

TECHNOLOGY

New British Process For Superphosphate Fertilizers

► A SHORTAGE of sulfuric acid in England for treating phosphate rock to make essential superphosphate fertilizers has resulted in the development of a new process in which a mixture of nitric acid and sulfuric acid is used to obtain satisfactory results.

The process was developed by the British Department of Scientific and Industrial Research. Experimental work showed that nitric acid alone can be used to reduce the phosphate rock giving calcium phosphate, and calcium nitrate as a by-product instead of calcium sulfate when sulfuric acid alone is used.

Calcium nitrate is a valuable fertilizer, but it absorbs moisture readily, causing caking. After storage and caking it is of little value to the farmer. In the new process, nitric acid and sulfuric acid are used in the proportion of four to three. Both calcium sulfate and calcium nitrate are formed. The sulfate picks up no moisture from the atmosphere and, in the by-product obtained, the calcium sulfate forms a coating over the grains of calcium nitrate which protects the latter from the damp atmosphere.

England depends largely upon the United States for the sulfur needed in the manufacture of sulfuric acid. There is now a world shortage of sulfur, and England's imports from America have been cut by one-third. Nitric acid can be made in the United Kingdom without relying on any imports. The new process will not only produce the superphosphates needed in British agriculture but it will make more sulfuric acid available for the many industrial processes in which it plays an important part.

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Shoes a century ago were not made in "rights" and "lefts" and were worn on either foot; the first manufacture of right and left shoes on a wide scale was for soldiers in the Civil War.

DO ANIMALS THINK?



Do animals feel the same emotions we do? Which animals are most intelligent? How does the rhinoceros compare with the elephant in memory, learning power and reasoning ability? How do dogs, cats, birds, coons, fish, foxes, chimpanzees and chickens rate on their IQ's? The results of hundreds of psychological tests summarized in Vance Packard's informative, entertaining book "ANIMAL IQ: THE HUMAN SIDE OF ANIMALS." 46 superb animal and bird photos. 192 pages. Amazing feats of animal intelligence described. Regular \$2.50 edition now only \$1.25 postpaid if ordered through us before our limited 72 copies give out. Send check or M.O. to DOVER PUBLICATIONS, Inc., Dept. 1, 1780 Broadway, New York 19, N. Y. Return book in 10 days for full refund if not delighted.

Books of the Week

TO SERVE YOU: To get books, send us a check or money order to cover retail price. Address Book Dept., SCIENCE NEWSLETTER, 1719 N St., N. W., Washington 6, D. C. Ask for free publication direct from issuing organizations.

ALUMINUM: The Industry and the Four North American Producers—*The First Boston Corporation*, 79 p., illus., paper, free upon request to the publisher, 100 Broadway, New York 5. Tracing the industry's progress accomplished within a single lifetime, its processes, products, outlook and statistics.

THE AMERICANA ANNUAL 1951: An Encyclopedia of the events of 1950—Lavinia P. Dudley and John J. Smith—*Americana Corporation*, 784 p., illus., \$10.00. Contains 760 alphabetically arranged articles on current events with index and illustrated chronology.

COMMUNIST ZOO—Hans Muller—*Swen*, 50 p., illus., paper, \$1.00. Reception of the book in the Chinese edition prompted the present edition. You will be amused at the resemblance to the Soviets seen by the author in these animal portraits.

THE DAKOTA BARK HOUSE: Indian Leaflets 1-4—*Science Museum, St. Paul, Minn.*, 16 p., illus., paper, 50 cents. Four leaflets based on research studies now being made of the Indian collections in the Science Museum, in a folder containing a selected bibliography.

EFFECT OF SOIL AND COVER CONDITIONS ON SOIL-WATER RELATIONSHIPS—George R. Trimble, Jr., Charles E. Hale and H. Spencer Potter—*Northeastern Forest Experiment Station*, 44 p., illus., paper, free upon request to publisher, Upper Darby, Pa. Information necessary for flood-control projects.

