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The 21st International Grassland Congress / 8th International Rangeland Congress took place in Hohhot, China from June 29 through July 5, 2008.

Proceedings edited by Organizing Committee of 2008 IGC/IRC Conference

Published by Guangdong People's Publishing House

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Panicum maximum seeds from sugarcane plantations improves household incomes in Uganda

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Key words : brooms ,pasture ,ecotypes ,panicles

Introduction Guinea grass is a widely distributed species in Uganda . It usually grows under shade , hence poses a weed problem in plantations . Its panicles are widely used to make brooms , a livelihood strategy for a number of women and children living on sugarcane estates in central Uganda . The brooms are on high demand , especially in peri-and urban areas . In order to make quality brooms , it is essential that the panicles are cleared of all the attached seed . *Panicum maximum* is one of the most recommended grass species for pasture establishment in Uganda . Progressive farmers , practicing intensive dairy production usually import grass seed . A study was , therefore , conducted to assess the potential of broom makers to provide quality seed of *P. maximum* for establishing grass based pastures . The proposed opportunistic way of harvesting grass seeds would not only improve income to households relying on selling brooms but would also avail scarce pasture seed to improve livestock productivity .

Materials and methods A survey was made of households on sugarcane estates to assess the gender involved in and the extent of making brooms . Contact persons were identified and exposed to the potential of making more money from selling *P. maximum* seed . Thereafter training was conducted in aspects of identifying ecotypes with forage value , collecting , drying and storing seed . After training , seed collection and processing materials were provided . A diversity of locations was selected because the quality of grass seed is greatly influenced by location (Lock , 1980) . It was agreed that collected seed would be paid for according to its quality .

Results and discussion It was observed that there was a wide variation in the quality (% mature caryopsis content) of *P. maximum* seed harvested from different locations . Even in the same location , it was observed that different broom makers produced seed with different qualities despite harvesting from apparently similar plants . This could be attributed to the different times when panicles were harvested (Hopkinson and English , 1985) . Based on the project agreement that all harvested seed by broom makers would be paid for according to quality , a number of households made additional income from seed (Table 1) .

Table 1 One Season's (shs) income from sale of *P. maximum* seeds and brooms in the location of Gayaza village , Uganda .

Household	Brooms , no	Seed , kg	Seed cash	Brooms cash
Amunda	165	16	36 ,425	100 ,000
Zanvayo	101	12	9 ,600	62 ,500
Drazia	284	79	152 ,470	175 ,000
Kana	203	27	48 ,330	125 ,000
Nema	106	37	46 ,990	125 ,000
Kana	601	42	129 ,200	375 ,000

Conclusions High quality *P. maximum* seed can be opportunistically harvested from selected locations of Uganda . This would not only avail scarce grass seeds in central Uganda but also improve livelihood strategies of households that usually depend on making brooms for a living . Combining making of brooms and collection of *P. maximum* seeds could greatly reduce the cost of pasture grass seed that would have to otherwise be imported for pasture establishment .

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