAMP-TON. A Study of the Changes Induced by Autoclaving a Solvent Extracted Cottonseed Meal.

EDWARD G. KELLEY, SAMUEL KRULICK, REBA R. BAUM, ROBERT M. ZACHARIUS, AND JOSEPH J. MCGUIRE. Distribution of Nitrogen in Cabbage. I. Nonprotein Nitrogen in Electrodialyzed and Alcohol Soluble Fractions.

MARGARET G. DRIVER. The Determination of Benzoic Acid in Margarine.

Monday Afternoon

Symposium on Radiation Sterilization

Belmont S. Evans, Jr., *Presiding*

MAURICE P. DRAKE, JOSEPH W. GIFFEE, JR., DOROTHY A. JOHNSON, AND VIRGIL

L. KOENIG. The Effect of Ionizing Radiation on the Amino Acid Content of Insulin.

R. E. BURKS, JR., P. CLARK, AND E. B. BAKER. Detection of Amines Produced on Irradiation of Meat.

L. P. HERK, JR., E. J. LEVY, D. C. O'BRIEN, AND W. H. STAHL. Identification of Certain Constituents of Odor of Irradiated Meat.

F. E. LITTMAN, E. M. CARR, AND A. P. BRADY. The Action of Atomic Hydrogen on Cysteine and Glutathione Solutions.

R. M. MENDENHALL, L. B. CLARK, AND W. D. BELLAMY. A Study of Electron Irradiated Proteins and Amino Acids.

P. SCHWARTZ, L. B. CLARK, AND W. D. BELLAMY. Changes Produced in Amino Acids and Peptides by Massive Doses of High-Energy Electrons.

JAMES M. ADAMS, DONALD J. SEEMANN, LAWRENCE ROSNER. The Use of Chemical Additives in Minimizing the Effect of Ionizing Radiation on the Flavor of Foods.

ROBERT W. SHORTRIDGE, WILLIAM H. BURTON, BETTY LOU SCOTT, AND SHIRLEY E. FRY. The Effect of Chemical Additives upon Odor and Taste Changes Caused by Radiation Sterilization.

Discussion.

Divisional Social Hour (Joint with Division of Chemical Marketing and Economics)

Divisional Dinner (Joint with Division of Chemical Marketing and Economics) Speakers: JOHN E. HULL, president of Manufacturing Chemists Association and BRADSHAW MINTENER, Assistant Secretary of the Department of Health, Education, and Welfare.

Tuesday Morning

Belmont S. Evans, Jr., *Presiding*

O. F. BATZER, M. SRIBNEY, D. M. DOTY, AND B. S. SCHWEIGERT. Production of Carbonyl Compounds During Irradiation of Meat and Meat Fats.

ROBERT A. STEIN AND JAMES F. MEAD. The Irradiation Decomposition of Butyl Hydroperoxides.

JOHN H. WERTHEIM, RATHINDRA N. ROYCHOUHDHURY, JOHAN HOFF, SAMUEL A. GOLDBLITH, AND BERNARD E. PROCTOR. Studies on the Irradiation Preservation of Milk and Milk Products.

J. R. CHIPAULT, O. S. PRIVETT, GEORGE R. MIZUNO, CHRISTENSE R. NICKELL, AND W. O. LUNDBERG. Effects of Ionizing Radiations on Fatty Acid Esters.

A. W. PHILLIPS, H. NEWCOMB, AND J. H. WYNN. Combined Chemical and Radiation Sterilization of Bacterial Spores.

Z. I. KERTESZ, R. E. GLEGG, AND F. P. BOYLE. The Relationship Between Gamma Irradiation and Effect in Some Plant Tissues and Their Constituent Polysaccharides.

M. L. WOLFROM, W. W. BINKLEY, T. M. SHEN, L. J. McCABE, AND D. S. MIYADA. The Irradiation of Carbohydrates.

Discussion.

Thursday Morning and Afternoon

Symposium on Physical Functions of Hydrocolloids

Joint with Division of Colloid Chemistry

Leonard Stoloff, *Presiding*

LEONARD STOLOFF. Introductory Remarks.

SANFORD J. WERBIN. The Practical Aspects of Viscosities of Natural Gums.

FREDERICK R. EIRICH. The Viscous Behavior of Hydrocolloids.

RALPH E. SCHACHAT AND LEONARD R. ZEGELBONE. Some Aspects of Hydrocolloid Gelation.