EFFICIENCY OF FLOORING NAILS—E. George Stern—*Virginia Polytechnic Institute*, 7 p., illus., paper, 20 cents. Heat-treated, threaded nails have been found by test to be more efficient and economical for both hardwood and softwood.

HANDBOOK OF EXPERIMENTAL PSYCHOLOGY—S. S. Stevens, Ed—*Wiley*, 1436 p., illus., \$15.00. Results of recent research in manageable form for the use of the advanced scholar or graduate student. Thirty-four authors contributed to the volume.

HISTORY OF PHARMACY: A Guide and a Survey—Edward Kremers and George Urdang—*Lippincott*, 2d ed., 622 p., illus., \$7.50. Revised and brought up to date after ten years. Especially helpful will be the bibliography, chronology and alphabetically arranged appendix of names and facts.

HONEY IN THE COMB—Carl E. Killion—*Killion & Sons*, 114 p., illus., \$3.00. Practical and well-illustrated instructions for the person who keeps bees to produce comb honey.

AN INTERNATIONAL BIBLIOGRAPHY ON ATOMIC ENERGY: Volume 2, Scientific Aspects—Atomic Energy Commission Group, UN—*United Nations (Columbia University Press)*, Unnumbered pages, paper, \$10.00. Contains 24,282 entries with author index.

JOHANNES KEPLER; Life and Letters—Carola Baumgardt—*Philosophical Library*, 209 p., illus., \$3.75. Biography of the father of modern astronomy together with letters which reveal his personality. Introduction by Albert Einstein.

METHODS AND ACTIVITIES IN ELEMENTARY-SCHOOL SCIENCE—Glenn O. Blough and Albert J. Huggett—*Dryden*, 310 p., illus., \$3.75. To help the student teacher learn how to make scientific facts clear to young children.

NUTRITION AND ALCOHOLISM—Roger J. Williams—*University of Oklahoma Press*, 82 p., \$2.00. Discussing the causes of alcoholism and describing a treatment by nutritional supplements by which alcoholics can be made into moderate drinkers.

ORGANIZATION AND PATHOLOGY OF THOUGHT: Selected Sources—Translation and Commentary by David Rapaport—*Columbia University Press*, 786 p., \$10.00. Papers which seem to the editor to explain part of the enigma of how thinking takes place.

PROCEEDINGS OF THE ALASKAN SCIENCE CONFERENCE—*National Research Council*, 216 p., paper, \$2.00. Experts of many fields were brought together to discuss the problems of this northern territory.

RICE, DIETARY CONTROLS AND BLOOD PRESSURE WITH MENUS AND RECIPES—Frances I. Seymour—*Froben*, 206 p., \$2.95. A patient who has suffered from hypertension and is also a physician provides advice and menus for those whose doctors have prescribed the rice treatment.

TOMORROW'S HORIZON IN PUBLIC HEALTH—*Public Health Association of New York City*, 109 p., paper, \$1.00. Transactions of the 1950 conference of the Association. Of interest to those concerned with keeping the community healthy.

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MEDICINE

Harder TB Fight Urged As Defense Measure

► TUBERCULOSIS MUST be fought harder than ever now as a national defense measure, Dr. Robert J. Anderson of the U. S. Public Health Service declared at the meeting of the National Tuberculosis Association in Cincinnati.

Tuberculosis robbed western Europe of much of its capacity to resist the military invader during the last war, he pointed out. That was because medical resources for treating tuberculosis had to be turned to more urgent needs. As a result, the disease spread widely and further weakened the population.

To avoid such a situation here, Dr. Anderson said every effort must be made now, "while we yet have time," to find cases of the disease and bring them under treatment so they cannot spread the disease to others. The campaign against the disease must be intensified to the point where hidden cases of tuberculosis will not seed new infections among us," he declared.

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