



KrishiKosh (कृषिकोश)

(/) An Institutional Repository of Indian National Agricultural Research System



Advanced Search (/advanced-search)

[Krishikosh \(/\)](#) / [Birsa Agricultural University, Ranchi \(/handle/1/93542\)](#) / [Thesis \(/handle/1/93550\)](#)

Please use this identifier to cite or link to this item: <http://krishikosh.egranth.ac.in/handle/1/5810020834>

Authors: [Minz, Suresh Kumar \(/browse?type=author&value=Minz%2C+Suresh+Kumar\)](#)

Advisor: [Sengupta, S. \(/browse?type=author&value=Sengupta%2C+S.\)](#)

Title: WEED MANAGEMENT AND STANDARDIZATION OF MINISETT TECHNOLOGY IN ELEPHANT FOOT YAM (*Amorphophallus paeoniifolius* (Dennst.)Nicolson) cv.Gajendra

Publisher: Birsa Agricultural University, Kanke, Ranchi, Jharkhand

Language: en_US

Type: Thesis

Pages: 93

Agrotags: null

Keywords: WEED MANAGEMENT AND STANDARDIZATION OF MINISETT TECHNOLOGY IN ELEPHANT FOOT YAM (*Amorphophallus paeoniifolius* (Dennst.)Nicolson) cv.Gajendra

Abstract: Elephant foot yam being Kharif and long duration crop is liable to be highly infested with weeds which is extremely hazardous both in terms of crop health as well as productivity. It has been well established that the yield loss due to weeds is quite higher (45%) than the pests (30%) and diseases (20%). In addition to weeds, as it is vegetatively propagated crop hence, availability of quality planting material is also an enormous hurdle in its cultivation. Plant spacing and sett size are the key factors that decisively influence the seed corm production. To overcome these problems two different experimental approaches were undertaken in order to find out most suitable weed management practice and to standardize miniset technology in production of elephant foot yam. In the first experiment, a field experiment was conducted during kharif 2011-12 to study the weed control efficiency of different herbicides in *Amorphophallus* Cv. Gajendra. The experiment consisted altogether of eight treatments having five weedicide treatments, intercropping with sesbania (Dhaincha), hand weeding and weedy check (control). The experiment was laid out in randomized block design with three replications. The weed count and dry weight of weeds were found to be significantly maximum in weedy check (control). Among the herbicides oxyflourfen @ 0.3 kg a.i. /ha recorded lower weed biomass followed by intercropping with sesbania. The physical and biological traits of *amorphophallus* viz., pseudostem height, pseudostem girth, canopy spread and dry weight were found lowest in unweeded control while hand weeding, application of oxyflourfen @ 0.3 kg a.i./ha and intercropping with sesbania markedly increased these parameters. The yield attributes viz. diameter of corm, seed yield per plant, seed yield per hectare and harvest index were significantly lower in unweeded control while application of oxyflourfen @ 0.3 kg a.i./ha and intercropping with sesbania have been also found effective in increasing these yield components. The benefit: cost ratio was highest with oxyflourfen @ 0.3 kg a.i. /ha followed by intercropping with sesbania and hand weeding. In the second experiment, nine treatment combinations including mini corm setts (cut pieces) of three sizes [100 g, 150 g and 200 g] of *Amorphophallus* variety "Gajendra" were planted at three different spacings (50cm x 30cm, 50cmx40cm and 50cmx50cm). The effects of corm size and spacing on pseudostem height, pseudostem girth, canopy spread of plant were recorded maximum in 200 g seed corm planted at the spacing 50cm x 30 cm followed by seed corm of 200 g weight planted at the spacing 50 cm x 40 cm. The yield was significantly higher in 200 g seed corm planted at the spacing 50 cm x 30 cm. However, the seed corm of 150 g weight planted at the spacing 50 cm x 30 cm was found most suitable with respect to getting desired seed corm of about 500-700 g optimum weight. On the basis of perusal of the data obtained it can be safely inferred that in the perspective of agro-climatic condition of the state of Jharkhand for weed management in *Amorphophallus* application of oxyflourfen @ 0.3 kg a.i. /ha or intercropping with sesbania have been found effective in increasing growth, yield attributes and yield and the seed corm mini sett of 150 g weight to be planted at the spacing 50 cm x 30 cm as most suitable treatment in respect to getting desired seed corm of about 500-700 g optimum seed corm weight.

Description: WEED MANAGEMENT AND STANDARDIZATION OF MINISETT TECHNOLOGY IN ELEPHANT FOOT YAM (*Amorphophallus paeoniifolius* (Dennst.)Nicolson) cv.Gajendra

Subject: Horticulture

Theme: WEED MANAGEMENT AND STANDARDIZATION OF MINISETT TECHNOLOGY IN ELEPHANT FOOT YAM (*Amorphophallus paeoniifolius* (Dennst.)Nicolson) cv.Gajendra

These Type: M.Sc

Issue Date: 2014

Appears in Collections: Thesis (/handle/1/93550)


Files in This Item:

File	Description	Size	Format
Corrected thesis final Suresh Minz.pdf		3.18 MB	Adobe PDF



[View/Open \(/displaybitstream?handle=1/5810020834\)](/displaybitstream?handle=1/5810020834)

[Show full item record \(/handle/1/5810020834?mode=full\)](/handle/1/5810020834?mode=full)

 [\(/handle/1/5810020834/statistics\)](/handle/1/5810020834/statistics)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.