rate than I have outlined here, and they have found that it pays. Estates as small as 1000 pectares in East Prussia frequently have university trained specialists in agronomy and animal husbandry on their staffs. Our agriculture consists, and will probably continue to consist, largely of relatively small, individually owned and operated farms. Some expansion of the already firmly established county agent's staff would seem the most efficient way of providing this added professional service where it is needed.

I cannot refrain at this point from commenting briefly on the organization of agronomic work in this country. The great bulk of our research and teaching in agronomy is supported by public funds. The great majority of the members of our society are employed by county, state, or federal agencies. As public servants, there are two different points of view as to how we should conduct ourselves:

The first is that we should confine our activities strictly to our field of specialization. In other words, "stick to our last."

The other is that we, as specialists in the public service, have a certain definite responsibility for helping to develop public policy in the field of our specialization. Agronomists are still citizens and, as such, cannot escape the responsibilities of citizenship.

I feel that one of the most outstanding public services ever performed by an American soil scientist has been performed by Dr. H. H. Bennett. As a result of years of experience in studying soils, especially those of the south, he was convinced that something more had to be done to stop erosion, or the agriculture of large sections of our country would be seriously impaired. In just about a decade, he has succeeded in persuading Congress that something should be done about it, and he has made the country erosion-conscious. The nation unquestionably owes him a debt of gratitude. We need more men with his vision.

We have recently had numerous new agencies set up in the United States Department of Agriculture—many of them largely as emergency measures and presumably of temporary duration. As originally conceived, each had a rather distinct function to perform, a function which no existing organization was adequately handling. Being liberally supplied with funds, these organizations expanded rapidly. Many of them soon extended into every section of the country. Each is tending to become a Department of Agriculture within a Department of Agriculture. The result has been confusion, working at cross purposes, and friction. A very considerable proportion of the time of some of our ablest men in the agronomic field is spent in trying to iron out difficulties which should never arise. I am convinced that no intelligent man could study the existing organization of the work being done in this country in the broad field of soil science and field crop production and justify it. Agronomists in these various agencies are earnest and sincerely anxious to do their work well. I have no solution to offer. But I am sure that none of you, especially those of you with administrative responsibilities, could ponder over "our job ahead" without having this problem of the organization of our work appear as a very vital part of the task.

A few months ago, I wrote a friend in Germany, a soil scientist who has traveled in this country and is well known to many of you, that with our traditions of democratic freedom in America, we found it difficult to understand how the intelligent German people could submit to the tyrannies of Hitler. His reply was that with our bountiful resources in America we might be able to afford liberty and democracy but that Germany is a much poorer country and must be more efficiently organized to survive! I have thought of this letter many times since the outbreak of war. Is it necessary to sacrifice efficiency in order to maintain our democratic freedom? We will all have to admit that, at times, things seem to move much more slowly in a democracy. We do more cutting and trying, more experimenting, and more compromising. We give more weight to the views of minorities. This retards action, but I think we will all agree that it increases the probability that we shall come out with the right answer in the end. Let us hope that this applies to the organization of our agronomic work. Let us hope that the present confusion represents, from the long-time point of view, merely a transitory experimental stage which will lead soon to the development of an efficient, well-integrated program. Such a development is necessary if we are to fully discharge our duties to the public. It is necessary if our services are to be more effective in helping post-war agriculture vie with post-war industry in supplying the wants of mankind.

OBITUARY

GEORGE WASHINGTON CRILE

DR. CRILE was born in Chili, Ohio, on November 11, 1864, and died in Cleveland on January 7, 1943. He received his A.B. degree at Ohio Northern University in 1884 and his M.A. and M.D. degrees at the University of Wooster, 1887.

Dr. Crile served his alma mater as lecturer and professor of physiology and also as professor of clinical

surgery. In 1900 he was appointed professor of clinical surgery in Western Reserve University and became professor of surgery in 1911. In 1924 he retired in order to give his entire time to the Cleveland Clinic, of which he was a cofounder in 1921. After this clinic was fully established he devoted most of his time to travel and more general biological studies.

