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Nature Note**Baobab Tree**

➤ ONE OF THE STRANGEST shaped trees in the world, the baobab grows to a medium height, but the base of the trunk is enormous—a circumference of 112 feet has been measured.

Thick, heavy branches grow out horizontally above the swollen trunk, which gives the tree the appearance of growing out of a huge Grecian vase.

The baobab, *Adansonia digitata*, or monkey-bread tree as it is also called, grows well in dry, desert areas of Africa, India and other tropical lands. These curious solitary trees may compete with redwoods as one of the longest-living trees in the world. Adanson, the French botanist after whom it was named, claims he has calculated the ages of some trees to be 5,000 years old.

The large smooth leaves, which are called digitate because five leaflets radiate from a central point much like the digits or fingers on a hand, in India drop to the ground at the beginning of the year, leaving the bottle-shaped trees standing gaunt and curious-looking.

New leaves sprout in a few months, just before the flowers arrive. These flowers have large snow white petals curving backwards, with a white column sticking out of the middle, topped with a pollen-speckled puffball. During July these immense flowers open at midnight and wither in the mid-morning sun.

The fruit is white and shaped like a gourd, with a spongy acid pulp which is edible, and from which many medicinal preparations have been made. The timber of this tree is useless as it is so spongy, but the bark makes extremely strong rope.

• Science News Letter, 88:62 July 24, 1965

AGRICULTURE**Hogs, Cows Getting 'People' Treatment**

➤ A NEW SELF-SERVICE feeding system for hogs will automatically mix up a combination of feed and water and squirt it right into the hog's mouth. Having determined how much the average hog eats and how big its mouth is, two agricultural engineers designed a feeding nozzle which delivers a measured amount of food each time the hog bites the nozzle, reported Carl Van Gilst, Ft. Atkinson, Wis., and Robert M. Peart, Purdue University, Lafayette, Ind.

Pigs getting plenty of shade and shower-baths were the object of another recent study.

Two test groups of pigs had access to a metal-roofed shade, equipped with nozzles showering about 2.8 gallons of water per hour. Two other groups had access to plenty of shade, but not the sprinklers.

"Excellent performance" was obtained from pigs on both treatments, but those cooled by the water spray ate more often and thus got bigger faster, reported O. M. Hale, Georgia Coastal Plain Experiment

Station, Tifton, and R. L. Givenue, U.S. Department of Agriculture's engineering research division, Davis, Calif.

Cows kept cool in hot weather were found to have better breeding efficiency and milk production in a third study, reported by Frank Wiersma and Gerald H. Scott, both of the University of Arizona, Tucson.

All three studies were reported in Athens, Ga., at the annual meeting of the American Society of Agricultural Engineers.

• Science News Letter, 88:62 July 24, 1965

BOTANY**Plant Growth Hormone Induces Tree Maturation**

➤ THE PLANT GROWTH HORMONE gibberellin has induced Arizona cypress to mature sexually, producing male flowers in 88 days, which is one-twentieth the normal flowering age.

The discovery was essentially an accidental one which occurred while experiments were being done on reversing the effects of growth retardants on trees. Gibberellin spray was being used to reverse the action of the retardants.

Miniature male cones, the flowers of the cypress tree, appeared about 25 days after a group of 55-day-old trees had been sprayed with a solution containing the plant growth hormone.

"Gibberellin apparently acts on the growing points—meristems—at the end of each shoot, stimulating the meristems to become flowers instead of producing new foliage," said Dr. Richard P. Pharis, plant physiologist and assistant professor of botany at the University of Alberta in Calgary, Canada. He conducted the research in California Institute of Technology's plant physiology laboratories in Pasadena, Calif.

The Arizona cypress is related to the redwoods, cedars and junipers. All are conifers and most of them appear to possess the ability to flower very early in life but do not do so, Dr. Pharis said.

"Speeding up reproductive maturity could greatly accelerate the production of trees and also could telescope the time required to develop genetically superior trees," he said.

• Science News Letter, 88:62 July 24, 1965

AGRICULTURE**Strong Root Systems Increase Grain Output**

➤ BY SELECTING wheat plants with strong root systems, Russian scientists are increasing grain productivity by about 132 pounds per acre, it was reported in the Soviet publication Science and Life.

Productivity of corn can be increased by 176 to 220 pounds per acre, and sugar beets by 1,320 pounds per acre, according to experiments conducted by F. G. Kirichenko at the Institute of Selection and Genetics at Odessa in the Ukraine.

Roots of these plants, as well as of barley and sunflower, were cultivated in nutrient solution and then planted in soil.

• Science News Letter, 88:62 July 24, 1965