A Greener Turn

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A future that feeds the world and heals it is upon us. Although synthetic fertilizers have long dominated agriculture for their effectiveness and affordability, organic fertilizers are more beneficial in the long term by sustaining agroecosystems across generations. Traditional farming practices have served their purpose, but with new advancements in agricultural practices, a revolution has begun to spur (Panday et al, 2024). Traditional fertilizers often do more harm than good when they are used. In contrast, organic fertilizers improve natural nutrient recycling, allowing continued farming on the same land (Panday et al, 2024). The advancement of organic replacing synthetic fertilizers is slow, but each year, it is more widely used (Panday et al, 2024).

Synthetic fertilizers have been used since the start of the organic movement and have proven to be effective; however, they are more prone to damage soil health over some time (Panday et al, 2024). Over a few generations of crop yields, the soil is deprived of nutrients that assist with healthy crops, which requires years to be suitable for farming once again (Panday et al, 2024). The final decades of the 20th century saw a wider acceptance and shift toward using organic fertilizers (Panday et al, 2024). Organic fertilizers showcased a stronger retainment of soil nutrients over several generations (Panday et al, 2024). Implementing them into farming practices also improves biodiversity, which supports natural pollination and enhances ecosystem health (Panday et al, 2024).

The environmental and health benefits of organic fertilizers are superior (Panday et al, 2024). Their use drastically reduces groundwater contamination, as observed in Europe, where nitrate levels dropped by 40% (Panday et al, 2024). Organic fertilizers also improve water retention in crop fields due to having higher organic components in their structure (Panday et al, 2024). Crops grown with organic fertilizers have greater antioxidants and lower cadmium levels, benefiting people and the environment's health (Panday et al, 2024). From 1999 to 2021, the global farmland utilizing organic fertilizers has increased to 1.6%, demonstrating a rising acceptance (Panday et al, 2024).

While organic fertilizers have nutrient release and variability challenges, the long-term benefits outweigh these drawbacks (Panday et al, 2024). Synthetic fertilizers may have faster effectiveness and short-term profits, but ultimately, the long-term consequences of soil degradation and long recovery periods make them an unreliable option for the future (Panday et al, 2024). Organic fertilizers showcase greater ecosystem maintenance and ensure a greener turn for the future of farming. It is important to focus not only on the effectiveness and quickness of fertilizers but also on the possible effects they may have in the future.

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References

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