For Dr. Crile the road to surgery was through physiology—an association closely linked with his earlier teaching of this science. Also in those early years his extensive experience in traumatic surgery greatly stimulated his interest in the problem of surgical shock. No surgeon probably has had a keener and quicker appreciation of surgical risk, of how to handle living tissues and of the practical means for conserving the patient's natural resistance. To these ends through a very busy professional life of over 50 years he utilized to the utmost his unusual speed in operating, manual dexterity and technical training. Dr. Crile combined an unusual capacity for sustained mental and physical work requiring the highest skill with personal charm and leadership. Endowed with a physique far above the average he conserved this endowment to the utmost only to expend it lavishly for the advancement of his professional work. A typical day began at 8 A.M. with 6 or 8 major operations lasting until noon. He then spent an hour or more with his staff and visitors in his personally financed research laboratory. After lunch he handled his correspondence, went over research projects and data and took care of a busy consultation practice.

Dr. Crile was actively engaged in investigative work throughout his long surgical career. Early identified with the physiological problem of surgical shock for which he received the Cartwright prize in 1897, the Nicholas Senn prize in 1898 and the Alvarengo prize in 1901, he has made noteworthy contributions to its nature and to the methods for its prevention and relief. He was perhaps the first to make a direct transfusion of blood (1905) as a means of combatting this serious complication of physical and psychic trauma. Much of his experimental and clinical research in this field is to be found in his books on "Blood Pressure in Surgery" (1903), "Hemorrhage and Transfusion" (1909), "Anaemia and Resuscitation" (1914) and "Anociassociation" (with W. E. Lower, 1914).

His active and unusual mind gradually took him into more general fields of biological investigation and away from the strictly surgical problems of earlier years. Such monographs as "The Kinetic Drive" (1916) (Wesley M. Carpenter lecture), "A Bipolar Theory of Living Processes" (1926) and "The Phenomenon of Life, a Radio-Electric Interpretation" (1936) illustrate this phase of his activity and also aroused some criticism.

Dr. Crile was a member of many foreign and domestic medical societies, including those of the basic sciences, clinical medicine and surgery. He was an unusually regular attendant at most of the meetings of these societies and generally contributed papers or participated in discussions. He was a prolific contributor to medical journals and in addition published more than 25 monographs, including "Man, An Adaptive Mechanism" (1916), "Diseases Peculiar to Civilized Man," "A Mechanistic View of War and Peace" (1915) and "Intelligence, Power and Personality" (1941).

Many honors came to him. Honorary degrees were conferred by Hiram College, the University of Wooster and by the Universities of Dublin and Glasgow. He was president of the American College of Surgeons, a charter member of the Board of Regents and its chairman since 1917. He was a member of the founders group of the American Board of Surgery and in 1923 was president of the American Surgical Association.

Dr. Crile was the recipient of many medals, including American Medicine (1914), The National Institute of Social Sciences, the Trimble Lecturer medal, the Lannelongue International Medal of Surgery, the Cleveland Medal for Public Service and the Distinguished Service Gold Key of the American Congress of Physical Therapy.

In 1898 he was Brigade Surgeon in the Volunteers with the rank of Major and served in Cuba and Puerto Rico. In 1917 he organized and was professional director of U. S. Army Base Hospital No. 4 stationed in France. He was promoted to Colonel in 1918 and in 1921 to Brigadier General in the Medical Officers Reserve Corps. He was awarded the Distinguished Service Medal in 1919, became an honorary member of the military division, 3rd class, Commander of Bath, and in 1922 was made a Chevalier in the French Legion of Honor.

Dr. Crile married Grace McBride of Cleveland in 1900, who ably contributed to his career.

DAVID MARINE

MONTEFIORE HOSPITAL,
NEW YORK, N. Y.

HARVEY LEROY WESTOVER

HARVEY LEROY WESTOVER, in charge of the Alfalfa Project in the Division of Forage Crops and Diseases, Bureau of Plant Industry, Agricultural Research Administration, U. S. Department of Agriculture, died in Washington, D. C., on January 2, of a heart complication. He was born in Austerlitz, N. Y., on June 4, 1879, the son of Seymour and Anna Gott Westover. He took his college work at Cornell, where he received his B.S. in 1906. He came to the U. S. D. A. that same year to the Office of Soil Survey, where he spent five years, then after devoting two additional years to