



Overlooked Anniversary

► **HYBRID CORN**, now waving its proud green banners over millions of American acres, might appropriately celebrate its fortieth birthday this year. The first public proposal to improve corn and increase its per-acre yield by crossing genetically pure parental lines was made in January, 1909, by Dr. George H. Shull, then of the

staff of the Carnegie Institution of Washington and later of Princeton University, in an address before a meeting of the American Corn Breeders Association at Columbia, Mo.

Hybrid corn did not begin to sprout from the soil immediately after that. New ideas of any kind seldom make a quick conquest; and agriculturalists in general are especially likely to be conservative. A great deal of experimental work had still to be done, and many points of difference thrashed out among the researchers, before the first field was planted with the new-type seed. Especially lively was the discussion between Dr. Shull and Dr. Edward M. East of the Connecticut Experiment Station, though the sparks they threw off fortunately generated more light than heat. Dr. Donald F. Jones, one of Dr. East's disciples, originated the double-cross method, now generally used, in which four pure lines are employed, first producing two hybrids and then using these as parents

of the final strain.

There were many early workers in the field of corn genetics and practical corn breeding besides these two pioneers, but it would be impossible to list them all.

Henry A. Wallace, often hailed in print as the originator of hybrid corn, is always embarrassed at such attribution. He certainly never claimed such honors for himself. Skeptical since boyhood of the value of older methods of seed-corn selection, he became an early convert to the hybrid-corn idea, used the family's farm journal as a pulpit for preaching it as sound doctrine to many thousands of practical dirt farmers, and financed with "venture capital" the first company devoted exclusively to the production and sale of hybrid seed corn.

Slow to take hold at first, hybrid corn finally swept its older rivals from the field. Yields per acre, as compared with open-pollinated corn, are commonly estimated as at least 20%.

Science News Letter, June 25, 1949

AERONAUTICS

Red for Cockpit Lighting

► **NIGHT FLYING** is claimed to be safer with a new type of radio control panel for airliner and military cockpits which utilizes red lighting to eliminate glare and minimize eye fatigue for the pilot.

It is a development of Bendix Radio Division of Baltimore, and is the result of extensive studies by psychologists in determining human factors in accurately reading aircraft instruments. It was found that dials lighted with white light tend to dazzle the eye with glare, especially when the pilot is required to read a lighted panel and then quickly adapt his vision for seeing outside.

Red lighting, it was determined, was ideal for better cockpit uses. In the new device, to be known as "Da-Nite" panel, the light is transmitted throughout the inside of the specially processed plastic panel itself, thus eliminating shadows. A red filter is provided in a newly designed tiny light socket holding a sub-miniature light bulb.

Multiple tiny light elements are used and they are scientifically spaced to give uniform lighting to the whole panel. With this development, pilots not only see better and quicker, either in the dark or daylight, but the eye adapts itself to changing visual conditions with greater speed.

When a pilot's eyes glance at a panel lighted with white light, they become dazzled by the light and time is required for them to adapt themselves to see the outside terrain, Bendix scientists explain. Studies made by them resulted in the finding that red is ideal for better cockpit lighting. It does not paralyze the eyes as the white light appears to do.

In describing the new development, John W. Hammond, of the Bendix company, pronounced it "a virtually perfect night

lighting system for aircraft control panels." Letters, numerals and other markings are applied to the plastic panel by a newly developed photographic process, he said. In daylight the markings appear an egg-shell white against a non-reflecting black background. In darkness, red light within the plastic panel causes the letters and numerals to become a deep red. In either daylight or darkness the characters are bold, with sharply defined edges due to the high quality of the photographic process. Quick eye adaptation, less fatigue, and high comprehension of legends are assured, he added.

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