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Q8

What is allelopathy? Discuss its role in major cropping systems of irrigated agriculture.

UPSC Civil Services Mains 2016 · GS III · 12 marks · Crops, Irrigation and Marketing

Major crops - cropping patterns in various parts of the country; different types of irrigation and irrigation systems; storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

Facts & figures for this PYQ only.

Numbers move. Confirm the latest Budget, Economic Survey or census round. This sheet is for revision, not a substitute for the model answer.

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Allelochemicals

Secondary plant compounds (phenolics, terpenoids, alkaloids) that affect germination or growth of other plants.

Autotoxicity

A crop's residues harm the next sowing of the same crop; reported in some rice, lucerne and sugarcane stands.

Echinochloa

Barnyard grass, a major irrigated-rice weed; some rice genotypes show allelopathic suppression of it.

Rice-wheat system

Dominant irrigated rotation of the Indo-Gangetic plains, where residue chemistry affects the succeeding crop.

Conservation agriculture

Minimum tillage, residue mulch and rotation; allelopathy is one reason residue management must be designed, not dumped.

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