munities of the third world. It does not compete seriously for nutrients near the soil surface, but it digs its roots to tap nutrients where other crops will not be disturbed. It spreads its leaves prominently to maximize photosynthetic activity. But cassava is not top heavy. It secures itself with its heavy and numerous roots, hence it is not easily dislodged by wind or rainstorm. It is propagated sexually and vegetatively thus ensuring its propagation and continuity under very adverse conditions. Moreover, it is potentially toxic but possesses an endogenous capacity for detoxification. It only requires patience (or respect) in handling through proper processing techniques so that it can give the products to save our lives. So why blame cassava?

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Local alternatives to plastic mulch in seed yam production

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The yam minisett technique is a technology that was developed to produce, in a very short time, several thousands of seedyams needed for growing the more readily accepted ware yams. This technology which was developed and popularized by the National Root Crops Research Institute, Umudike, Nigeria (Okoli et al. 1982) in collaboration with the International Institute of Tropical Agriculture (IITA), adopts the use of plastic mulch to overcome the laborious tasks of staking and weeding (Otoo et al. 1985, Osiru et al. 1986). In addition, soil moisture and nutrients are conserved, erosion is reduced and the leaves receive light in two directions—direct light from the sun and the reflected light from the plastic mulch. The result is that yields are high and many more seed yams can be produced by individual farmers.

The minisett technology has been successfully tested in the yam growing belt of West Africa including countries like Nigeria, Benin, Togo, Côte d' Ivoire, Ghana and Cameroon. A recent survey shows a growing adoption of the technology and hence a growing request for the plastic mulch. This mulch which used to be imported is now manufactured in Nigeria by Ibachem Chemicals.

However, it has been difficult for this company to meet the farmers' requests for the mulch as confirmed at a recent meeting of the Nigerian Seed Yam Growers Association. There is therefore a serious need to find alternatives to the plastic mulch within the easy reach of farmers to facilitate continuous production. Staking and the use of the plastic mulch expose yam leaves to more sunlight and reduce exposure to soil pathogens. Any local material therefore, preferably organic, that can be used to keep the yam leaves away from direct contact with the soil could serve as a good alternative to the much-talked about plastic mulch. Such materials as bamboos, palm fronds, sorghum, maize, and grass straws are possible alternatives. Sorghum, maize and grass straws can be obtained from previous harvest in the savanna belt while bamboos and palm fronds are fairly common in the rainforest belt.

Therefore, an experiment was conducted to compare the seed yam production of two white yam varieties—TDr 747 and TDr 179—using plastic mulch and palm fronds as mulching materials.

Materials and methods

Six ridges, each 10 metres long, spaced 1m apart were made. Two ridges constituted a block so that there were three replications per treatment combination. Half the length of each ridge (plot) was randomly selected within each block and covered with plastic mulch and the other half was covered with palm fronds tied to a long bamboo and supported by two stumps on the ridges. Forty sprouted minisetts of each of TDr 747 and 179 were randomly planted in May 1991 under plastic and palm frond mulch respectively, at a spacing of 25 x 25 cm in each plot of two rows. Weeding was done manually when necessary and harvesting was delayed until December 1991 to ensure good, dry-

People

Dr Indira J. Ekanayake, a crop physiologist, joined the Root and Tuber Improvement Program of IITA in October 1991. Dr Ekanayake obtained her PhD in stress physiology/agronomy from Cornell University and was project leader on stress physiological research at the International Potato Center (CIP), Lima, Peru before she joined TRIP.

Dr James B. A. Whyte, an IITA plant breeder, who was previously the project leader (1982-1990) in Cameroon of a project funded by IDRC Gatsby Foundation and the National Root Crops Improvement Program has assumed office as a research liaison scientist for Central Africa at IITA headquarters since August 1991.

matter content of the tubers and to enhance their storage.

Results and discussion

The analysis of variance performed on the data showed that variety and mulch effects were significant (P<.05) for the traits measured while there was no variety by mulch interaction.

Table 1: Mean establishment and fresh tuber yield (kg) of two varieties of yam

Variety	No. of plants established	Fresh tuber weight (kg)
TDr 179	36.8a	12.5a
TDr 747	34.2b	14.6b
LSD (0.05)	2.2	1.2

TDr 179 exhibited better plant establishment than TDr 747 but tuber yield was still higher in the latter (Table 1).

The plant establishment of the two varieties was significantly higher under palm fronds than under plastic mulch (Table 2). This was possible since it was noticed that some yam shoots had problems coming through the perforations on the plastic mulch. Rather, such shoots grew under the plastic and must have died after some time. In addition, the rains were not very frequent just after transplanting and the heat generated by the plastic mulch particularly in the hot afternoons may have caused some young shoots to die off. Table 2 shows no significant difference between the two mulches with respect to fresh tuber yield . Considering the poorer establishment on plastic mulch this suggests a higher tuber yield per stand using that mulch. However, the absence of a significant difference in overall yield is a good indication that palm fronds and perhaps maize, sorghum and grass straws could serve as suitable alternatives to plastic mulch in the production of seedyams.

Table 2: Mean establishment and fresh tuber yield (kg) under two types of mulch

Mulch	No. of plants established	Fresh tuber weight (kg)
Plastic mulch	33.3a	13.7a
Palm frond	37.7b	13.4a
LSD (0.05)	2.7	1.4

Note: Means with common letter within a column are not significantly different

These findings promise a useful alternative mulch and will be retested in a larger experiment involving other locally available materials.

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Hybridization of yams: a mini-review

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Yams (*Dioscorea* spp.) are an important food crop in West and Central Africa, the Carribean and parts of Asia and Latin America. The traditional constraints to yam production include high cost of labor input for mounding/ridging and staking, shortage and high cost of planting materials, diseases (e.g. viruses, anthracnose) and pests (e.g. nematodes, beetles and mealybugs). In their efforts at improving on the situation the few yam breeding programs reported in the literature have relied on selections from landraces and hybridization of genotypes within and between species (Sadik and Okereke 1975, Akoroda 1985a, Doku 1985, Abraham et al. 1986). The principal obstacles encountered in sexual hybridization of yams have included the paucity of flowering, rarity of females, poor synchronization of male and female flowering phases and lack of efficient pollination mechanisms (Abraham et al. 1987).

Flower biology

There is a range from nonflowering to profuse flowering among genotypes of the commonly cultivated species of yams. Flowering genotypes of species like *D. alata*, *D. bulbifera*, *D. cayenensis* and *D. rotundata* are generally dioecious but Sadik and Okereke (1975) reported occurrence of complete flowers on *D. rotundata*. Monoecious genotypes have been recorded in *D. rotundata* at IITA over the

Fifth ISTRC-AB Symposium in Uganda

The International Society for Tropical Root Crops—Africa Branch (ISTRC-AB) will hold its fifth triennial symposium in Kampala, Uganda, from 22 to 28 November 1992. The theme of the symposium will be " Root Crops for Food Security in Africa". A second announcement has been sent out to those who have indicated their intention to attend the meeting. Abstracts and full papers should reach the Acting Secretary by 15 September and 15 October 1992, respectively.