advances made which should be listed: (1) the Biological Readjustment Unit has now been advanced to the status of a Division in the Department of Forestry Relations; (2) active cooperative agreements have been signed by the TVA and the Bureau of Fisheries, Biological Survey, and the Conservation Commissions of the States of Alabama and Tennessee, assuring active cooperation in the field of wildlife rehabilitation; (3) the large Elk River Fish Hatchery has been started in northern Alabama; (4) a full summer's study has been completed on Norris, and has yielded information of great interest; (5) a fully equipped laboratory boat will be studying the Chickamauga-Gilbertsville waters before this paper appears.

COTTON PICKER GETS THE COTTON BUT DAMAGES LINT

The greatest difficulty to be overcome in the development of a satisfactory mechanical cotton picker is the failure to harvest existing varieties of high quality seed cotton without serious damage to the lint. This is the conclusion of Charles A. Bennett, of the U. S. Bureau of Agricultural Engineering.

Spinning tests of cotton harvested with the newest type of mechanical picker show that "even with the use of full batteries of gin cleaners and extractors the machine-picked cotton was of appreciably lower grade and yielded much more manufacturing waste than hand-picked cotton from the same field."

Machine-picked cotton, he said, is matted, carries much green leaf and occasionally has green stains on the fiber; it contains fragments of bark, stems and long grasses.

From the standpoint of picking the cotton, Bennett said, the spindle-type mechanical pickers do a fairly good job as they gather about 90 per cent of the open cotton and only from 3 to 8 per cent is knocked to the ground.

He summarized the objectives of mechanical harvesting as follows:

1. To replace entirely manual harvesting by mechanical methods, or

2. To supplement manual labor continuously during the cotton picking season, or

3. To clean up all late-season portions of open cotton remaining after defoilation of the cotton plants.

The production of high-grade mechanically-harvested cotton, Bennett said, probably will be difficult until the plant breeder has developed cottons of suitable pickability. In his opinion the problem is threefold, its solution lying within the domains of plant breeding, agricultural engineering and cotton ginning.