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TRIP REPORT

A SURVEY OF PARASITIC WEEDS AND SOME OTHER PESTS IN THE VICINITY OF JUBA, YEI, AND UPPER TALANGA

by

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MARCH 21-29, 1983

CONTRACT NO.: AID/DSAN/XII-G-0149

☆ International Sorghum/Millet

☆ Collaborative Research Support Program (CRSP)

A Research Development Program of the Agency for International Development, Participating Land-Grant Universities, Host County Research Agencies and Private Donors.

Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln

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Introduction

The purpose of this survey was to determine the presence and importance of parasitic vascular plants, especially *Striga hermonthica*, in the region by observation of fields and by discussion with agricultural personnel; to find native parasitic plants which might have the potential of become problems in crops; and to collect insects which feed on parasitic plants. Our survey was conducted during the end of the dry season and few crops were still in the field.

We were able to discuss the striga problem with: Mr Amin I. Julla, Director General, Ministry of Agriculture, Southern Region, Mr Sampson A. Koi, Plant protection Department, Southern Region, Juba; Dr Peter O. Tingwa, Dean of the Faculty of Natural Resources and Environmental Sciences, University of Juba; Mr. Cornelius K. Worigor, Assistant Project Director, Project Development Unit, Yei; Mr. Taffy Thomas, Acting Project Director, Project Development Unit (PDU), Juba; and Mr. A. F. T. Monck-Mason, Agricultural Adviser, Upper Talanga Tea Project (UTTP), Upper Talanga.

1. Yei

1.1 No *Striga hermonthica* was observed in any of the sorghum fields between Juba and Yei. We carefully examined about five fields and observed numerous others. Farmers told us that striga did occur in their fields but we failed to observe any.

1.2 Mistletoes are abundant in the broad-leaf savanna between Juba and Yei. We noted two species, *Tapinanthus globiferus* and another species which is being determined. However, no mistletoes were observed on any tree crops: teak, citrus, mango, guava, or coffee. *Tapinanthus globiferus* causes considerable damage to guava and citrus in some other parts of Sudan.

1.3 *Alectra communis*, a root parasite relative of *Striga*, was present on *Vigna unguiculata* intercropped with coffee at PDU, Yei.

1.4 *Striga hermonthica* was present in small numbers in sorghum, rice, and finger millet (*Eleusine coracana*)in research plots at PDU, Yei. Seed was collected for laboratory studies.

1.5 No *Striga gesnerioides* was observed on any legume crops.

1.6 *Striga hermonthica* is known as a considerable problem in some scheme and concern was expressed as to how it can be controlled.

2. Upper Talanga

2.1 No *Striga hermonthica* was found in any sorghum field in the area between Juba and Upper Talanga. Farmers told us it was not present. One of the staff of the Norwegian Church Aid project (NCA) also told us that striga was not a problem in their fields.

2.2 The only pest problems in tea, at present are: *Armillaria*, nematodes, and an insect tentatively determined as the tea mosquito bug. Nematodes are a problemonly in the nursery, older plants are free.

2.3 Mistletoes are frequent on a variety of forest trees in the vicini[illegible] the tea plantation but do not attack tea or species plant[illegible] fuel wood (eucalyptus, *Grivillea*, *Acacia melaloxylon*, pines[illegible] identity of the mistletoes is being determined. Numerous insects were found on a mistletoe abundant on *Albizzia* sp. These include: aphids (*Therioaphis* sp.), leaf miners, at least one lepidopteran, chewing insects (grasshoppers?), and scale insects.

2.4 *Cuscuta kilimanjari* was found in two habitats: dense forest along the trail from Talanga toKatori and along a recently disturbed roadbank. In both cases the parasitizing of diverse hosts was observed. It is likely that this parasite has a broad host range but it is not recorded to be an important problem on crops.

2.5 *Striga hermonthica* has not been noted on any of the food crops at Upper Talanga including maize, sorghum, and vegetables.

3. Miscellaneous

3.1 *Tridax procumbens* is abundant throughout the region and was prevalent in some cassava fields.

3.2 No study of the environmental impact of the tea project exists and its impact on the unique biota ofthe Imatong Mountains has not been assessed.

4. Recommendations

4.1 *Striga hermonthica* is not a major problem at present with the traditional farmer perhaps due to the practices of shifting cultivation and burning. Thus, care must be taken not to introduce and spread striga to new areas where it is not now a problem.

4.2 The nematode problem at UTTP should be addressed as soon as possible in order to present spread from the nursery to outplanted areas. Conditions for nematode growth are excellent. Heat sterilization of soil would be a simple, econimical, and effective means of nematode control.

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Field work sponsored by INTSORMIL.

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