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## Sustainable yam management in Guadeloupe (French West Indies)

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### **PP-7.29: Sustainable yam management in Guadeloupe (French West Indies)**

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In Guadeloupe, yam cultivated area has decreased in the last 20 years from 1,200 ha to 300 ha. This is partly due to the prohibition of the use of chemical herbicides and to the high cost of labor in Guadeloupe (16.54 € hours<sup>-1</sup>) which reduce farmers' investment and risk-taking in favor of this crop. Highly variable yields add to the uncertainty of growing yam and variations ranging from 5 to 40 tons ha<sup>-1</sup> have systematically been recorded. Research was carried out to decrease the workforce used in yam cultivation, especially as relates to weeding; and mineral content of the plant focusing on the intake of both fertilizer and organic matter (chemical and organic nutrient management). A new kind of mulch, made of biodegradable Kraft paper was developed, and the costs and efficiency for controlling weeds in three yam cropping systems: Kraft paper mulch (0.2 kg m<sup>-2</sup>), sugar cane residues of leaves mulch (2kg m<sup>-2</sup>), and no mulch were compared. The cost for installing mulches is around 4 000 € ha<sup>-1</sup> but it reduces the weeding time by 75% and saves 8 000 € ha<sup>-1</sup>. With these mulches, yam does not compete with weeds for water or minerals and the yield is at least equal or higher (up to + 40%) to that of a culture conducted in normal conditions. On the other hand, we studied the effects of chemical fertilizer and compost on yam yield. It was observed that a mixture of chemical fertilizer and compost was more favorable (yield + 20%) than separate use of either one. A way to boost the yam sector in Guadeloupe would be to mobilize new mulching techniques, and to provide the nutrients needs of the crop and understand how soil density influences yam yield.



***‘to harness research innovations to  
unleash the potential of yam’***

**PROGRAM AND BOOK OF ABSTRACTS**



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