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Q24

Why does the Government of India promote the use of 'Neem-coated Urea' in agriculture? (a) Release of Neem oil in the soil increases nitrogen fixation by the soil microorganisms (b) Neem coating slows down the rate of dissolution of urea in the soil (c) Nitrous oxide, which is a greenhouse gas, is not at all released into atmosphere by crop fields (d) It is a combination of a weedicide and a fertilizer for particular crops Official key: B.

UPSC Civil Services Prelims 2016 · General Studies · 2 marks · Art and Culture

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Explanation

(a)

Neem oil increases biological nitrogen fixation. Promotion of neem-coated urea is not primarily a Rhizobium-boost story. This letter is not the key.

(b) Official key

Slower dissolution of urea. Neem coating inhibits soil **urease** somewhat and slows nitrogen release, so more nitrogen stays for the crop and less is lost as ammonia or nitrate. That stored letter is the official key.

(c)

No nitrous oxide at all from fields. Neem coating can cut some **N₂O**, but it does not zero greenhouse-gas release from cropland. The absolute claim is false.

(d)

Weedicide plus fertiliser. Neem-coated urea is still a nitrogen fertiliser with a coating, not a registered herbicide mix for particular crops. This letter is not the key.

Summary

Official key is (b) neem coating slows urea dissolution in the soil. That is why GOI mandated neem-coated urea: better nitrogen-use efficiency and less diversion. It is not a fixation booster, a zero-**N₂O** guarantee or a weedicide. Honour the stored letter (b).

Related possible facts

These can be asked in a future Prelims paper.

GOI mandate

100% neem-coated urea policy (2015)

Urease

Soil enzyme that hydrolyses urea to ammonia

Diversification control

Coating makes urea less attractive for industrial misuse

N₂O

Greenhouse gas from denitrification; reduced, not eliminated

Nutrient

Urea is 46% nitrogen

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