

# Beekeeper's

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visitor for a close-up inspection.

Tales of terror that have risen from supposed attacks of African "killer" bees have not alarmed the Red Lion beekeeper.

"They're a more high-strung strain of bees and are just aggressive about defending their homes," he insists. Minnich is convinced that, by the time the new strain of bees may work their way into upper areas of the country, they will have crossbred with the more

gentle domestic breeds and become less aggressive. He adds that the "killer" strain does readily accept a Golden Italian queen, a bee fancier's solution to injecting more acceptable personalities into a mean-tempered variety.

Always interested in helping a novice beekeeper get started, Minnich frequently aids others in ordering packages of bees. A package weighs about three pounds, with approximately 5000 bees per pound, and costs \$22.50. Each package includes a queen; she is

placed first into the waiting hive and the worker bees automatically follow her into the structure. Bee larvae mature to adulthood in only 21 days, so a colony can multiply quite rapidly.

There is only one major disease threat to a thriving colony of bees. American Foul Brood is an affliction of bees in the larvae stage that causes them to become weak and easily preyed upon by outside colonies. The disease then spreads to the conquerers and eventually out into other hives.

Eight other states now provide fumigating equipment to their beekeepers to control American Foul Brood. Minnich would like to see the Pennsylvania Department of Agriculture take steps to provide this service to the state's apiaries. Broods containing the disease must be destroyed, but with the proper fumigating equipment, hives and sections of the internal honey-storage areas can be treated and reused.

Bees play an important role in the economic well-being of the nation's agriculture. Over 100 crops

are dependent on the cross-pollination wrought by visits of honey bees.

"Did you know that germs can't live in honey?" queries Minnich. "That's a proven fact. Back in the times before antiseptics were in common usage, bad cuts were wrapped in cloths that had been dipped in honey and the injuries healed remarkably well."

Such knowledge has been gleaned over the years by Minnich from endless reading and study of honeybee lore and active participation in related organizations. A member of both the county and state beekeepers associations, he has won a long list of awards and trophies for hive and honey exhibits.

Traveling in search for additional information on his favorite subject, Minnich attended the 22nd annual International Agricultural Congress at Munich, Germany, during 1969. At the worldwide conference, only top-notch authorities with documented research are allowed to make presentations to the delegates. One breakthrough in bee science that particularly interested

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Minnich was a study by a German researcher, Dr. Von Frisch. The scientist was the first to document the theory that a bee returning to the hive will perform a "dance," and through this means of communication with the colony, the returning bee will inform the workers where pollen can be found, in what direction and how far away the source lies.

According to Minnich, another such international researcher has documented the value of bee venom in the successful treatment of arthritis. The healing qualities of bee stings has long been recognized in some countries, but is

questioned in the United States. Some physicians once used live bees which would sting joints of the body afflicted with painful arthritis, and the venom in the sting would ease the pain of the disease. Today, the healing venom is extracted from the stingers of the bee and injected with modern syringes.

The winner of numerous recognitions throughout his beekeeping years, Minnich is active in church and community work, helps to guide the activities of the 4-H youth beekeeping projects and has taken part in exhibiting at the York Fair for 43 years.

## Refrigeration course offered

UNIVERSITY PARK — Most mechanical refrigerators are of the "compression system" type. All compression refrigeration systems depend on the evaporation or boiling of liquids to remove heat from a room or box.

Paul M. Anderson, associate professor of agricultural engineering at Penn State, and author of the correspondence course on Farm Refrigeration, points out that the most efficient operation of this compression system results when the discharge pressure is as low as possible and the suction pressure as high as possible.

The high pressure must be such that the boiling point of the refrigerant is 20 to 30 degrees higher than the temperature of the air or water used to cool the condenser. The suction pressure must be low enough that the refrigerant is 10 to 20 degrees below the temperature desired in the storage area.

Anderson notes that it is not uncommon to find these pressures higher than necessary, thus resulting in poor performance. These and other tips are given in a 10 lesson study-at-home course. The course is intended to help farmers understand refrigeration and their application to milk coolers, egg coolers, air conditioners, 35-degree rooms, and frozen food cabinets.

Additional lessons aid in selection, application, operation, and maintenance of farm refrigeration equipment. To order a copy of the course, one can write Refrigeration, Box 5000, University Park, Pa. 16802. Make your check for \$5.50 payable to Penn State.

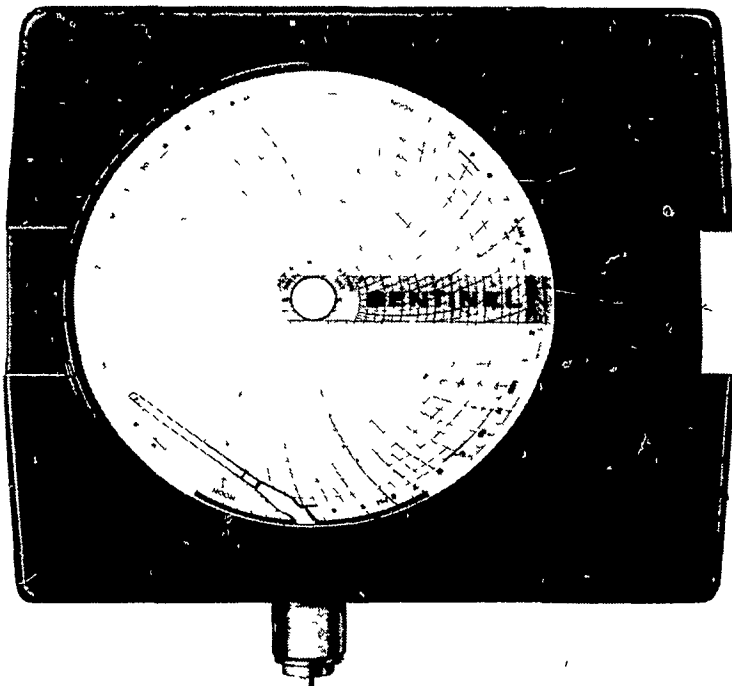
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