

## “Air Potatoes” Grow Above Ground

By Jim Ruen, Contributing Editor

When I first heard stories about “air potatoes” that grow above ground, they sounded too good to be true. I learned that they’re members of the yam family, and that they form tubers in the ground and on their vines. They are perennial, and the above-ground tubers are supposed to be quite tasty. I wanted to try some, but the only ones I could find grow wild in Florida and are poisonous.

Then I read “Perennial Vegetables,” by Eric Toensmeier. He writes about an air potato variety that yields 17,000 lbs. per acre without plowing or cultivating. I called him to find out more. He told me they were generally considered a tropical plant, not a good fit for Minnesota.

“One variety in India produces 33 tons of aerial and underground edible tubers per acre,” he says. “There are varieties that could be grown from the Carolinas to California and into the Pacific Northwest.”

The bad news is that seed tubers for the edible air potato are not currently available commercially in the U.S. Because of its poisonous relative, nurseries are hesitant to import it, and permits are required to grow it in several states.

“The air potato is common for subsistence farming in Mexico and Guatemala,” says Toensmeier. “They haven’t been commercialized into production agriculture because they produce tubers over several months.”

Toensmeier grows an air potato relative called Chinese Yams that produces chickpea

sized bulbs over a 6 to 8-week period. It also produces an underground tuber, but harvesting it kills the plant. Toensmeier says they are grown on trellises in Japan and yield more than 16 tons per acre. Mats are laid beneath the trellises to catch the tubers, which fall off when mature.

“I boil them for 10 minutes and eat them like new potatoes,” he says. “They can be stored in a cool, dry place for 4 to 5 months.”

Toensmeier is confident the edible air potato would make a good addition to U.S. gardens and small farms. Not only are they drought tolerant and have few pests, their perennial nature means reduced work load once they have been established.

“They would make a great livestock feed,” he says. “You could run pigs under the vines and let them eat the tubers as they drop.”

Whether for livestock feed or human food, Toensmeier is enthused about the edible air potato’s potential. Like the other 100 plus edible, perennial vegetables he features in his book, the tropical yam family requires little work or outside inputs once established.

“As a general group, perennial vegetables are less work, and I like things that are less work,” he says. “If there’s a concern that a perennial could spread, it’s best to plant it with a zone around the plant that is kept grazed or mowed to prevent spreading.”

In his book, he outlines how to use perennial vegetables in your garden or yard, including propagating them from seed, tubers and



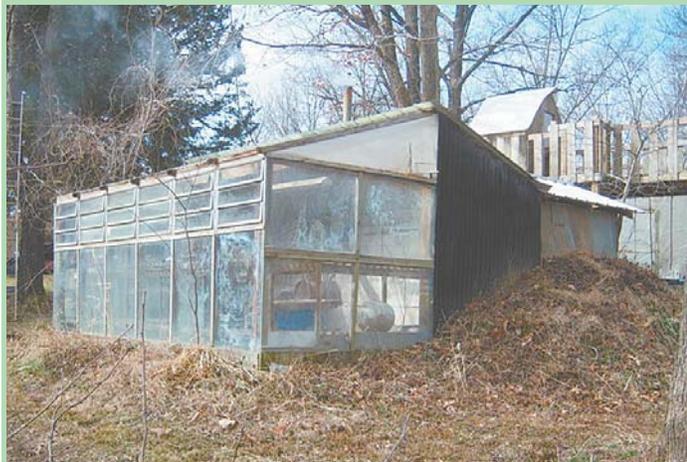
Air potatoes form on the vines, left. Photo at right shows a mature air potato.

cuttings. Then he profiles more than 100 of his favorites, covering how and where they will overwinter or grow as annuals. He also provides websites, plant and seed sources and other resources.

Contact: FARM SHOW Followup, Perennial Vegetables, Chelsea Green Publishing Co., P.O. Box 428, White River Junction, Vt. 05001 (ph 802 295-6300; www.chelseagreen.com).

For Chinese Yams: Tripple Brook Farm, 37 Middle Road, Southampton, Mass. 01073 (ph 413 527-4626; www.tripplebrookfarm.com).

Photo shows an underground potato and small bulbils produced by an air potato relative called Chinese Yams.



Greenhouse is built into side of hill, with heat from the ground keeping the greenhouse warm. A cement mixer drum is buried in the hill side behind it.

## Earth-Sheltered Greenhouse Doubles As Storm Shelter

Mark Jenkins built a 12 by 20-ft. greenhouse into the side of a hill with a combination root cellar/storm shelter, made from the drum off a cement mixer truck, buried behind it.

First Jenkins excavated the hillside to bury the cement drum. He cut off the beveled front half of the drum and removed all the baffles from inside. That left him with a round tank, 7 ft. tall and 8 ft. across. It mounts sideways on concrete blocks for drainage and he cut a door out of the side facing the greenhouse. “The domed roof is 3/8-in. thick with 1/4-in. sides,” he says. “I lined it with shelves made from treated lumber and dismantled pallets. There’s room for 5 to 6 people to stand and for 500 jars of canned goods.”

The greenhouse was framed against the excavated hillside, in front of the root cellar/shelter. Jenkins slipped pieces of recycled corrugated tin behind wall timbers where they came in contact with dirt. The dirt floor and exposed a 2-ft. dirt bank on the backside soak

up heat during the day and release it at night.

“I’ve had nights that got down to -10° F and not had to worry about plants in the greenhouse,” says Jenkins. “Heat from the ground keeps the greenhouse warm.”

Costs for the greenhouse were minimal, thanks in part to a door and window recycled from an old camper. The real savings came in 30 pieces of glass salvaged from a nearby factory that years before had stopped using tempered glass in the screen doors and windows they made.

“They set all the unused glass outside for the taking, and my dad picked up thousands of sheets of it,” says Jenkins. “I had plenty on hand for what would have been my biggest expense.”

Contact: FARM SHOW Followup, Mark Jenkins, 12723 E. Panama Road, Nevada, Mo. 64772 (ph 417 684-3339; kyud8@yahoo.com).



For the elderly or anyone with physical limitations, planting directly into bags of potting mix can make gardening a lot easier.

## Here’s An Easy Way To Garden

By C. F. Marley, Contributing Editor

Planting a garden directly into bags of potting mix may seem a bit different, but it can make gardening a lot easier, especially for the elderly or anyone with physical limitations.

The idea is to put bags of potting soil on the ground or on raised beds, then slit the bags open. The bottom of each bag should be punctured for drainage. Once planted you can throw some mulch on top to hide the bags.

Credit for the idea goes to researcher Dr. Clydette Alsup-Egbers, an agronomist with Missouri State University in Springfield. She got the idea after watching an urban couple struggle to break up their compacted ground to plant their first garden.

“Gardening should be enjoyable, not back-

breaking work,” she says.

Dr. Alsup-Egbers says there are several advantages to her system of planting directly into bags of potting mix. She says soil problems are fewer in the bagged gardens. Also, the potting soil warms up faster than does the ground.

As with anything new, it’s a good idea to go slow at first. Strawberries, radishes, cherry tomatoes and other small crops may be the best way to go at first.

You can keep planting into plastic bags from year to year.

Contact: FARM SHOW Followup, Dr. Clydette Alsup-Egbers, 901 S. National Ave., Springfield, Mo. 65897.