

S1: Questionnaire

Set 1: European potato farmers' perception of climatic changes and experienced impact on potato production.

- Q1: Do you believe that in the last 10 years changes in climatic conditions have affected your potato production? (yes/no)
- Q2 (optional): If yes, which effect(s) related to climatic changes do you feel has (have) increasingly impacted your potato production in the last 10 years:
(Multiple choice)
Drought; Heat; Heavy precipitation; Flash floods; Early autumn frosts; Late spring frosts; Soil erosion; Pests and pathogens induced by climatic conditions; Others (with text field)
- Q3: In your opinion, which effect(s) related to climatic changes will negatively affect your future crop production the most?
(Multiple choice)
Drought; Heat; Heavy precipitation; Flash floods; Early autumn frosts; Late spring frosts; Soil erosion; Pests and pathogens induced by climatic conditions; Others (with text field)
- Q4: Do you believe climatic changes are a threat to maintain potato production at your farm? (yes/no/unsure)

Set 2: European potato farmers' pursued adaptation strategies and in-depth information about adaptation strategy "variety choice".

- Q5: Which adaptation strategies to climate changes are you willing to implement?
(Multiple choice)
Change of planting and harvesting date; Irrigation; Tillage; Change in crop rotation; Planting an adapted variety; Planting an adapted genetically modified or genome edited variety; Others (with text field)
- Q6: Do you believe that the impact of climatic changes on potato production can be reduced by the choice of an adapted variety? (agree/disagree/unsure)
- Q7: Which source of information do you use in your choice of variety?
(Multiple choice)
Personal experience; Discussion with colleagues; Plant variety examination office; Technical associations or institutes; Breeding companies; Processors; Retailers; Agricultural fairs; Farmers' representatives/associations; Others (with text field)
- Q8: How important do you consider these characteristics for the choice of an adapted variety?
(Rating of each characteristic from 1=very relevant to 4= not relevant)

Optional

Yield potential; Yield stability; Skin and flesh color; Tuber shape; Time of maturity; Disease resistance; Pest resistance; Starch content ; Sugar content; Dormancy and storability; Drought tolerance; Heat tolerance

Set 3: Information about site conditions and survey participants

- Q9: Which farming system applies to your potato production: (Categories: conventional; organic; mixed; others (with text field))
- Q10: Your main production target(s): (Multiple choice: Table potatoes; Starch industry; Processing industry for consumption; Seed potatoes)

Please characterize your potato-growing site

- Q10: Potato acreage (Categories <3 ha; 3-8 ha; 9-20 ha; 21-50 ha; 51-100 ha; 101-150 ha; >150 ha)
- Q11: Possibility of irrigation (yes/no/partially)
- Q12: Soil water retention capacity (Categories: low; low-medium; medium; medium-high; high; unsure)
- Q13: Medium annual precipitation (Categories: <300 mm; 300–500 mm; 500–700 mm; 700-900 mm; >900 mm; unsure)
- Q14: Probability of maximum temperature >26 °C for more than 7 days during growing period (Categories: low; medium; high; unsure)
- Q15: Probability of maximum temperature >30°C for more than 7 days during growing period (Categories: low; medium; high; unsure)
- **Q16: Where is your potato production located?**
Austria; Belgium; Bulgaria; Croatia; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Luxembourg; Malta; Netherlands; Poland; Portugal; Romania; Serbia; Slovakia; Slovenia; Spain; Sweden and Iceland, Liechtenstein, Norway, Switzerland; United-Kingdom
- Q17: How long have you been growing potato? (5 years or less/more than 5 years)
- Q18: What is your age? (Categories <25; 25-34, 35-44; 45-54; 55-64; >65)