FAO unveils farming guide to help smallholders increase yields with fewer resources

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Why in News?

The United Nations Food and Agriculture Organization (FAO) has released a new guide calling for changes in crop production practices to increase agricultural productivity while using fewer resources and reducing environmental damage.

- **Publication** – *Optimization and Minimization: Towards Sustainable Plant Production*, outlines how science, technology, innovation and supportive policies can help farmers produce more food while reducing crop losses, pollution and greenhouse gas emissions.
- The FAO describes the approach as "**producing more and better with fewer resources".**
- According to the FAO, **pests destroy up to 40 per cent of global agricultural production each year**, highlighting the need for more effective and sustainable crop protection.
- Crop production already provides more than 80 per cent of the world's calories and is expected to account for approximately 80 per cent of additional food production requirements by 2050.
- **Five areas for improving agricultural productivity –** The guide identifies five interconnected areas for making crop production more efficient and sustainable:
    - **Seed systems:** Improving farmers' access to high-quality seeds suited to local growing conditions.
    - **Crop production systems:** Promoting scientific cultivation practices that improve productivity and resource efficiency.
    - **Integrated pest management:** Protecting crops while reducing unnecessary pesticide use and associated environmental risks.
    - **Agricultural mechanisation:** Helping farmers use labour, machinery and other resources more efficiently.
    - **Agricultural extension and advisory services:** Providing farmers with practical knowledge, technical support and access to innovations.
- The publication also examines the role of digital technologies and improved resource management in strengthening agricultural systems.
- According to the FAO, better coordination across these areas could help farmers increase yields, reduce production costs and improve their livelihoods while making agriculture more resilient to climate-related shocks.

- **Focus on smallholder farmers –** The guide places particular emphasis on smallholder farmers and farming systems with limited access to external resources.
- It is intended as a practical reference for farmers, agricultural professionals, researchers, policymakers, educational institutions, civil society organisations and development partners.
- The publication aligns with the FAO's Strategic Framework 2022–31, which focuses on four priorities: Better Production, Better Nutrition, a Better Environment and a Better Life.
- These priorities support wider efforts to end hunger and poverty, reduce inequality and achieve the UN Sustainable Development Goals by 2030.
- The FAO says the guide aims to help countries develop crop production systems that are more productive, climate-resilient, environmentally sustainable and inclusive.



Reference

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