Discover an 8000 year-old 'new' vegetable

BELTSVILLE, Md. — Amaranth as a cooked vegetable tastes as good or nearly as good as spinach, say most of the 60 people polled in recent tests here.

The tests are hardly scientific proof that most Americans would enjoy eating amaranth greens as much as spinach. However, as part of a 2-year study of vegetable amaranth in USDA's New Crops Program, the tests point out that amaranth may have arrived as a hot-weather spinach substitute to be taken seriously.

Field tests last summer by USDA research agronomist Austin Campbell, funded in part by USDA's Small Farms Program, indicate that certain varieties of amaranth would make excellent greens crops — yielding at least three crops a season. Unlike spinach, which requires cool weather for growing, amaranth does best in mid-summer heat. Leaves of spinach-like flavor can be harvested about 30 days after planting amaranth seeds, says Campbell.

Amaranths, including 19 leafy types being tested by Campbell and high-protein grain types, have been rediscovered by agricultural scientists. Largely ignored by modern agriculture, amaranths are actually among the oldest crops of the New World, dating from 6000 B.C.

Today, faced with increasing world hunger and malnutrition, scientists, such as Campbell and others with USDA's Science and Education Administration, are focusing on such forgotten crops in an effort to "diversify our farming systems." Diverse systems, with many crops of special attributes, says Campbell, are less vulnerable to plant disease and insect epidemics than large monoculture cropping systems, and may lead to a more productive agriculture.

Amaranth's special attributes include:

Good nutritive value. Amaranth contains high amounts of good quality protein and essential minerals. Amaranth grain contains a better balance of amino acids than corn, wheat, rice or other popular grains. Foods with well-balanced amino acids — the building blocks of proteins — help the body produce necessary proteins.

Efficient growth and versatility. Amaranth is very efficient in terms of converting the raw materials of sunlight, soil and water into plant tissues, proteins and vitamins. Amaranth can be grown anywhere spinach grows and is adaptable to many different climates.

Good potential for improvement through plant breeding. The large Amaranthus plant family is a rich pool of genetic traits. Amaranths offer breeders more genetic diversity in their present undeveloped state than do many widely grown crops. Breeders could, for example, raise already high levels of leaf proteins.

Serious study of amaranth as a potential U.S. crop began seven years ago when Rodale Press' Organic Gardening and Farming Research Center in Emmaus, PA started what has become an extensive project on amaranth cultivation, breeding, and nutritive value. Research gained momentum in the last couple of years and interest in amaranths is high among home gardeners. Current research includes studies by USDA's Cereal Research Unit in Berkeley, Ca., on the potential of amaranth grains.

Amaranth's long association with man is probably due to the plant's ability to readily adapt to new environments created by people. Just as the North American pigweed — a wild amaranth — quickly invades a freshly turned home garden, ancestor plants of the amaranth probably kept close to early tribes of Central America by gaining hold on disturbed soil.

Ag centers report $303.5 million receipts

LITITZ — Gross receipts of 3,472 agricultural service establishments totaled $303.5 million for Pennsylvania in 1978, according to preliminary data from the 1978 Census of Agricultural Services.

The data published by the U.S. Department of Commerce's Bureau of the Census are shown by selected kinds of business on the back of this release.

Establishments included in the census were defined as 'economic units primarily engaged in performing for others on a fee or contract basis the following: Soil preparation services, crop services, veterinary services, other animal services, farm labor and management services, and landscape and horticultural services.

Final data for agricultural service establishments will be published in Volume 3 of the 1978 Census of Agriculture, and will contain more detailed data for States, as well as for counties.

Announcements containing descriptions and publication date of all reports from the 1978 Census of Agriculture, as well as an order form, can be obtained from the Subscriber Services Section (Publications), Bureau of the Census, Washington, D.C. 20233.

Train for nursery management

UNIVERSITY PARK — People trained in the propagation, field production, use and maintenance of trees, shrubs, and flowers are in demand.

Both landscape and production nursery persons as well as garden center operators need horticulturists. The increased emphasis on beautification of buildings and highways would indicate that trained ornamental plant persons will continue to be in demand.

For more information contact William L. Sipple, 306 Agricultural Admin. Bldg., University Park, PA 16802, Phone 814/865-8301.

Proper handling is important with eggs

HARRISBURG — Proper storage and handling are important in maintaining egg quality, according to Vicky Wass, Egg Promotion Specialist with the Pennsylvania Department of Agriculture.

"A high quality Grade AA egg can rapidly lose its quality and become a Grade B egg unless properly handled," said Wass. "Eggs kept at room temperature (above 68 degrees F.) will lose more quality in one day than in one week under refrigeration. Kept under proper refrigeration, (40-45 degrees F.) eggs will retain their quality for several weeks."

Wass explained that when an egg loses quality, the following changes occur: the thick white becomes thin, the yoke breaks easily when the shell is opened, the air cell increases in size and the yolk may become off-center, and the egg absorbs odors. "By following just a few simple guidelines, these changes can be kept to a minimum," said Wass

Fresh shell eggs should be immediately refrigerated after delivery. They can be kept under refrigeration in their carton with the large end up for approximately five weeks with insignificant grade-quality loss. Refrigerated hard cooked eggs in the shell can be kept at least that long.

A fresh shell egg only loses moisture and carbon dioxide with age, not nutrient value. Sometimes eggs will be treated with an odorless, tasteless mineral oil to help maintain freshness. This process seals many of the shell pores and slows down the loss of carbon dioxide.

Eggs should be stored away from foods such as onions, apples and cabbage, because eggs are susceptible to strong odors. If either the yoke or whites are leftover, use them as soon as possible.

Leftover yolks should be stored under milk or water in a covered ontainer up to five to seven days or, hard cook the yolks and store for four to five days. Whites may be refrigerated in tightly covered jars for five to seven days. Freezing is only recommended for leftover eggs.

To freeze whole eggs, break them one at a time into an airtight container and gently mix, do not beat. Freeze in appropriate amounts for usage. Eggs can also be put through a sieve to blend yolks and whites.

To freeze yolks, press yolk through sieve. If yolk will be used for main dishes, add ½ teaspoon salt per cup. If they are to be used for desserts, add 1½ teaspoons sugar for each cup of yolks.

When freezing egg whites, separate and press through sieve Do not add anything before freezing. Thaw whites in refrigerator

Frozen eggs and egg products should be defrosted quickly. This can be accomplished in the refrigerator or in a vat of cold running water. Eggs should never be allowed to thaw at room temperature. Defrosting at temperatures higher than 45 degrees F. can cause curdling and off flavor.

Defrosted eggs should be used promptly. The unused portion should be refrigerated and used within three days.

Fresh eggs, protected by the shell and two shell membranes are wholesome foods. However, if stored in a soiled condition, become cracked, are not refrigerated or are otherwise mishandled, they may become contaminated with bacteria that are ordinarily stopped by the shell membranes. Once through the membranes, bacteria can thrive in the egg meat. Since eggs are highly nutritious for bacteria as well as man, mishandled eggs and foods containing mishandled eggs will support bacteria growth.

If an egg is broken, cracked or leaking, cooking it until the yolk is hard makes it safe to eat. Only when a broken egg is eaten raw or partially cooked, can it cause illness. Cracked or cooked eggs should be used at once, and only in foods that are to be thoroughly cooked.