



VAST GENETIC VARIETY IN SIZE, SHAPE AND COLOR

AGRICULTURE

Unique Barley Type

► A UNIQUE TYPE of barley that adapts to its surroundings so quickly it might be said to have jet-propelled evolution abilities is now being distributed throughout the world by the United Nations' Food and Agriculture Organization (FAO).

Coit A. Suneson, U.S. Department of Agriculture plant breeder stationed at the University of California's farm at Davis, told the American Society of Agronomy meeting in Chicago that the barley is "a potential giant step to provide more food for the world."

The 700-pound barley crop, harvested this season from two-fifths of an acre at Davis, has the built-in capacity to adapt itself to any of the world's grain growing areas and to improve its own production by a process of quickened evolution.

During 35 years on the Davis campus, an early version of Mr. Suneson's barley has increased its production at the rate of one percent annually, with a minimum of care. But with the best plant selection skills now known, the average yearly increase has been boosted as high as three percent.

These facts have tremendous implications for underdeveloped nations where grain production is limited by lack of money and know-how.

The self-improving barley was developed by using two unusual approaches to plant breeding. One was the random intercrossing of 7,500 types of barley—essentially resulting in a calculated hodge-podge of genetically favorable characteristics. The

second step was to plant this mixed-ancestry seed in as many areas as possible, during which time plant characteristics fitting the various environments multiplied and the weak or unsuitable characteristics dropped out.

The upshot is that the seed from the Davis crop, now being distributed in four-pound lots to barley breeders throughout the world, literally can be tossed into a field anywhere and something will come up. In

ROCKETS AND MISSILES

Space Goal Improved

► SUCCESS WAS PREDICTED accurately for the firing of the Mercury escape capsule from a Redstone missile by Dr. T. Keith Glennan, National Aeronautics and Space Administrator.

While this success brings closer to achievement the United States goal of manned space flight, Dr. Glennan told SCIENCE SERVICE that the whole program of launch vehicles currently is undergoing "re-examination and re-assessment." Recent NASA failures prompted the re-appraisal, notably the fizzle of the Atlas-lifted lunar Explorer VI last week and the failure of the Mercury capsule escape system launched from a Jupiter rocket last month.

"We expect failures. We learn from them; and what we learn helps us toward ultimate success in all our space goals," Dr. Glennan

said. "The recent failures certainly have in no way significantly affected Project Mercury," he added.

"Evolutionary plant breeding," as Mr. Suneson calls this speeded up selection process, is expected to do more than raise backward food standards. The program will put the world's barley assets into circulation rather than leaving them undiscovered or locked away in plant breeders' seed vaults.

Because this basic barley breeding stock will be scattered around the globe, Mr. Suneson said that if civilization is destroyed by nuclear war, the surviving peoples could tap this breeding reservoir and reap the evolutionary gains of all history in a few years.

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GENERAL SCIENCE

Ours Is a Great Age Says Carnegie President

► OUR AGE is greater than you think.

Our times show all the elements that, in looking back, "distinguished a great age," Dr. Caryl P. Haskins, president of Carnegie Institution of Washington, said in his annual report.

Our time resembles earlier dynamic and critical eras, he said. It shows the same sense of new physical frontiers close at hand, the same ferment of new ideas, and the same new and violent demands upon political and social organization.

Periods of great intellectual and technical achievement, such as the present one, are characteristically accompanied by grave uncertainty and questioning, Dr. Haskins said, adding:

"Our age may be considered typical of the most significant eras of change since the fall of the Roman Empire."

Dr. Haskins charged that major tasks for the coming years will be to find means to adjust to the "new powers, new values and new challenges and requirements" while preserving intact the fundamental values and characteristics of our society.

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said. "The recent failures certainly have in no way significantly affected Project Mercury," he added.

"People should understand that this is a research and development program and we must go it a step at a time," he said.

"A safe launch and return of man in space must be reasonably assured before we go further."

There have been rumors that Dr. Glennan might be asked by the President-elect to continue as NASA's administrator. Dr. Glennan's only comment on this rumor was, "We'll have to wait and see." Present plans are that he will return to Case Institute of Technology to his position as its president.

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