

Sustainability index for scientific crop cultivation practices

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India has undergone various changes in agriculture sector since independence. It has moved to self sufficiency in food grain production. Thanks to green revolution which has brought drastic change in agriculture sector. With green revolution there was introduction of use of synthetic chemical fertilizers, use of high yielding varieties, etc. But, the over-use of chemicals to intensify crop production led to health problems in people and animals as well as environmental pollution. Hence, these days, much emphasis is being laid on sustainable development in agriculture by adoption of scientific crop cultivation practices to meet the needs of the present without compromising the ability of future generations to meet their needs.

Sustainability of scientific crop cultivation practices should be assessed and necessary modification may be carried out, if required, to ensure sustainability. The study focuses on development of sustainability index. The sustainability index has ten dimensions namely technology appropriability, economic viability, environmental soundness, socio-cultural compatibility, stability, resource-use efficiency, productivity, local adaptability, equity, government policy. Each dimension has 2-3 indicators for assessing level of sustainability. The sustainability index developed is used to assess the level of sustainability of scientific crop cultivation practices (SCCP). If mean sustainability score of any particular practice is greater than 50% of maximum possible score it is considered as higher level of sustainability. If it is less than 50%, it is considered lower level of sustainability. If any SCCP is less sustainable, suitable corrective measures may be taken for the practices which have less level of sustainability.

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