VII^th Symposium of the International Society for Tropical Root Crops,
Gosier (Guadeloupe), 1-6 July 1985, Ed. INRA, Paris, 1988.

EFFECT OF DELAYED PLANTING AND CHEMICAL TREATMENT ON THE PERFORMANCE OF YAMS GROWN FROM MINISETTS

(Effet de la plantation tardive et des traitements chimiques des minifragments sur les performances de la culture d'igname)

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SUMMARY

Experiments were carried out to evaluate the potentials of curing and use of wood ash seed dressing as an alternative to chemical seed dressing of yam setts, before planting, especially for commercial production of seed yams by the minisett technique. Curing was at the ambient temperature for periods of 1, 2, 3, 4 and 5 days. These were compared with treatment with two recommended seed dressing chemicals (Thioral and Aldrex T).

Curing of yam minisetts for 3 days and above resulted in high moisture loss and rapid drying of the cut surfaces.

There were no significant differences in the rate of germination and final percentage sprout between yam setts treated with chemicals and those cured for one or two days. There was delayed sprouting and very low percentage sprout when curing extended up to 3 days and above.

Reductions in leaf area, leaf area index, number of leaves and final tuber yield at harvest occured when curing extended up to 3 days. These parameters did not differ significantly between yam setts cured for 1 or 2 days and those treated with chemicals.

Wood ash from oil palm inflorescence was as good as any of the chemicals used.

RESUME

Des expérimentations ont été réalisées pour évaluer les potentialités du CURING en substitution à l'enrobage chimique des fragments d'igname avant plantation et ce pour la commercialisation des semences d'igname par la technique des minifragments. Le CURING a été réalisé à température ambiante pendant 1, 2, 3, 4 et 5 jours en comparaison avec deux traitements par des produits d'enrobage chimique recommandés : Thioral et Aldrex T.

A partir de 3 jours et au delà le CURING des minifragments a entraîné une forte perte d'humidité et un dessèchement important des surfaces sectionnées.

Il n'y avait pas de différence significative de taux de germination et de pourcentage final de germes entre les fragments traités avec les produits chimiques et ceux traités par CURING pendant 1 à 2 jours. Il y a eu un retard de levée et un pourcentage faible de germes quant le CURING était prolongé à 3 jours et plus.

Il y a eu réduction de la surface foliaire, de l'index de surface foliaire, de la longueur des tiges, du nombre de feuilles, du rendement en tubercule à la récolte quand le CURING a été prolongé à 3 jours. Ces paramètres ne diffèrent pas significativement pour les fragments traités par CURING pendant 1 à 2 jours et ceux traités chimiquement.

La cendre de l'inflorescence du palmier à huile était aussi bonne que chacun des produits chimiques utilisés.

INTRODUCTION

Yam (*Dioscorea* spp.) is an annual climber that is best propagated by means of the tuber which is a stem structure (BURHILL, 1960 ; NJOKU, 1963). The yam crop, a starchy food, is one of the most expensive sources of calories in human diet in the tropics. Nervertheless, it still plays an important role in socio-economic lives of the people, especially in Nigeria. Because of its demand, and the high cost of production and low multiplication ratio, there is a need to find methods of improving the multiplication ratio of yams (OKOLI, 1978), to increase the amount of "seed" available for "seed" and ware-yam production.

The development of the minisett technique at the National Root Crops Research Institute was therefore indicated. Prior to the development of the minisett technique, OKOLI, (1978) developed the segmentation method. The segmentation method made use of small setts with reasonable food reserves and vigorously growing sprouts, but the technique, which involved carving out sprouted segments from the main tuber, was laborious and expensive. The minisett technique which consisted of cutting up seed yam tuber (200 - 500 g