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Variability in weedy rice infestation among selected locations in the Matara District

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Weedy rice (*Oryza sativa f. spontanea*) is taxonomically classified as the same species as cultivated rice (*O. sativa*), but is strongly characterized by its seed shattering and dormancy, which apparently increase the distribution of this species. Seed dormancy and shattering has considerable importance as it relates to pre harvest sprouting and the persistence of weed seeds in the soil which enriches the soil seed bank. Therefore, this study was carried out to determine the variation of weedy rice seeds in the soil seed bank among selected weedy rice infested locations in the Matara District in Sri Lanka.

A field survey was carried out in rice growing areas of Matara District. Kotapola, Pasgoda, Pitabeddara, Akuressa, Kamburupitiya, Hakmana, Kirinda, Puhulwella, Thihagoda, Mulatiyana, Matara, Malimbada and Athuraliya were selected as sampling sites. Ten soil samples were randomly collected in each field from a space 12''*12''*3''. The number of weedy rice seeds and improved rice seeds were counted after thoroughly washing of soil samples. All the rice seeds except the cultivated variety which was grown were considered as weedy seeds.

The results of the study reflect the higher variation of weedy rice seeds in the soil seed bank among selected populations in the Matara District. Significantly, the highest number of weedy seeds was observed at Thihagoda (153.9 ± 26.35) while the lowest was observed at Pitabeddara (42.2 ± 9.41). ANOVA revealed more variation exists among populations (93.29%) than within (6.71%) populations.

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