

Reference 18 Getting acquainted with weeds of rice

Summary

Weeds can be divided into three groups: grasses, sedges and broad-leaved weeds. Good knowledge of weeds allows us to recognize the different species in the field, assess the severity of the situation and decide on the actions to take (see References 19 and 20).

In West Africa, weeds constitute one of the most important constraints to inland-valley rice production. They compete with rice for soil nutrients, water and light. Weeds reduce rice yield and quality, and may act as alternative hosts for insect pests, but also for their natural enemies (*see* Reference 21). Weeds can be categorized into three main groups: the grasses, sedges and broad-leaved species. Weeds may also be grouped according to whether they are annual (dying after producing seed) or perennial (surviving repeated cycles of seeding).

Grasses

Grasses (Gramineae) may look like rice when they are young (in fact, rice is a grass). They have long, thin leaves, usually with parallel vein, and the round and hollow stems are composed of segments separated with nodes. The roots are fibrous, rather than having a principal root.

Common annual grass weeds are *Echinochloa crus-gavonis*, *E. colona* and *Ischaemum rugosum*.

Sedges

Sedges (Cyperaceae) may look like grasses. They tend to have long, thin leaves, smooth solid stems that are triangular, polygonal or rarely round in cross-section; and, in general, they do not have nodes.

Sedges are widespread in inland-valley rice fields. The most frequent annual sedges are *Cyperus difformis*, *Cyperus iria* and *Kyllinga pumila*.

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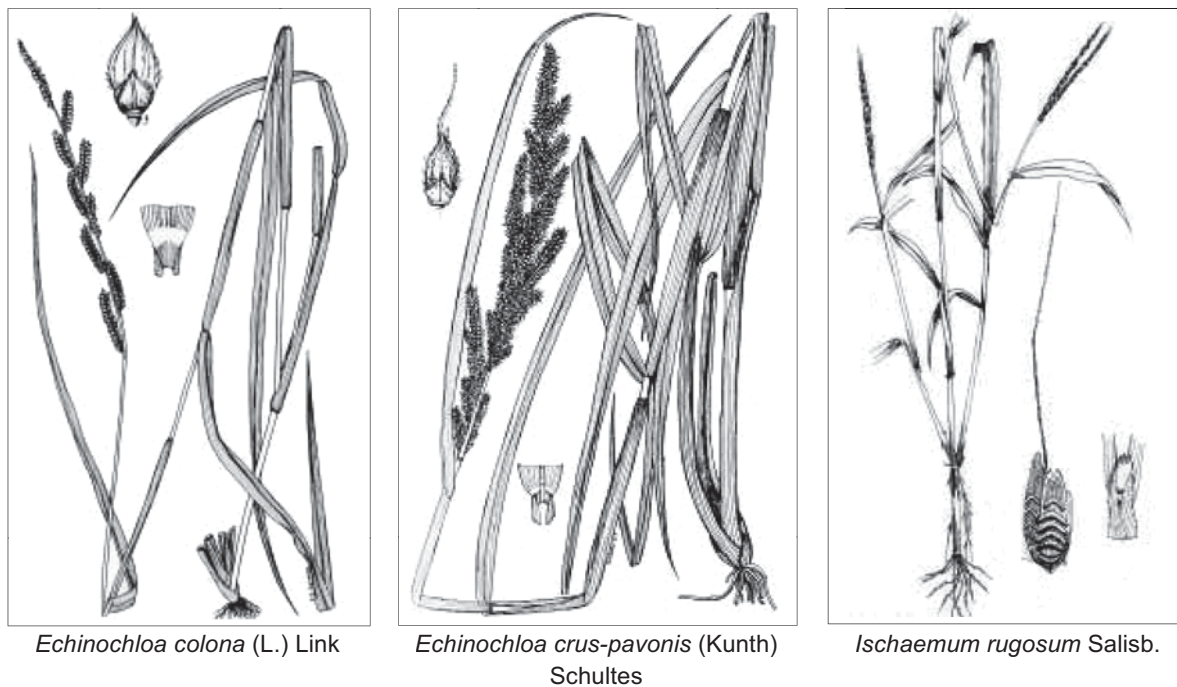


Figure 18.1. Three widespread grasses found in inland valleys



Figure 18.2. Three common sedges found in inland valleys

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Broad-leaved weeds

The leaves of broad-leaved weeds are usually wider than those of the grasses and sedges, and have branched veins. The first leaves of seedlings are a pair. Broad leaves often have one principal root that develops into a tap root.

Broad-leaved weeds frequently found in rice fields in inland valleys are: *Ludwigia abyssinica*, *Sphenoclea zeylanica*, *Ipomoea aquatica* and *Heteranthera callifolia*. In general, they are easier to control than grasses and sedges.



Ludwigia abyssinica A.
Rich.



Ipomoea aquatica
Forssk.



Sphenoclea zeylanica
Gaertner



Heteranthera callifolia
Rchb. ex Kunth

Figure 18.3. Four broad-leaved weeds dominating in inland valleys

Bibliography

Johnson, D.E., 1997. *Weeds of Rice in West Africa / Les adventices en riziculture en Afrique de l'Ouest*. WARDA/ADRAO, Bouaké, Côte d'Ivoire, 312 pp.