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## Two Pioneer Oat Agronomists Pass Away

By T. R. Stanton

In 1950 two well-known pioneer oat breeders were called to their reward, namely, C. W. Warburton of Washington, D. C., on September 22, and L. C. Burnett of Ames, Iowa, on November 11. Both made substantial and outstanding contributions to oat improvement in their day and more complete biographical sketches of them will appear elsewhere. However, a brief statement on some of their achievements in oat breeding should be of interest to those who will receive the newsletter.

Dr. Warburton was in charge of oat investigations of the Division of Cereal Crops and Diseases, Bureau of Plant Industry, from 1907 to 1921, except for a year and a half (1911-1912), when he served as an Associate Editor of *The Farmer* published at St. Paul, Minnesota. During his tenure of service he organized and supervised numerous cooperative oat experiments with the state agricultural experiment stations and was the author of a number of Department Bulletins and Circulars, as well as popular articles on oats. Some of his pioneer publications from the Department included *Farmers' Bulletins* as follows:

- 395, Sixty-day and Kherson Oats (1910)
- 420, Oats: Distribution and Uses (1910)
- 424, Oats: Growing the Crop (1910)
- 435, Winter Oats for the South (1911).

These are of special interest because they constitute the first set of *Farmers' Bulletins* that appeared on oats from the Department of Agriculture. Furthermore, one of the earliest United States Department of Agriculture publications on cereal nursery technique was his article entitled: "Improvement of the Oat Crop", which appeared as Circular 30.

Dr. Warburton had a part in the selection, testing, and distribution of numerous oat varieties, some of which became of great economic importance. A partial list of the winter oat varieties would include Red Rustproof Selection (C. I. No. 518-3), Winter Turf Selection (C. I. No. 3296), Hairy Culberson, Aurora, Custis, Lee, Winter Fulghum Selections C. I. Nos. 2498, 2499, and 2500; a partial list of spring oat varieties would include Richland (Iowa No. 105), Albion, Iowar, Iogold, Iogren, Iomine, Iowa No. D67, Iowa No. D69, Iowa No. 444, Hawkeye, Idamine, Cornellian, Empire, Standwell, Ithacan, Upright, Kanota, Markton, Trojan, and Brunker.

Professor L. C. Burnett was a joint member of the Iowa Agricultural Experiment Station and the Division of Cereal Crops and Diseases, Bureau of Plant Industry from 1906 to 1948. He did outstanding work in selecting and testing varieties and strains of oats for Iowa, several of which also became standard in many other states, and of national importance. He developed and distributed some of the best known and most widely

grown oat varieties that have been grown in the Corn Belt, such as Richland (Iowa No. 105), Logold, Albion, and Iowar. He also selected Logren, Iomine, and Iowa No. 444. In addition he had some part in the breeding of Hawkeye, Iowa No. D67, Iowa No. D69, as well as in the more recent epoch-making varieties as Boone, Cedar, Control, Tama, Vikota, Hancock, Marion, Advance, Bonham, Eaton, Clinton, Benton, Cherokee, Kent, Nemaha, Mohawk, and Shelby.

Professor Burnett also conducted and reported the results from many cultural experiments with oats. He was one of the first experimental agronomists to organize and conduct a complete and extensive uniform series of community yield-test nurseries for the evaluation of oat varieties for different sections of a particular state. He is the author or joint author of a number of bulletins published by the Iowa Agricultural Experiment Station in cooperation with the United States Department of Agriculture. He was well known to hundreds of Iowa farmers by whom he was held in high esteem. They were always eager for his advice and practical suggestions relative to the best varieties and cultural methods for oats and the other small grains for Iowa. It should be said of him, that he was an acknowledged authority on Iowa field crop production.

Professor Burnett was an exponent of improvement by pureline selection and was not sold on the possibilities of hybridization until he grew relatively large increase plots of the selections from the Victoria-Richland and other crosses later named Boone, Control, Cedar and Marion on the Agronomy Farm at Ames in the late 1930s.

There is no question that his greatest contribution to national oat improvement was the selection and development of the Richland and Logold varieties with high resistance to many races of stem rust. Paradoxically, it is interesting to record that this resistance was not recognized until these selections had proved superior on the basis of performance in acre yield. The resistance to stem rust of Iowa Nos. 105 and 109 Selections provided the major contributing factor to their outstanding performance, the cause of which had not yet been discovered as breeding for resistance to the rusts was still in its infancy at that time. The type of stem rust resistance found in these oats has contributed much to the value of the present day widely grown varieties such as Clinton, Benton and Cherokee as well as to nearly all current oat breeding projects in numerous states.

In retrospect, those who have been closely associated with Professor Burnett through the years in oat investigations at Ames will often wonder whether Iowa State College will be quite the same without "L. C." as he was affectionately known to his many friends.