



Nikofor Ivanov lives in Yakutsk, a Siberian city built on **permafrost** that is located about 450 kilometers south of the Arctic Circle, and he grows a type of frost-resistant apples the size of pearls.

The apples can **withstand** extreme weather conditions in Siberia, they're crunchy like ordinary apples, and they taste like apples, too. Winter temperatures in Yakutsk can drop as low as -60 degrees Celsius, and the region experiences a below-zero winter climate for much of the year.

Local plants had to adapt to such an environment by decreasing their size, growing close together low to the ground, and remaining small, typically only centimeters tall. Local biologists first observed this back in the 1970s when the new type of dwarf apples was born.

Ivanov says that harvesting the micro apples is **painstaking** and laborious, and he never harvests all of them. The man tried to make jam and preparations for the winter; however, it was too difficult, so he just ate the apples by the handful.

Difficult words: **permafrost** (a thick layer of soil that remains frozen throughout the year), **withstand** (to remain undamaged or unaffected by something), **painstaking** (great care and effort to do something).

**Discussion Questions****Topic Talk**

1. Define the following words: *permafrost*, *withstand* and *painstaking*
2. What kind of apples does Nikofof Ivanov grow?
3. What kind of weather do these apples have to withstand?
4. Does Yakutsk have longer warm temperature in a year?
5. How do local plants adapt to such a cold environment?
6. Is harvesting the micro apples a piece of cake?

Express Your Thoughts

1. Have you seen and eaten these micro apples?
2. Are there any fruit or vegetables that only grow in specific areas of your country?
3. Do you have any unusual plants in your country?
4. In which part of your country do you get extreme weather conditions?