

AGRONOMIC STUDIES ON EDIBLE YAM IN THE GRASSLAND PLATEAU REGION OF THE UNITED REPUBLIC OF CAMEROON

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SUMMARY

Root and tuber crop cultivation and production in Cameroon is outlined. A collection of 109 accessions of yam species and cultivars has been screened. Three promising cultivars, one from each important species are being tested for optimum planting period, size of planting setts, population density, staking, fertilizer responses and storage characteristics.

The earliest planting date (January) tried gave the highest yield, but even earlier dates are being tried. Setts of 375-500 grams are best for ware yams, setts of 125 grams are best for rapid multiplication; best spacing is 100 cm x 66 cm giving 15,000 plants per hectare. Tall stakes were best, and 80 kg/ha of N and 40 kg/ha of K fertilizers gave economic responses.

RESUME

La culture et la production des plantes à racine et à tubercule ont été soulignées. Une collection de 109 variétés d'espèces et cultivars d'igname a été sélectionnée. Trois cultivars à caractéristiques désirables issus de chaque espèce importante sont en cours d'essai pour déterminer la période optimale de plantation, la dimension des boutures, la densité de peuplement, le tuteurage, les réponses aux engrais et les caractéristiques de conservation.

La date de semis la moins tardive essayée (janvier) a donné le rendement le plus élevé et on essaie même des dates de semis encore moins tardives. Les boutures de 375-500 grammes sont les plus valables pour le marché, celles de 125 g pour la multiplication; l'espacement de 100 cm x 66 cm donne la meilleure densité, soit 15,000 plants à l'hectare. Les treillis longs sont les plus satisfaisants. 80 kg/ha d'engrais K sont également les plus satisfaisants du point de vue économique.

RESUMEN

Se reseña el cultivo y producción de raíces y tubérculos en Camerún. Se ha seleccionado una colección de 109 especies y cultivares de ñame. Se están probando tres cultivares prometedoros, uno de cada especie importante, en cuanto período óptimo de siembra, tamaño de "estacas" de siembra, densidad de población, estacado, respuesta a los fertilizantes y características de almacenamiento.

La fecha de siembra más temprana que se probó (Enero) dió el más alto rendimiento pero aún se están probando fechas más tempranas. Las "estacas" de 375-500 gramos son las mejores en ñame para venta, las "estacas" de 125 gm son las mejores para la multiplicación rápida; el mejor espaciamiento es 100 cm x 66 cm dando 15,000 plantas por hectarea. Los estacados altos fueron los mejores 6 80 kg/ha de N 6 40 kg/ha de K como fertilizantes, dieron la respuesta económica.

INTRODUCTION

Investigations have been carried out mainly in the North West Province of Cameroon. The landform comprises a broad mainly rolling low lava plateau from 700 – 1400 m above sea level surmounting which there is a more rugged chain of high lava mountains with peaks from 1400 m to over 2500 m. The main vegetation is grassland savannah dominated at lower altitudes by *Hyparrhenia* spp and at higher levels by *Sporobolus* spp. These provide good cattle grazing pastures but are liable to dry season fires. Savanna trees, raffia palms and elephant grass (*Pennisetum purpureum*) compete in the narrow valleys and stream banks.

The climate is cool with temperatures ranging between 14°C and 25°C. Annual rainfall is between 200 and 300 cm occurring between mid-March and mid-November with a single peak around July or August. There is a marked dry season with strong dusty winds preceding the return of the rains (hamattan).

The soils mainly have volcanic parent material such as trachyte lavas and tertiary basalt. They are humic with a wide carbon/nitrogen ratio (16-20 in the surface layers), acidic (pH from 4.2 in alluvium to 5.5 in the high lava humic soils). The cation exchange capacity of surface layers is high (10-28) with low total exchangeable bases, the combined figure for calcium, magnesium and sodium seldom exceeding 1-4 me/100 g of soil. These soils are usually deficient in the main nutrients, mainly as a result of leaching, burning and erosion which constitute serious problems. Fertilization and conservation should therefore, be important considerations in their management.

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