

HORTICULTURE

Wealthy South, Healthy North

A more prosperous South and a better-fed North are resulting from a vegetable breeding program for the South started about 15 years ago.

By MARTHA G. MORROW

➤ A MORE prosperous South and a better-fed North are resulting from a vegetable breeding program for the South instituted about 15 years ago by the U. S. Department of Agriculture.

A number of advances can already be traced to the Southeastern Regional Vegetable Breeding Laboratory just seven miles outside of Charleston, S. C. This summer look for:

Congo watermelons. Some 25,000,000 of these tasty new melons with tough but thin rinds will be shipped north.

Contender snapbeans. Introduced only two years ago, they are already a garden favorite.

Hopes for the future:

Sweeter fresh corn-on-the-cob in May and June. Hybrids with greater sugar content are being developed for the South.

Fresh garden peas all winter long. Satisfactory varieties for winter growing in the far South are being sought.

Cabbages and tomatoes with higher vitamin C content. Increasing the nutritional value of vegetables is one of the station's aims.

Research at the Laboratory, with an eye to developing vegetables that ship well, indicates:

Thickness of the watermelon rind does not necessarily keep the melon from breaking—firmness of the flesh is more important.

Tough fibers do not prevent snapbeans from wilting—the fewer the hairs on the bean, the better the water is kept in.

Breed Vegetables Only

The only laboratory in the country devoted entirely to vegetable breeding, the Southeastern Regional Vegetable Breeding Laboratory was set up in South Carolina during the spring of 1936 to conduct basic research in the heredity and behavior of vegetable crops, and to develop vegetable varieties superior in quality and better adapted to the southeastern region of the United States.

About 37,000,000 people have their homes in these 13 states served by the breeding laboratory. This area extends westward from Virginia through Kentucky, Arkansas and Oklahoma to Texas, and includes all states south and east. Since some growing conditions are somewhat similar, the station also cooperates with Hawaii and Puerto Rico.

It seems logical that the South, having

large areas of land suited to truck farming and long growing seasons in both spring and fall—and even throughout the winter in the deep South—should play a large role in supplying fresh vegetables to northern markets where some 40,000,000 city-dwellers are dependent on outside sources for their vegetables. Large quantities of market-garden produce each year are shipped north by southern growers.

But the South on the whole does not produce sufficient garden vegetables to meet its own nutritional requirements during late summer. Large quantities of fresh and processed vegetables are shipped into the South from other parts of the country. In midsummer, for instance, fresh tomatoes and head lettuce are imported from the North.

Wide variations exist throughout the South in the character of the soils, in rainfall and in seasonal temperatures. Plant diseases and insect pests to destroy crops and to spread certain diseases are found here as in other parts of the country. Nematodes, microscopic parasitic worms that damage the roots of many plants, are common.

Frost in early spring and late fall, excessive heat in summer and, at times, prolonged drought in some sections combine to make vegetable growing difficult at best.

Most of the vegetables grown in the South, with the exception of certain newer varieties of sweetpotatoes, watermelons, collards, southern peas and kale, were chiefly developed in the northern states. Frequently these varieties do not grow well on such soil and in such climate as is available in these southern states.

Developed for Specific Needs

The Regional Vegetable Breeding Laboratory already is helping meet the need for varieties specifically designed to flourish in the South. Heat tolerance, disease resistance and ability to ship well are high on the list of requirements.

Vegetables developed specifically for the home gardener may be quite different from those created for the truck farmer. The truck farmer wants most of his vegetables to mature all at once; the home gardener desires vegetables that ripen over as long a period as possible. The truck farmer must be able to ship his produce to market with a minimum of damage and his crops should permit harvest by machine if possible; home gardeners hand-pick their own



WATERMELON "HAMMOCKS"—Melons, grown on trellises to conserve ground space, are supported in cloth hammocks to keep their own weight from breaking them from the stem at the U. S. Regional Vegetable Breeding Laboratory, Charleston, S. C. C. F. Andrus, senior horticulturist, is shown examining a watermelon cross.

vegetables and usually eat or process them as soon as harvested. At the laboratory more attention usually is given to the needs of the truck farmer.

The active breeding program at present is limited to seven crops. Dr. S. H. Yarnell, director of the Laboratory, also personally does the research on cabbage and sweet corn. C. F. Andrus is responsible for the tomato and watermelon breeding. J. C. Hoffman does the breeding of snap beans and lima beans. J. A. Eades devotes his time exclusively to English or garden peas.

The vitamin C in tomatoes and cabbage, niacin and sugar in sweet corn, and fiber content of snap beans are determined by Miss Margaret Kanapaux. All varieties at the Laboratory, to be considered promising, must not only grow well and look appetizing, but also be wholesome to eat.

The study of a new variety of snap bean or tomato, however, only begins at the Vegetable Breeding Laboratory. Once a promising variety has been found, it is tested in several dozen locations throughout the South. Certainly it is possible to get more information in a single season by growing a vegetable in 25 locations than

PSYCHOLOGY

Forced Confessions

► THE UNITED Nations could take action against Czechoslovakia for their third-degree methods in forcing a confession from the newspaper correspondent William N. Oatis and the grilling of jet pilot Luther G. Roland if the suggestion made by Dr. Joost A. M. Meerloo had been adopted.

Dr. Meerloo urged early this year that the United Nations declare that political intervention in the human mind to force confessions or betrayal is an international crime on a par with genocide. Such an attack on man's mind and will might be called "menticide," Dr. Meerloo proposed in a report to the AMERICAN JOURNAL OF PSYCHIATRY.

Mental torture—menticide—is the stock-in-trade of all police states, Dr. Meerloo points out. He had direct experience with menticide as a physician treating mental and physical ills under the Nazis in the Netherlands for two years.

It is a growing threat to mankind, he said—a threat far worse than genocide because it destroys free thought and makes servile, mechanical instruments of man's inviolate thought processes.

If the prisoner's mind proves too resistant under third-degree methods, Dr. Meerloo reported, narcotics are given to confuse it: mescaline, marijuana, morphine, barbiturates, alcohol. If his body collapses before his mind capitulates, he receives stimulants—benzedrine, caffeine, coramine—all of which help to preserve consciousness until he confesses.

Drugs reported used by the Communists to produce confessions would not themselves

be effective toward this result, according to medical opinion in this country. "Actedron," one drug reported used for this purpose, is known in the United States under the name benzedrine. It is the "pep pill" used by truck drivers to keep awake on the road and by students who want to stay awake while cramming for examinations. It might be used by the Communists to keep their victims awake during long hours of incessant questioning.

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INVENTION

Twists in Line Replace Ordinary Clothespins

► THE NEED for the long-used ordinary clothespin to hold the washing on the line is eliminated with a new type of clothesline on which the government has issued a patent.

This clothesline is made up of a series of twisted wire links. The twisting is in the middle of each link. Both ends of the links are broadened to form a crossbar at one end and a hinged clasp at the other. It is this hinged piece that keeps the clothes on the line.

Patent 2,557,756 was awarded to Melvin L. Ollman, Indianapolis, Ind., for this invention. The patent covers not only the line but a container for the line as well. This container is permanently attached to the line and forms only a small package when the line is collapsed within it.

Science News Letter, July 21, 1951

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