

# CLIMATIC REQUIREMENTS OF PLANTS

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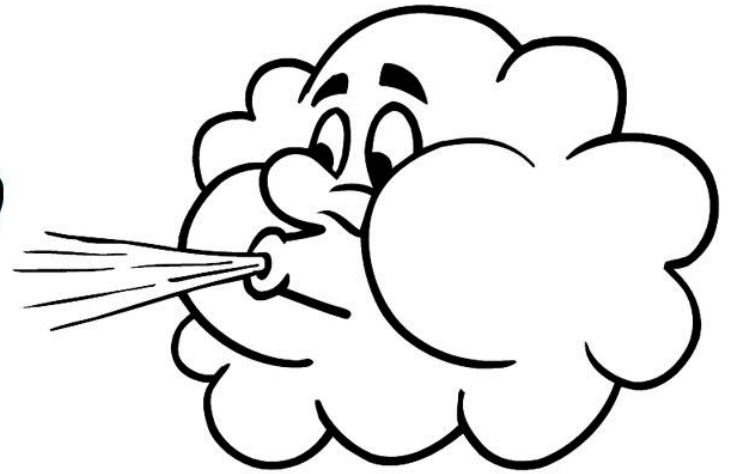
# Outline:

- *Introduction*
- *The effect of temperature on the yield of grain;*
- *To prevent the plant from a low yield*
- *Crop temperature needs*
- *Conclusion*



**rainy**

*WIND*



*most important  
climatic factor to be  
considered in  
agriculture.*

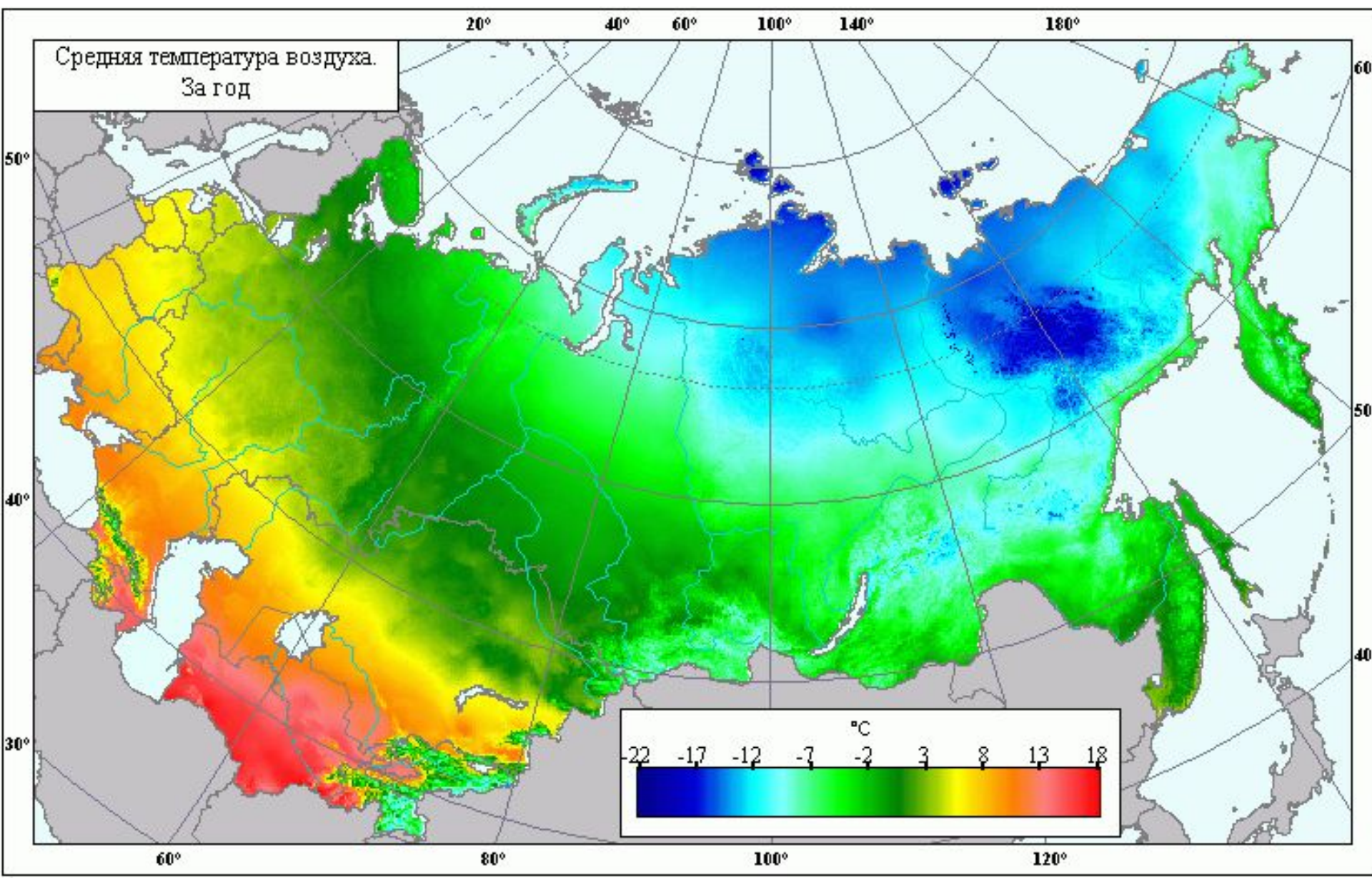


# CROP TEMPERATURE NEEDS





(the sum of active temperatures above 10°C)







- *Wheat* — 1200—1700,
- *Barley* — 960—1450;
- *Oats* — 1000—1600;
- *Millet* — 1410—1950;
- *Buckwheat* — 1200—1400;
- *Potato* — 1200—1800.
- *Corn* — 1100—2900;
- *Sunflower* — 2000—2300;
- *Cotton* — 3000-3400



# The effect of temperature on the yield of grain

developmental phase	crop loss
<p>tillering</p> <p>18,3°C    26,1°C</p>  <p>Колосок в фазу кушения</p>	<p>-10-15 %</p> 
<p>booting</p> 	<p>-10-15 %</p> 

developmental phase	crop loss
<p>earing</p> 	<p>-20-40 %</p> 
<p>grain maturity</p> 	<p>-5-7 %</p> 

To prevent the  
plant

from a low yield

• Create resistant crop  
varieties

of high temperature;

• To use of  
resource-saving  
technologies





# Questions:

- **How does high air temperature influence on the yield in tillering period of wheat?**
- **How can we prevent a low yield of crops from high temperature?**



# References

- Kartamishev VG Oil crops in arid regions of Russia // environmental management and agricultural production in the southern regions Russian Federation.-M.: "Modern notebook", 2003.
- Elderen, E. van. Moisture content of wheat in harvesting period / E. van Elderen, Hoven S.P.J.H. van // Journal agricultural engineering research. - 1973. Vol. 18. №2.