

Title Breaking yam tuber dormancy with appropriate chemical treatment

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Abstract

Yam (*Dioscorea alata* L.) is an important food resource and industrial raw material but its production is highly seasonal mainly due to tuber dormancy. In the Philippines, the crop is grown only once a year (May to January) and 20-40% of tuber yield is used as planting materials as 100-250g tuber slices for the next cropping after a 3-month dormancy period. The planting material requirement is a great loss of tubers from the supply chain and contributes to the limited and seasonal supply of tubers for domestic and export use. This study determined the effects of two chemical formulations, CF1 and CF2 (propriety products), on breaking dormancy of 10g tuber minislices which were designed to minimize tuber requirement as propagules. Based on a series of experiments in four seasons, CF2 was consistently shown to be very effective in breaking tuber dormancy. The minislices can be treated right after harvest and can be field planted the following month, yielding more than 2 kg tubers/plant comparable to that from conventional propagules and much higher than that produced from the first generation tissue culture-derived propagules which has been established earlier for year-round planting material supply to support crop production.