NOTE

THE RELATION OF SHUCK COVERING TO EAR-WORM ATTACK

Long shuck covering has been said to be a fair measure of protection against insects attacking corn in field or crib. The practice in the South has been to store corn in the shuck to reduce weevil damage. There can be no question but what the shucks do protect against weevils, angoumois moths, and perhaps other insects attacking stored corn. The only other measure of protection available is fumigation with carbon disulfide, which necessitates very tight cribs and introduces a fire hazard.

The weevils attack the corn with little or no shuck covering or the ears where an entrance has been made for them by the ear-worm through the silk-channel or through the hole in the shucks through which the worm made his exit. If corn is protected by long shucks and unattacked by ear-worm, then weevils and moths can do little damage to it.

Kyle advocates selection of corn for long shuck covering as a means of reducing damage by the weevils, wet weather, and molds, incidently also, by the ear-worm, saying, "That when there is a long shuck extension, the worms frequently cut from the silk channels before reaching the ear and the longer the extension, the more frequently this happens." He found that with long shuck extension the worms cut from silk channels in 7% more instances than where the shuck covering was short. He gives the percentage of ears attacked by worms as follows:

- With shuck extension of 4 to 6 inches ............. 72%
- With shuck extension of 2 to 3 inches ............. 87%
- With no shuck extension .......................... 96%

These observations were made in south Georgia and may be taken as more or less true for all cotton belt sections. That there may be variations, however, is shown by some observations of the writer made in north Arkansas in 1928 on open-pollinated ears of selfed strains of different varieties and also on open-pollinated ears of Paymaster corn. The selfed varieties included Hasting's Prolific, Jarvis Golden Prolific, Mexican June, Reid's Yellow Dent, Champion White Pearl, Pride of Saline, and Paymaster. To compare corn of open-pollinated ancestry and to see if selfed strains were more subject to ear-worm attack, some observations on an adjoining field and also on a distant field of Paymaster corn were made. The results given in Table 1 are much the same as in the selfed strains.