ton, Florida, but returning in 1936 to Leesburg. It was here, on January 17, 1937, that soon after the birth of a baby son, she died of an embolism. She was 29 years old.

Mrs. Goff’s chief interest was in Parasitology. She had not published anything in this field but was building up a collection of Trematodes to work on later. She was interested in her husband’s work on Peromyscus and worked out jointly with him much unpublished material on these mice. They published jointly a couple of short papers on the incubation of turtle eggs. She became a member of Phi Sigma while at the University of Michigan.

SUGAR CANE MEALYBUG CONTROL ON SEED CANE, WITH SPECIAL REFERENCE TO COLD WATER TREATMENT, AT THE NORTH FLORIDA EXPERIMENT STATION

A general infestation of mealybugs (Pseudococcus calceolariae Mask.) on all varieties of sugar cane was noted at the North Florida Experiment Station in September, 1934. Infestation was relatively heavy especially on those varieties whose leaf sheaths clung tightly to the stalk. Damage to growth and survival of certain varieties seemed to be impending, therefore a clean-up program was initiated. Out of the 1170 varieties under observation 80 were selected for yield trials and were windrowed in November, 1934. When removed from the windrow on the third of March, 1935, an abundance of mealybugs were noted. The canes were clean stripped and submerged for 25 minutes in a tank containing a .25% solution of nicotine sulphate at 65°F. plus a soap spreader. Each variety was treated and planted immediately in a field one-fourth mile from infested cane. In September, 1935, a more or less general infestation of mealybugs were found throughout the one acre planting.

The following month 22 varieties were selected for increase and further testing and were clean stripped and topped and left standing in the field for three days. Exposure to sun apparently reduced the population of mealybugs considerably. The canes were then cut and removed to shelter. Further treatments and results obtained were as follows:

1. Part of each variety was carefully washed with brushes in a soap solution and submerged for thirty minutes in tanks containing a 5% solution of lethane 420 plus lethane spreader. The cane was then removed
from the tanks and carried directly to a mealybug free field some distance from infested cane and planted. The two acres of cane thus treated were comparatively free of mealybugs in November, 1936. However, a few foci of infestation were found and with the mealybugs overwintering on the stubble it seems likely the insect will spread into a general infestation.

2. A small amount of each of nine varieties was submerged in the lethane solution for 12 hours. This was planted one-fourth mile from other cane. With the exception of two varieties this planting came to a reasonably good stand and made an excellent growth. When clean stripped in November, 1936, no mealybugs were found.

3. The remaining clean stripped cane was windrowed in November, 1935. When removed from the windrow on February 24, 1936, quite a few bugs were noted, though not so many as were previously found on unstripped cane. Each of nine varieties were tied in convenient size bundles and completely submerged in an artificial lake through which a considerable stream of clear spring water was flowing. After 7 days all cane was removed from the lake except one bundle of each of three varieties which remained submerged for 21 days. Immediately after removal from the lake the canes were planted in double straids in a Norfolk sandy loam soil one-half mile from other cane plantings. Canes submerged for 7 days came to a reasonably good stand. Considering excessive handling with resultant destruction of eyes it appears doubtful whether the treatment impaired germination to any extent. The entire one-fourth acre planting made an excellent growth of cane which was found to be entirely free of mealybugs when clean stripped in November, 1936.

Canes submerged for 21 days came to a broken stand. This was likewise partly due to inferior planting material. Only a 75 ft. section of row was planted from this treatment, therefore the observation is limited. The canes made an excellent growth and were free of mealybugs.

From this limited trial for only one year the cold water treatment appears to be effective and is economically feasible. The experiment is being continued and further observations will be made.

J. D. WARNER.

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