Alurahatty Hanumanthanaik Kumar Naik et al., Agrotechnology 2017, 6:4(Suppl)
DOI: 10.4172/2168-9881-C1-027

Evaluation of pre and post emergent herbicides for control of weeds in Castor (*Ricinus communis* L.) under rain fed conditions of central dry zone of Karnataka, India

Alurahatty Hanumanthanaik Kumar Naik, Parashuram Chandravanshi and **Pradeep S**
University of Agricultural and Horticultural Sciences, India

Acquiring knowledge on weed control in castor crop is still limited, and new research into this area is necessary. A field experiment was conducted during 2012, 2013 and 2014 to find out most suitable and cost effective weed management practice for rain fed castor on the medium black soils of Central Dry Zone of Karnataka. The experiment consist of ten treatments involving two pre-emergence herbicides (trifluralin and pendimethalin) alone and in combination with hand weeding/inter-cultivation, inter-cropping of castor+groundnut (1:3 ratio), three weeding (20, 40 and 60 DAS), farmers' practice (one weeding at 20 DAS fb two inter-cultures at 45 and 60 DAS), two post emergence herbicides (Quizalofop ethyl and fenoxaprop-p- ethyl, both at 50 g/ha at 25 DAS) and weedy check. The pooled results of three seasons revealed that pre-emergence application of pendimethalin at 1.0 kg/ha fb one inter-cultivation at 40 DAS resulted in better weed control efficiency and seed yield (1612 kg/ha) and B:C ratio (4.3) comparable to farmers' practice (1332 kg/ha) and three weeding (1995 kg/ha). Herbicides controlled grasses gave moderate yield comparable to farmers' fields. Weedy check reduced the yield by 76% due to severe competition offered by grasses and broad leaf weeds. The large scale demonstration on five farmers' fields in Chitradurga district also revealed that pendimethalin at 1.0 kg/ha fb one inter-cultivation at 40 DAS (1477 kg/ha and 3.90) gave seed yield and B:C ratio comparable to farmers' practice of weed control (1493 kg/ha and 3.70).

Biography

Alurahatty Hanumanthanaik Kumar Naik is serving as an Agronomist with a research experience of five years in the area of Castor and Groundnut. He is currently working on ICAR-All India Coordinated Research Project at Hiriyur University of Agricultural and Horticultural Sciences, Shivamogga (India). He has expertise in castor and groundnut and noted for his contributions in the field of castor and released five technologies in castor and published more than 30 research papers in the research journals.

kumarahphd@gmail.com

Notes: