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Select Theme : Sustainable and equitable farming systems

Endorsement email :

Keyword 1 : Weed management

Keyword 2 : Sustainable management practices

Keyword 3 :

Title of Entry : Weedy Rice Management in wet seeded Rice in Low Country Wet Zone of Sri Lanka

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Select only one type of presentation

: 3-5 minute flash talk

Abstract

: Weedy rice (*Oryza sativa* f. *spontanea*) taxonomically classified as the same species as cultivated rice (*O. sativa*) is a noxious weed in rice crop and becoming a serious problem in rice growing areas all over the world. In Sri Lanka, it has been spreading almost all over the country since its first detection in 1992. Different weedy rice management packages consisted with different crop establishment methods in combination with clean seed paddy free from weedy rice and pre-emergent herbicides were compared for controlling weedy rice under low country wet zone of Galle district in Sri Lanka. Treatments of T1; Transplanting+Clean Seed+ Pre-emergent herbicide T2; Seedling broadcasting +Clean Seed + Pre-emergent herbicide T3; Row seeding +Clean Seed + Pre-emergent herbicide T4; Random broadcasting +Clean Seed + Pre-emergent herbicide T5; Random broadcasting +Clean Seed only and T6; Random broadcasting + Farmer seeds (Farmer Practice-Control) replicated by 3 times with Randomized Complete Block Design were tested in a farmer field with higher weedy rice infestation experienced in previous seasons. All other management practices including post-emergent herbicide application were carried out equally in all the six treatments. T6; Farmer Practice (Control) recorded significantly higher weedy rice plant count of 9/m<sup>2</sup> than all other treatments; T1, T2, T3, T4, and T5 having 1 or less than 1/m<sup>2</sup>. Weedy rice plant dry weight of 39.33g/m<sup>2</sup> and weedy rice grain weight of 10.096g/m<sup>2</sup> recorded in T6 were significantly higher than all other treatments. Yield (Kg)/25m<sup>2</sup> were significantly higher in treatments; T2, T1, T3, T5 and T4 as 8.492, 7.45, 7.273, 6.619 and 6.140 respectively than T6 as 5.292. Transplanting(T1), Seedling broadcasting(T2), Row seeding(T3), Random broadcasting(T4) each with pre-emergent herbicide + clean seeds and Random broad casting(T5) with clean seeds only are effective in controlling weedy rice. Use of clean seed paddy controls the new introductions of weedy rice in to the field. Since there is no significant difference in weed controlling ability and yield between T4 and T5, it could be concluded that clean seed plays major role in controlling weedy rice than pre-emergent herbicide in low country wet zone of Sri Lanka where rice is grown under rain fed conditions.

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