BERNARD IDSON AND EMORY H. BRASWELL. Gelation of Gelatin.

JURG SOLMS. Some Aspects of the Gel-Formation of Pectins and Related Polysaccharides.

NAT H. NASH. The Functional Aspect of Hydrocolloids in Controlling Crystal Structure in Foods.

A. CORNWELL SHUMAN. Theoretical Aspects of Hydrocolloids in Controlling Crystal Structure in Foods.

BENJAMIN R. HARRIS. Some Lesser Known Aspects of Stability in Commercial Emulsions.

BERNARD WOLNAK, LEONARD F. BARRINGTON, AND LUCILLE FALLER. Emulsions.

JUSTIN J. ALIKONIS. Practical Aspects of Foam Stabilization.

JACOB J. BIKERMAN. Stability and Formation of Foams—Theoretical Comments.

SAMUEL PRUSSIN, GEORGE LIEBERMAN, AND J. RAYMOND LINDQUIST. Practical Aspects of Stabilizing Dispersions.

RAYMOND R. MYERS. Physical Stability of Dispersions. I. A Preliminary Survey.

PESTICIDES SUBDIVISION

J. A. Noone, *Chairman*

Hobart O. Thomas, *Secretary*

General

Monday Morning

W. F. Phillips, *Presiding*

J. A. NOONE. Introductory Remarks.

A. M. MATTSON, CIPRIANO CUETO, AND J. A. JENSEN. Fate of DDT in the Rat. (I) DDT Metabolites Stored in the Fat.

CIPRIANO CUETO, W. E. DALE, J. A. JENSEN, AND G. W. PEARCE. Fate of DDT in the Rat. (II) DDT and DDT-Derived Materials in Feces.

J. A. JENSEN, W. E. DALE, AND G. W. PEARCE. Fate of DDT in the Rat. (III) DDT Derived Materials in Bile.

A. M. MATTSON AND R. M. NUESLEIN. Fate of DDT in the Rat. (IV) DDT and DDT-Derived Materials in the Blood.

L. W. FANCHER, G. C. PATCHETT, AND S. C. DORMAN. A New Organophosphate Pesticide—Stauffer Experimental Compound R-1303.

ALLEN E. SMITH AND GRACIE M. STONE. Mobility of N-1-Naphthylphthalamic Acid (Alanap-1) in Soil.

JOSEPH W. E. HARRISSON, E. W. PACKMAN, AND S. E. LEVIN. Acute Oral Toxicity, Chemical and Physical Properties of Arsenic Trioxides.

Monday Afternoon

Hobart O. Thomas, *Presiding*

J. W. COOK. In Vitro Destruction of Some Organo-Phosphate Pesticides by Bovine Rumene Fluid.

LAWRENCE P. MILLER AND S. E. A. MCCALLAN. Quantitative Studies on the Toxic Action of Metal Ions to Fungus Spores.

HENRY J. ACKERMANN, HERMAN H. BERGES, DARWIN O. BROOKOVER, H. A. BALTRUSH, AND BERNARD B. BROWN. Spectrophotometric Determination of Terraclor (Pentachloronitrobenzene) Residues in Vegetables, Food Products, and Forage Crops.

ELMORE W. EASTER, LESTER T. FULLER, EDWARD J. KUCHAR, AND MAX V. NORRIS. Colorimetric Estimation of Malathion Residues in Animal Products.

GEORGE W. DARLING AND LEWIS E. TUFFTS. The Determination of Trichlorobenzoic Acid Herbicide Residues on Corn Plants and in Shell Corn.

HOWARD A. JONES AND NORRIS W. MATTHEWS. The Determination of Piperonyl Butoxide in Fats.

MARGARET G. DRIVER. The Determination of Isopropyl N-(3-Chlorophenyl) Carbamate (CIPC) in White Potatoes.

Business Meeting, Pesticides Subdivision.

Tuesday Morning and Afternoon

Symposium on Relationships between Molecular Structure and Biological Activity of Pesticides

John E. Casida, *Presiding*

J. A. NOONE. Announcements.

JOHN E. CASIDA. Introductory Remarks.

JAMES STERBURG. Toxicity and Metabolic Fate of DDT and Related Compounds.

DOUGLAS J. HENNESSY AND MOTHER MARY GEORGE O'REILLY. A Free Radical Hypothesis of Pesticidal Action.

