Our models are based on global climate models that have been chosen for their strong performance in the far north, and scaled down to the local level. Even the most ambitious growers are not planning their 2099 harvests! But we include far-future modeled data in these tools because those who are more generally interested in climate change may want to see a longer-term picture. Also, a clearer picture of trends emerges at longer time scales.

Length of Growing Season
Is your summer season long enough for a crop to mature? This tool can help you estimate the number of days between the last cold spring day and the first cold fall day for your community for temperature thresholds geared to hardy or delicate crops. Choose thresholds that make sense for your area, and consider using a greenhouse or windowsill to start plants early.

Daily Minimum Temperatures
Daily minimum temperatures can help gauge the risk of frost or cold stress for annuals such as barley or beans, or perennials such as fruit trees or peonies. Here, you can see modeled data based on the coldest temperature ever recorded or projected for a chosen location and time period, year-round. These temperatures are estimates of record-breaking cold for all seasons.

Growing Degree Days (GDD)
This tool estimates how much heat is available to crops. Plants reach particular growth stages when cumulative GDD reaches the necessary values. Many Alaska plants are cold-hardy and can grow on all above-freezing days. For these, GDD can be calculated with a baseline of 32°F. Most crops in other regions have higher baseline temperatures, such as 40°F for barley and oats, or 50°F for corn and tomatoes.
Alaska Hardiness Zone Maps

The USDA uses Plant Hardiness Zones as the standard by which growers can determine which plants are likely to thrive at a given location. Many seed manufacturers reference these zones.

Hardiness maps are based on the average annual minimum winter temperature. These zones are only a rough guide. Because they are based on winter temperatures, they are of greatest importance for perennials such as fruit trees or peonies.

It may make more sense to choose summer crops (annuals) based on our Growing Degree Day or Growing Season tools. Also, variations based on very fine scale differences in slope or elevation are too small to show up on these maps.

Hardiness projections

These four maps represent current estimates of hardiness zones in Alaska, plus projections of how these zones may look in three future time periods, based on climate change models.

Looking at future zone maps can help guide long-term planting, and can also provide a starting point for discussions and further research about Alaska’s agricultural future.

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SEE THE GARDEN HELPER TOOL ONLINE snap.uaf.edu/tools/gardenhelper