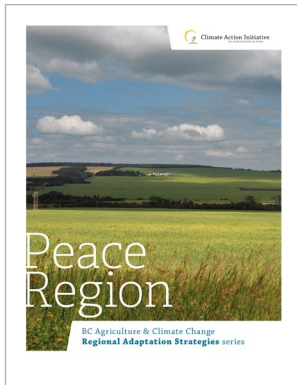


# Peace

## AGRICULTURAL IMPACTS as assessed in 2013



THE CHANGES IN CLIMATE projected for the Peace region will have a range of impacts on agricultural production. Potential agricultural impacts are summarized the table below.

This table is extracted from the *Peace Adaptation Strategies* full report, published in 2013 by the BC Agriculture & Food Climate Action Initiative. To read the full report, visit: [www.ClimateAgricultureBC.ca](http://www.ClimateAgricultureBC.ca)

Projected Climate Changes	Projected Effects	Potential Agricultural Impacts
<ul style="list-style-type: none"> <li>↗ Increasing winter temperatures</li> </ul>	<p><b>More frequent rain-on-snow events, freeze-thaw cycles</b></p>	<ul style="list-style-type: none"> <li>- Increase in hazardous conditions for livestock</li> <li>- Increase in winterkill of grasses and legumes</li> <li>- Increase in management costs</li> <li>- Increase in loss of soil inputs applied in fall</li> </ul>
<ul style="list-style-type: none"> <li>↗ Increasing temperatures</li> <li>↗ Increasing growing degree-days/heat units</li> <li>↗ Increasing frost-free period</li> </ul>	<p><b>Increasing growing season length</b></p> <p><b>Increase in wildfire risk</b></p>	<ul style="list-style-type: none"> <li>- Increased uncertainty (shoulder season variability/extremes)</li> <li>- Increased risk of plant stress, pests</li> <li>- May decrease hay yields</li> </ul> <p><b>Potential opportunities:</b></p> <ul style="list-style-type: none"> <li>+ Increase in suitability for new varieties (forage, grain, seed)</li> <li>+ May increase length of fall grazing season</li> <li>+ Increase in suitability of new types of crops</li> <li>+ Increased yields and quality</li> </ul>

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Projected Climate Changes	Projected Effects	Potential Agricultural Impacts
<ul style="list-style-type: none"> <li>↗ Increasing seasonal temperatures</li> <li>↘ Decrease in precipitation falling as snow</li> </ul>	<p><b>Changing hydrology:</b></p> <ul style="list-style-type: none"> <li>▪ Earlier river peak flow</li> <li>▪ Lower water supply in summer/fall</li> <li>▪ Increasing frequency and severity of drought</li> <li>▪ Decreased quality of water supply</li> </ul>	<ul style="list-style-type: none"> <li>- Increased plant stress</li> <li>- Decreased productivity</li> <li>- Crop losses</li> <li>- Increased need for water storage and irrigation</li> <li>- Lower pasture carrying capacity</li> </ul> <p><b>Potential opportunities:</b></p> <ul style="list-style-type: none"> <li>+ Decreased drying costs</li> <li>+ Improved grain quality</li> <li>+ Slower weed growth</li> <li>+ Increased feasibility of storage/irrigation infrastructure</li> </ul>
<ul style="list-style-type: none"> <li>↗ Increasing precipitation</li> </ul>	<p><b>Increasing moisture in the spring</b></p>	<ul style="list-style-type: none"> <li>- Waterlogged soils</li> <li>- Increased risk of disease</li> <li>- Delayed planting</li> <li>- Increased costs</li> </ul> <p><b>Potential opportunities:</b></p> <ul style="list-style-type: none"> <li>+ Improved germination and emergence</li> <li>+ May improve hay yields</li> </ul>
<ul style="list-style-type: none"> <li>↗ Increasing extreme precipitation events</li> </ul>	<p><b>Flash flooding</b></p> <p><b>Soil erosion</b></p>	<ul style="list-style-type: none"> <li>- Crop damage</li> <li>- Input (fertilizer, seed, pesticides) losses</li> <li>- Impeded pollination</li> <li>- Delayed planting</li> <li>- Impeded combining</li> </ul>
<ul style="list-style-type: none"> <li>↗ Increasing variability of conditions</li> </ul>		<ul style="list-style-type: none"> <li>- Increase in management complexity</li> <li>- Acceleration of cumulative impacts</li> <li>- Challenge to current production system</li> <li>- More rapid adaptations required</li> </ul>
<ul style="list-style-type: none"> <li>↗ Increasing winter temperatures</li> <li>↗ Increasing annual temperature</li> <li>↗ Increasing growing degree days</li> <li>↗ Increasing frost-free period</li> </ul>	<p><b>Changes to pests and diseases:</b></p> <ul style="list-style-type: none"> <li>▪ Increased winter survival rates</li> <li>▪ Increased number of cycles in a year</li> <li>▪ Introduction of new pests and diseases</li> </ul> <p><b>Increasing wildlife &amp; bird activity, success rates, population sizes</b></p>	<ul style="list-style-type: none"> <li>- Increased management costs, complexity, uncertainty</li> <li>- Crop damage, losses</li> <li>- Negative effects on livestock health</li> <li>- Increased conflicts with other stakeholders over wildlife and habitat management</li> </ul>