

GENETICS
NATURE RAMBLINGS
by Frank Thone



Drought-Proof Corn

CORN better able to withstand droughts than any of the standard strains now in existence is held out as a definite possibility of the Shull-Wallace inbreeding technique, by Dr. Merle T. Jenkins of the Bureau of Plant Industry, writing in the U. S. Department of Agriculture's new-type annual report, the Yearbook of Agriculture, 1936. Disease, cold, and insect damage are other desirable qualities that may be put into corn by the newer method of breeding.

Modern corn breeding (and it is nowhere near being universally adopted as yet), depends on getting genetically pure lines of parent plants, each with one or several desired qualities certainly present — yield-abundance, or stalk-strength, or early ripening. The strains destined for such select parenthood are inbred for generation after generation, until they dwindle to runts that seem just about to perish on the poison of their own germ-plasm. Then they are interplanted with another line, embodying other desired qualities, and controlled cross-pollination is permitted to occur.

And behold a race of giants springing from a parentage of runts! The combination of qualities planned for, plus the strange phenomenon of hybrid vigor (familiar, but little understood as yet), sends the new stalks higher than any of their ancestors, rustling with greener, broader leaves, burdened with heavier, more abundant ears.

First steps toward the new way in corn breeding were taken a generation ago, by Dr. G. H. Shull and Dr. E. M. East, working independently of each other, but using much the same methods. The first private breeder to produce inbred corn was H. A. Wallace of Des

Moines, now Secretary of Agriculture. He began in a small way in 1913, but did not undertake larger-scale operations until 1919. Now the inbreeding technique is practised in experiment stations all over the country, and new commercial producers enter the field every spring.

Even without the benefit of deliberate breeding for drought resistance, the inbred-hybrid corn varieties have come through the drought-ordeals of 1934 and 1936 in better shape generally than the standard varieties produced by older breeding methods. This is due, perhaps, to the greater vigor that seems inherent in hybrids of all kinds. What corn purposely bred for drought-fighting purposes may do can only be conjectured, but the prospect seems hopeful.

The Yearbook of Agriculture, 1936, in which the new corn-breeding method is discussed, departs from earlier editions in that it is devoted entirely to the subject of the creative development of new forms of life through plant and animal breeding. Discussions range through all sorts of crops and animals, from corn and wheat to cotton and tobacco, with cattle, sheep, horses and other livestock to fill in the animal side of the picture.

Science News Letter, October 31, 1936

TECHNOLOGY

Cherry of Victory

"About a generation before the Christian era a Roman general conquered the last province of Asia Minor, which had held Rome at bay and had encroached on her principalities in northern Greece. To commemorate this victory, cherry trees—indigenous to the region—were taken to Rome. From them developed the domestic and wild cherry of Europe and America."—Malcolm H. Sherwood in FROM FOREST TO FURNITURE (Norton).

Science News Letter, October 31, 1936

INVENTION

Present Automobile Result of Some 100,000 Patents

THE newest 1937 streamlined automobiles soon to come to the market are the culmination of more than 100,000 individual patents, according to a search made by patent examiners in connection with the coming Centennial Celebration of the American Patent System on Nov. 23, 1936.

Science News Letter, October 31, 1936

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