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Harvesting Change: Climate Change's Impact on Agriculture and Food Security

Open-Ended Response Answer Key

1. Implementing adaptive strategies such as drought-resistant crop varieties, improved irrigation techniques, and agroforestry practices can help farmers mitigate the impacts of climate change on agriculture. Sustainable practices such as conservation agriculture, organic farming, and agroecological approaches promote resilience by enhancing soil health, biodiversity, and ecosystem services. Community-based initiatives, farmer-led research, and capacity-building programs empower smallholder farmers to adapt to changing conditions and build resilient food systems. However, challenges such as limited access to finance, knowledge, and markets, as well as policy constraints and institutional barriers, hinder the widespread adoption of climate-resilient practices and threaten the livelihoods of vulnerable farming communities.
2. International cooperation and support are essential for building resilience in farming communities and addressing the root causes of food insecurity exacerbated by climate change. Global initiatives such as the Paris Agreement and the United Nations Sustainable Development Goals provide frameworks for collective action and investment in climate adaptation, mitigation, and resilience-building efforts. However, equitable distribution of resources, technology transfer, and capacity-building are needed to ensure that smallholder farmers and marginalized communities benefit from international assistance and contribute to global efforts to combat climate change. Inclusive decision-making processes, partnerships between governments, civil society, and the private sector, and collaboration across sectors and scales are critical for implementing effective solutions and achieving sustainable development outcomes.

