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Uttarakhand Farmers and Climate Change

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Introduction

Climate change has been making headlines around the world for years, but it's often hard to understand what it really means. One aspect of climate change that's badly affected by it, however, is agriculture.

In the state of Uttarakhand in India, for example, farmers are struggling to cope with the increasingly erratic weather patterns. Droughts are becoming more common, and rain is coming in heavier downpours and causing destructive floods.

This is seriously impacting farmers' livelihoods, as they're no longer able to rely on traditional methods to predict the weather or grow crops. Many are having to find other ways to make a living, such as selling their animals or migrating to cities in search of work.

It's heart-breaking to see so many people losing their homes and their way of life because of something that's largely out of their control. But we can all do our part to help by raising awareness and supporting organizations that are helping these farmers adapt to climate change.

Overview of Uttarakhand's Agricultural Landscape

The state of Uttarakhand is located in the Himalayan foothills. Uttarakhand has 13 district, 9 district is hilly and 4 is plain district. The region is known for its picturesque landscapes, religious temples, and pilgrimage sites. What you might not know, is that Uttarakhand is also one of the most important agricultural states in India.

Uttarakhand is a major producer of millets, grains, fruits, and vegetables. The state has a rich diversity of agricultural products due to its varied agro-climatic conditions. However, due to climate change, the region is facing increasing challenges in terms of production and food security.

Impact of Climate Change on Uttarakhand's Farmers

Farmers in the state of Uttarakhand are facing an uncertain future as the impact of climate change takes its toll on their crops.

You might not think of a place like Uttarakhand when you think of the effects of climate change, but the fact is that the region is already feeling the impacts. The average temperature in the state has risen by 1.5 degrees Celsius in the past few decades, and rainfall patterns are changing too.

This is having a devastating effect on the farmers in Uttarakhand. Their crops are withering and dying due to the heat and lack of water, and they are struggling to make a living.

The government needs to do more to help these farmers adapt to the changing climate and protect their livelihoods.

Strategies for Reducing Climate Risk

There are a number of strategies that farmers can adopt to reduce their climate risk.

Here are a few examples:

1. Improve soil health and fertility. Healthy soil is better able to absorb and hold water, which can help reduce the impact of floods. It is also more resilient against pests and diseases.
2. Plant trees and other vegetation along the edges of fields. This will help protect against soil erosion and Keep the soil moist in times of drought.
3. Use crop rotation to diversify crops. This will help reduce the risk of pests and diseases and will also help the soil retain its nutrients.

Innovative Approaches to Sustainable Farming

As a farmer in Uttarakhand, you may have been wondering how you can make your farming practices more sustainable. Many of the farmers in Uttarakhand are taking innovative approaches to tackling climate change and protecting their environment.

From using natural fertilizers to developing crop rotation systems, there are so many simple methods for boosting sustainability. Additionally, farmers in the region have been exploring ways to reduce waste on their farms as well as introducing sustainable sources of energy such as solar power for irrigation and other farming operations.

It's inspiring to see how Uttarakhand farmers are taking action on climate change! By being mindful of the environment, they are setting an example of the importance of sustainable farming practices that the rest of us can learn from.

Utilizing New Technologies to Mitigate Climate Change Effects

To best manage the problem of climate change, farmers in Uttarakhand must be aware of the latest technologies and practices to mitigate its effects. For example, farmers can start using new techniques like no-till farming. This method reduces soil compaction, increases organic matter in the soil, and improves water retention. Additionally, farmers can also utilize advanced irrigation methods like sprinkler irrigation or drip irrigation systems to accurately measure and control water distribution.

Other innovative technologies that can be employed include Remote sensing to monitor crop health, using farm management software for better data analysis and insights into crop production or even investing in renewable energy sources such as solar energy. In this way, farmers in

Uttarakhand can significantly reduce their environmental footprint by taking proactive steps towards finding sustainable solutions to climate change.

Programs and Policies to Support Farmers in Uttarakhand

As a society, we must actively engage with climate-change-related programs and policies that support Uttarakhand farmers. For starters, the government's Production-Linked Incentive (PLI) scheme can be used to ensure that farmers get timely access to quality inputs at prices they can afford. At the same time, the government must also provide sufficient subsidies to help farmers adopt climate-resilient techniques such as intercropping, agroforestry and mulching.

Moreover, it is essential to introduce crop insurance schemes that protect farmers from the financial risks caused by extreme weather events. For long-term sustainability, we need to invest in smart irrigation systems that reduce water wastage and allow farmers to maximize their yields. Finally, we must ensure that these initiatives are backed with proper monitoring and evaluation systems that can be used for better implementation and goal tracking.

Conclusion

So, the next time you hear about the farmers in Uttarakhand, don't just think about global warming and climate change. These farmers are fighting a difficult battle every day to save their land and their livelihood. They are the real heroes, and we should do everything we can to support them.

References:

- Kandari, L. S., Dhyani, S. K., & Todaria, N. P. (2017). Impact of Climate Change on Livelihood Security of Mountain Farmers: Evidence from Uttarakhand Himalaya. *Indian Journal of Agricultural Sciences*, 87(10), 1357-1363.
- Negi, S. S., Kala, C. P., & Tiwari, J. K. (2018). Climate Change and Its Impact on agriculture in Uttarakhand, Indian Himalayan Region. *Indian Journal of Ecology*, 45(3), 518-526.
- Negi, J. D. S., Kumar, P., & Sharma, C. M. (2019). Farmers' Perception of Climate Change and Adaptation Strategies in the Uttarakhand Himalayas. *Journal of Environmental Biology*, 40(3), 473-480.
- Rawat, G. S., Pant, S. R., & Rana, N. (2020). Farmers' perception of climate change and its impact on agriculture in a Himalayan state of India. *Journal of Agrometeorology*, 22(1), 61-66.
- Chaudhary, D., Dangwal, D., & Dangwal, R. (2020). Climate Change Vulnerability of Farmers in High Mountain Communities of Uttarakhand Himalaya, India. *Journal of Mountain Science*, 17(4), 868-883.