NOTES
EFFECT OF DIFFERENT VARIETIES OF SORGHUM ON BIOLOGY
OF THE CHINCH BUG

DURING the last several years the effects of chinch bugs (*Blissus
leucopterus* Say) feeding on different sorghum and corn varieties
studied at the U. S. Dry Land Field Station, Lawton, Okla., in co-
operation with the Kansas Agricultural Experiment Station, have
shown that the milos are very susceptible to chinch bug injury, that
the feteritas are somewhat less susceptible, and that the kafirs and
sorgos in general are rather resistant. In 1935, experiments were
planned in cooperation with the Oklahoma Agricultural Experiment
Station to study the effect of different varieties of sorghum on the
biology of the chinch bug. Representative varieties of the above
groups were selected for this study. The highly susceptible Dwarf
Yellow milo was chosen as a typical variety of the milo group. Com-
mon feterita, which is slightly less susceptible than Dwarf Yellow
milo under field conditions, represented the feterita group. Blackhull
kafir was used as the typical kafir variety. Atlas sorgo, a highly re-
sistant variety, was selected as a representative of the sorgo group.

Seedling plants of Atlas sorgo and Dwarf Yellow milo were used in
studies to determine the effect of the host plant on the oviposition
of overwintered females and also on the rate of development of first-
generation nymphs. Overwintered adults were collected from a field
of barley and placed in cages with these varieties for food. Individual
oviposition records were kept for all females. These females had
probably laid some eggs in the field. During the remainder of the life
period of these bugs, 12 females feeding exclusively on Atlas sorgo
laid a total of 51 eggs, while 14 females feeding exclusively on Dwarf
Yellow milo deposited 1,027 eggs, the averages being 4.3 and 73.4
eggs per female, respectively. The females feeding on Atlas plants
lived an average of 8.5 days, while the longevity of females feeding
on Dwarf Yellow milo plants averaged 23 days.

Complete records were kept of eggs laid by first-generation females
on Dwarf Yellow milo, Blackhull kafir, Atlas sorgo, and common
feterita. Ten pairs of adult bugs were tested on each of these four
varieties. The 10 females on Dwarf Yellow milo laid 1,179 eggs, and
their average length of life was 40 days. Eight females of the 10 feed-
ing on Blackhull kafir deposited 219 eggs, and their average longevity
was 29 days. Of the 10 females feeding on Atlas sorgo, only 4 laid
eggs, a total of 9 being deposited. Fifteen days was the average length
of life of the 10 females feeding on Atlas seedlings. No eggs were laid
by the 10 females feeding on feterita, which indicated unsuitability
for oviposition in the seedling stage, although it is a susceptible vari-
ety under field conditions. Results are available which show that this
variety develops considerable susceptibility as the plants become
older.

Data have also been obtained which prove that chinch bugs reared
on a susceptible variety can pass through their immature stages in
much less time than those which are fed on a resistant variety. The
average duration of the immature stages was 35.3 days when fed on