Loss of soil fertility

What is the issue?

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- The pressures of constantly increasing agricultural production have in turn resulted in a persistent decline in soil fertility.
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- This could possibly be a major challenge that Indian agriculture is currently facing.
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What are the concerns with soil health?

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- Soil **degradation** and **loss of fertility** is affecting the productive capacity of the soil.
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- The current status of **nutrient-use efficiency** remains quite low for most nutrients.
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- The demand for food grain is expected to increase, but with the current soil health status, meeting the targets would be a huge challenge.
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What are the causes?

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- Inappropriate **agricultural practices** include,
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1. Overuse of chemical fertilisers and pesticides on soil.
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2. Excessive tillage.
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3. Moving away from age-old organic soil revival practices.
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4. Unscientific rotation of crops.
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5. Poor irrigation and water management practices.
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- Factors such as deforestation, ill management of industrial wastes, overgrazing by cattle, and urban expansion, are also the notable causes.
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- **Organic matter** plays a key role in maintaining soil fertility by holding nutrients to the soil. Decline in soil organic matter causes limited soil life and poor soil structure.
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- **Soil organic carbon** plays a key role in maintaining soil fertility, increasing water-holding capacity and even suppressing crop diseases. Inappropriate practices are resulting in low Soil Organic Carbon.
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- Deterioration in chemical, physical and biological health of the soils are to blame for low nutrient use efficiency.
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- Natural factors such as floods, volcanoes and earthquakes also contribute to shortfalls in soil health.
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What is to be done?

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- Farmers and policymakers are largely responsible for ensuring safe agricultural methods.
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- However, the **agrochemical industry** too must react by investing and producing **organic biological products** that help rejuvenate soil health.
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- Making agriculture more **sustainable** by having a right balance between use of agrochemicals and age-old practices of soil regeneration.
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- It is the need of the hour to educate farmers on sustainable practices.

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Source: BusinessLine

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