A FIELD EXPERIMENTAL APPROACH TO MAXIMIZING STARCH YIELDS FROM CASSAVA IN INDONESIA

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SUMMARY

By plotting yield of starch per unit of area against crop age for different cultivars, locations and planting dates, curves with maxima are obtained. Although the occurrence of such maxima determines the best moment for harvesting each particular plot, in practice a compromise is made, taking account of harvesting and processing capacity and choosing the length of the working season which is also constrained by other labour demands. Obtaining data by the method described provides a guide for the effective organization of harvesting and processing operations.

RESUME

En comparant le rendement en amidon par unité de surface avec l'âge de la plante pour les différents cultivars, lieux et dates de semis, on obtient les extrémes des courbes. Bien que les extrémes représentent la meilleure période pour la récolte de chaque parcelle, dans la pratique, on adopte une voie moyenne en prenant en compte la capacité de récolte et de transformation d'une part, et en choisissant la durée de la saison de travail qui est par ailleurs soumise aux demandes de main-d'ouvre dans d'autres secteurs. La détermination des données par ce procédé permet une organisation plus adéquate de la récolte et des opérations de transformation.

RESUMEN

Se obtuvieron curvas con máximo al graficar rendimiento de almidón por unidad de área contra: edad de cultivo para diferentes cultivares, localidad y fecha de siembra. Si bien que la ocurrencia de esos máximos determina el mejor momento para cosechar cada lote particular, en la práctica se hace un compromiso tomando en cuenta la capacidad de cosecha, procesamiento y seleccionando la duración de la temporada de trabajo, la que también se encuentra restringida por otras demandas referentes a la mano de obra. La obtención de datos por el método que se describe provee una guía para la organización efectiva de la cosecha y el procesamiento de operaciones.

INTRODUCTION

Knowledge of factors determining starch accumulation in the roots is of value when cassava is grown for the purpose of starch production in order to optimise the time of harvesting for this purpose. Well organized cooperation between plantations and the factory allowed maximum production of the end product at a high standard quality.

Before World War II, Amsterdam Ltd. (H.V.A.) produced 55-60 thousand tons of cassava starch in Indonesia and was one of the largest producers. Cassava crops were grown on five plantations in rotation with sisal, sugarcane and leguminous crops, and much care was taken to maintain conditions ensuring high yields of all crops grown. Recently renewed interest and a favourable political climate may lead to reconsideration of the economic possibilities of this kind of enterprise.

REVIEW

Cultivar effects

Not only do the different cultivars produce highly differing total production of roots and starch within a certain period of time, but they may also vary in growth rate and development.

Fertility effects

When grown under conditions favouring the production of high root-yields, the rate of starch accumulation is often lower in comparison with that in a crop growing under less favourable conditions. On the other hand, excessive development of aerial parts of the plant, promoted by unbalanced nutrient supply is associated with low accumulation of starch in the roots.

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