

officers prevented the complete loss of the herd. The animals were examined almost daily to determine whether they had become infested with Texas fever ticks and were placed in specially designed cages and sprayed with crude oil at intervals of from fifteen to thirty days, but notwithstanding the extreme precautions which were adopted, three of the animals died. Gradually, however, the enclosures in which the buffalo were confined were freed from fever ticks and there is a possibility that as the buffalo adapted themselves to their new environment they became more or less immune to the disease. No losses from Texas fever have occurred for several years, and the herd has almost quadrupled in number since it was established. The fact that the herd has not increased more rapidly is due largely to the preponderance of male calves. This characteristic of the buffalo is so pronounced in all of the herds now in captivity that a cow is considered twice as valuable as a bull.

#### UNIVERSITY AND EDUCATIONAL NEWS

ERNEST SOLVAY, the discoverer of a process for the manufacture of soda, celebrated the fiftieth anniversary of that discovery on September 2 at Brussels by giving more than \$1,000,000 to educational and charitable institutions and the employees of his firm. The Universities of Paris and Nancy each received \$100,000.

At the last session of the Legislature of Pennsylvania an appropriation of \$40,000 was made to aid in the development of courses in education at the University of Pennsylvania. Dr. Frank P. Graves, of the Ohio State University, has been appointed professor of the history of education, and Dr. Harlan Updegraff, of the Iowa State University, as professor of educational administration. Professor A. Duncan Yocum, who now occupies the chair of pedagogy at the University of Pennsylvania, will continue as professor of educational research and practise.

A GRADUATE school of education has been established at Bryn Mawr College. It is under

the charge of Professor Kate Gordon, associate professor of education, Dr. Matilde Castro, director of the Model School, and Professor James H. Leuba, professor of psychology, who will give a graduate course on the psychology of defective and unusual children.

THE University of California has announced the establishment of a new Division of Rural Institutions. This new department will study and aid the rural forces which have for their aim the making of life in the open country successful and satisfactory. Elwood Mead has been called to the headship of this new division. He was formerly chief of the United States Bureau of Irrigation Investigations. He is now in Australia, as chairman of the Rivers and Water Supply Commission of the State of Victoria and chief engineer. His work in the University of California will be to deal with questions of farm credits, irrigation and drainage institutions, cooperation, and all the varied political, economic, educational, social and religious institutions which affect rural life.

WORK has been begun at Smith College on the erection of a new biological laboratory which is to cost \$150,000.

PROFESSOR DON ROSCO JOSEPH, of Bryn Mawr College, has accepted a call to the medical school in St. Louis. His work in physiology at Bryn Mawr College will be given by Professor Arthur Russell Moore, now assistant professor in the University of California.

DR. PAUL S. MCKIBBEN has left the department of anatomy of the University of Chicago to become professor of anatomy in the Western University of London, Ontario.

DR. G. E. COGHILL, of Denison University, has been appointed associate professor of anatomy at the University of Kansas, Lawrence.

EDMUND VINCENT COWDRY, associate in anatomy of the University of Chicago, goes this fall to the Johns Hopkins Medical School.

DR. CLARA MOORE, pathologist in the North Chicago Hospital, has been appointed instructor in clinical medicine and diagnosis in the University of Wisconsin.

DR. HENRY E. RADASCH, assistant professor of histology and embryology at Jefferson Medical College, has been appointed instructor of anatomy in the Pennsylvania Academy of Fine Arts to succeed the late Dr. George B. McClellan.

DR. C. C. LIPP, assistant professor of veterinary science at the University of Minnesota, has been elected head of the department of veterinary science of the South Dakota Agricultural College.

AT NORWICH UNIVERSITY Dr. S. F. Howard, formerly associate professor at Amherst College, is to be head of the chemistry department. J. E. Lear, B.S., formerly associate professor in the Texas College, Texas, has been appointed assistant professor of physics and mathematics.

AT THE UNIVERSITY OF PENNSYLVANIA Dr. Thomas D. Cope and Dr. E. A. Eckhardt have been promoted to assistant professorships in physics; Dr. Walter T. Taggart to the grade of professor of organic chemistry; Dr. Owen L. Shinn to be professor of applied chemistry, and Dr. Herman C. Berry to be professor of materials of construction.

HARRY WALDO NORRIS, A.M., professor of zoology at Grinnell College, has been appointed to give instruction in zoology in Harvard University during the year 1913-14, in accordance with the agreement with western colleges. His term of service will fall in the second half-year.

DR. M. BARTUZZI has been appointed to a newly established chair of medical history in the University of Siena.

#### DISCUSSION AND CORRESPONDENCE

##### THE BREAD SUPPLY

IN SCIENCE of August 22, 1913, appear twenty columns of words from Professor H. L. Bolley, entitled "Cereal Cropping: Sanitation, a New Basis for Crop Rotation, Manuring, Tillage and Seed Selection." Under this imposing and comprehensive title we find that eighteen columns are devoted chiefly to belittling the work of chemists, agronomists, bacteriologists, and also agricultural advisers who accept the findings of such scientists.

Occasionally Professor Bolley hedges with the assertion that he knows plant food to be essential, and then renews the attack in such words as these:

On account of all these conditions of low yield and invariable deficiency in quality, there has gone up a great cry of "depleted" soils, "worn out" land, "bad agriculture," "shiftless methods," etc. This cry follows the plowman regardless of his improved tools and general farming improvements, regardless of better methods of tillage which we know now obtain on the farm, as against those which our forefathers were able to accomplish, and all regardless of hard work. It is all right for the banker and the lawyer, and even some professors, to berate the farmer for idleness and inefficiency in methods and lack of business, but I say let such men try to raise wheat of high grade under the present general understanding as laid down in books, or by our best agriculturists. In spite of all these directions, the wheat soon becomes soft and shows all of the peculiar characteristics which we find named in the literature of the chemical laboratory, or in the milling tests of wheat as previously indicated, "white-bellied," "piebald," or shrivelled, bleached and blistered, "black-pointed," in fact all of the qualities of deteriorated grain; and the chemist from his laboratory outlook cries out "depleted soils," "lost fertility," "bad physical texture," due to "worn-out humus," "lost nitrogen," "insufficient phosphates," "lime," etc., forgetting, as it were, that almost every field in these matters is a law unto itself and that every one of these fields in the next few years may contradict all these assertions by the growth of splendid crops for reasons no one seems to know. The expert agriculturist and agronomist, who take their cue largely from the chemists, cry out: "Give us intensified agriculture," "Apply phosphates," "Apply lime," "Apply potash," "Grow clover," "Raise corn," "Rotate," all in a confused jumble, and lately the bankers, afraid of their mortgages, have become very busy and tell how to farm and scold rather strongly about lack of business methods on the farm, berate the schools, etc.

These conditions of farm cropping, though not exclusively American, are especially in prominence at present because many of our most noted publicists are becoming, perhaps properly, alarmed. They say our farmers show no ability of maintaining the supply of wheat, the bread grain, a