USE OF CHEMICAL AND TRADITIONAL METHODS TO INDUCE SPROUTING IN DIOSCOREA SPECIES (*DIOSCOREA ALATA* L.)

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The presence of a definite dormant period (4–4½ months) in Dioscorea yams imposes a physiological limitation for staggered planting and producing off season crops. Hence, for year-round production of yams to become a reality, simple and effective methods to break tuber dormancy is essential. Chemicals such as calcium carbide and ethylene chlorohydrin have been successfully used to induce sprouting of Dioscorea yams,

but, the use of chemicals at village level seems to be remote both due to its cost and non availability. The use of Kappitiya leaves (*Croton aromaticus* L.) and biling leaves (*Averrhoa bilinbi* L.) to induce ripening of banana led to the contention that these leaves could be useful material to induce sprouting of yams. In the study reported here, a chemical method using calcium carbide is compared with traditional methods and their relative effects studied on two Dioscorea cultivars.

Results demonstrated the superiority of calcium carbide treatment over the traditional methods of treating with kappitiya or combination of kappitiya and biling leaves, in breaking the dormancy of *Dioscorea alata* cultivars. However, treatment of setts with kappitiya and biling leaves induced a relatively high degree of sprouting compared with those treated with kappitiya leaves only. All treatments were much better than the untreated control.

With different treatments, both heads and middles sprouted earlier than the tails. With tails, treatment with calcium carbide was more effective in breaking the dormancy than others.

The different pre-treatment methods will not only help to stagger the planting time but also allow the selection of most vigorous setts in the nursery for planting in the field.