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Production potential and economics feasibility of buckwheat (*Fagopyrum esculentum* Moench) as influenced by integrated weed management practices under Terai rgion of West Bengal

■ BINOY CHHETRI[1], S.B. SATPUTE, TAPAS DAS[1], D.T. SURJE[2] AND S.K. MAHATO[3]

AUTHORS' INFO

Associated Co-author :

[1]Department of Agronomy, Uttar Banga Krishi Viswavidyalaya, Pundibari, COOCHBEHAR (W.B.) INDIA

[2]Department of Genetics and Plant Breeding, Uttar Banga Krishi Viswavidyalaya, Pundibari, COOCHBEHAR (W.B.) INDIA

[3]Department of Pomology and Post Harvest Technology, Uttar Banga Krishi Viswavidyalaya, Pundibari, COOCHBEHAR (W.B.) INDIA

Author for correspondence:
S.B. SATPUTE
Department of Agronomy, Uttar Banga Krishi Viswavidyalaya, Pundibari, COOCHBEHAR (W.B.) INDIA
Email : sushil.satpute@yahoo.com

ABSTRACT : A field experiment was conducted during the winter season of 2011-2012 and 2012-2013 at the Instructional Farm of Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar, and West Bengal. The experimental field was laid out in Randomized Block Design, having seven (7) treatments with three (3) replications. The treatments consisted of pre-emergence application of fluchloralin @ 2.22 lit. ha^{-1}(T_1), post-emergence of application of glyphosate @ 2.50 lit. ha^{-1} (T_2), pre-emergence application of fluchloralin @ 2.22 lit. ha^{-1} + hand weeding (once at 35 DAS) (T_3), hoeing (Twice) 20 and 35 DAS (T_4), hand weeding (twice) at 20 and 35 DAS (T_5), pre-emergence application of fluchloralin @ 2.22 lit. ha^{-1}combined with post-emergence application of glyphosate @ 2.50 lit. ha^{-1} (T_6) and unwedded control (T_7). The economics of buckwheat under seven varying weed management practices showed that the hand weeding twice at 20 and 35 DAS recorded highest net income, benefit cost ratio and lowest cost of producing per kg of seed over other weed control practices, this is environmentally sound, socially acceptable and economically viable. Among the weed management practices pre-emergence application of fluchloralin @ 2.22 lit. ha^{-1} and post-emergence application of glyphosate @ 2.50 lit. ha^{-1} at 20 DAS produced higher yield attributes and yield over unwedded control whereas pre-emergence application of fluchloralin @ 2.22 lit. ha^{-1} followed by one hand weeding at 35 DAS produced seed yield comparable to hand weeding treatment.

KEY WORDS : Buckwheat, Yield, Herbicides, Economics

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