JAMES G. HORSFALL. Relationship Between Structure, Permeation Into the Cell, and Physical Toxicity Among Fungicides.

H. P. BURCHFIELD. Fungitoxicity of the α -Triazines.

W. C. SHAW. The Relationship Between the Molecular Configuration and the Herbicidal Activity of Phenoxyalkyl-carboxylic Acids.

W. A. ANDREAE AND N. E. GOOD. The Metabolic Fate of Plant Growth Substances in Relation to Their Molecular Structure.

PHILLIP C. HAMM. Chemical Structure Requirements for Inhibiting Germination of Grass Seeds.

MORTON BEROZA AND W. F. BARTHEL. Chemical Structure and Activity of Compounds as Pyrethrin Synergists.

R. D. O'BRIEN. The Relation Between pK and Insect Toxicity of Some Nitrogenous Compounds.

JOHN F. CASIDA. Selective Toxicity in Organophosphorus Insecticides.

E. E. KENAGA AND P. D. LUDWIG. The Relative Insecticidal Activity of Some 2, 4, 5-Trichlorophenyl Phosphorothioates. Divisional Business Meeting.

FERMENTATION SUBDIVISION

R. J. Allgeier, *Chairman*

J. C. Sylvester, *Secretary*

Wednesday Afternoon

General

R. J. Allgeier, *Presiding*

R. J. ALLGEIER. Introductory Remarks. A. J. LIEBMANN AND B. R. PANETTIERE. Quality Control and Consumer Testing for Distilled Alcoholic Beverages.

GEORGE A. DUBEY, PETER GFELLER, AND AVERILL J. WILEY. The Analysis of Amino Acids in Torula Yeast (*Torulopsis utilis*) by a Modified Moore and Stein Chromatographic Method.

GEORGE J. HAJNY, PAUL R. GREENMAN, WILLIAM F. HENDERSHOT, AND WILLIAM H. PETERSON. Production of High Yields of Glycerol by Osmophilic Yeasts.

WILLIAM H. PETERSON, HENRY M. LITTLE, ROBERT H. BURRIS, AND RAMA-SHANDRA SANT. Production of Toxic Gas (Nitrogen Dioxide) from Silage.

DONALD H. PHILLIPS AND MARVIN J. JOHNSON. Evaluation of Aeration in Fermentations.

GERHARD J. HAAS AND ALAN I. FLEISCHMAN. Moisture Determination in Hops.

Business Meeting. Fermentation Sub-division.

Thursday Morning and Afternoon

Symposium on Fermentation Process and Equipment Design

E. L. Gaden, Jr., *Presiding*

E. L. GADEN, JR. Introduction. Subject of the Symposium.

GEORGE J. FULD AND CECIL GORDON DUNN. New Process Control Applications in Fermentation.

FRED H. DEINDOERFER AND B. L. WILKER. A Laboratory Fermentor for Studying the Effect of Controlled pH in Submerged Pure Culture Fermentations.

WILLIAM H. BARTHOLOMEW AND DAVID KOZLOW. Automatic Antifoam Control for Bench Scale Fermentations.

Discussion.

A. M. FRIEDMAN AND E. N. LIGHT-FOOT. Oxygen Absorption in Agitated Tanks: A New Correlation for Open, Flat-Bladed Impellers.

WLODZIMIEVZ TERESHKEVITCH AND CECIL GORDON DUNN. On the Mechanism of Gas Absorption from Bubbles under Shear in Agitated Liquids.

Discussion.

RICHARD P. RHODES AND ELMER L.

GADEN, JR. The Characterization of Agitation Effects in Shaken Flasks.

MICHAEL A. AURO, HOWARD M. HODGE, AND NORMAN G. ROTH. Scale-up Correlation of Oxygen Absorption Rate Data in Erlenmeyer Shake Flasks.

ELMER L. GADEN, JR., AND ANTHONY J. CARDINAL. Fermentation Process Scale-up.

Discussion.

STANLEY M. MARTIN. Citric Acid Production by Submerged Fermentation.

Discussion.

Friday Morning and Afternoon

Symposium on Microbial Transformations of Steroids

Richard W. Thoma, *Presiding*

RICHARD W. THOMA. Introductory Remarks.

WILLIAM CHARNEY. Transformations of Steroids by Bacteria and Yeast.

G. M. SHULL. Transformations of Steroids by Molds.

D. PERLMAN. Modification of Steroids by Actinomycetes.

E. VISCHER. Isolation and Identification of Fermentation Steroids.

HERBERT C. MURRAY. Problems of the 11-Hydroxysteroid Fermentation.

PAUL TALALAY. Mechanisms of Microbiologically Catalyzed Steroid Transformations.

THOMAS H. STOUTD. Total Synthesis of Steroids by Microorganisms.

RICHARD W. THOMA. Closing Remarks.

DIVISION OF FERTILIZER AND SOIL CHEMISTRY

G. L. Bridger, *Chairman*

Kenneth G. Clark, *Secretary*

Monday Afternoon

General

G. L. Bridger, *Presiding*

G. L. BRIDGER. Introductory Remarks. HENRY E. VAN THIEL AND WILLIAM J. TUCKER. Rapid Determination of Magnesium in Mixed Fertilizer.

JACKSON B. HESTER. The Interrelation of Fertilizer Salts and the Soil and Plant Phenomena of Exchange Reactions.

F. A. GILBERT, A. H. BOWERS, AND M. D. SANDERS. Effect of Nitrogen Sources in Complete Fertilizers on Bluegrass Turf.

S. J. TOTH AND W. H. KELLY. Agricultural Value of Organic Wastes.

T. P. HIGNETT, M. R. SIEGEL, T. M. KELSO, AND R. S. MELINE. Fertilizer from Leached-Zone Ore.

Tuesday Morning

General

Stacy B. Randle, *Presiding*

R. M. CREAMER AND T. G. LAMONT. The Stability of Certain Insecticides in Mixtures with Fertilizers.

ROBERT E. BAARSON, M. R. MCCORKLE, AND DUANE T. OHLSEN. Anticaking of Commercial Pelletized Fertilizers and Various Fertilizer Components with Fatty Chemicals.

C. C. LEGAL, JR., J. N. PRYOR, T. O. TONGUE, AND P. L. VELTMAN. Phosphoric Acid by the Davison Clinker Process.

E. J. FOX AND W. A. JACKSON. Influence of Adsorbed Surface Active Agents on the Physical and Chemical Properties of Solid Constituents of Phosphate Ore.

R. D. YOUNG AND F. G. HEIL. Production of Ordinary Superphosphate for Immediate Use in Ammoniation and Granulation Processes.

J. E. YOCOM, G. F. SACHSEL, AND R. D. ELLSWORTH. The Control of Air Pollution from Fertilizer Plants.

Divisional Luncheon. Speaker: FIRMEN E. BEAR, Rutgers University.

Tuesday Afternoon

Fertilizer Technology

Kenneth G. Clark, *Presiding*

J. G. GETSINGER, E. C. HOUSTON, AND F. P. ACHORN. Production of Diammonium Phosphate by Continuous Vacuum Crystallization.

JULIUS SILVERBERG AND F. G. HEIL. Storage Properties of Diammonium Phosphate Made from Electric-Furnace Acid.

HERBERT F. RAPP AND JOHN O. HARDESTY. Granulation of Mixed Fertilizers in Experimental Equipment.

WILLIAM R. FORT, WILLIAM C. WEBER, AND GORDON C. INSKEEP. Manufacture of Granulated Triple Superphosphate.

A. B. PHILLIPS, G. C. HICKS, N. L. SPENCER, AND JULIUS SILVERBERG. Use of Ammoniating Solutions Containing Urea in TVA Granulation Process.

Divisional Business Meeting.

Wednesday Morning

General

G. L. Bridger, *Presiding*

ODIN WILHELMY, JR., L. L. LORTSCHER, AND G. F. SACHSEL. The Team Approach to Fertilizer Economics Research.

A. A. NIKITIN, S. D. BRISTOW, AND J. P. GOODE. Factors Governing Use of Trace Elements with Various Fertilizer Formulations.

J. E. REYNOLDS, JR., N. K. ALFREY, AND G. W. ROSE. Davison's Trenton Process for Ammoniating and Granulating Fertilizers.

A. B. PHILLIPS, R. D. YOUNG, J. S. LEWIS, JR., AND JULIUS SILVERBERG. Utilization of Calcium Metaphosphate in the Production of Granular Fertilizers.

WALTER SCHOLL, HILDA M. WALLACE, AND ESTHER I. FOX. Distribution of Granular Mixed Fertilizers to Retail Trade in 1954-55.

JAMES M. O'DONNELL. Urea-Form Sales and Acceptance.