

Climate change series

Focus on peas and beans

The changing weather impacts of climate change are likely to become more extreme over time. Pea and bean growers are already noticing the effects of climate change, with some varieties particularly susceptible to extreme weather events. Yields of vining peas are already reduced and other varieties may soon start to suffer. However, climate change does present opportunities as well as challenges for pea and bean growers, but planning now to reduce cost, risk and concern in the future is crucial.

CLIMATE CHANGE OPPORTUNITIES FOR PEA & BEAN GROWERS

Productivity

- Investigate earlier maturing varieties
- Consider investing in novel vegetables: *Edamame*, soya beans, flageolet beans, navy beans
- Earlier springs enable earlier sowing
- Increase in yields due to more carbon dioxide available for growth (but may require more water or other inputs)
- Earlier spring growth allows earlier ripening, harvesting and possibly sowing
- Potential for greater canopy cover (due to increased carbon dioxide and higher temperatures, but requires more soil moisture)
- Significantly earlier harvest period for vining peas

CLIMATE CHANGE CHALLENGES FOR PEA & BEAN GROWERS

Pests/diseases

- Temperature changes may increase powdery mildew
- *Bruchid* pea beetle may extend its geographic range from France to UK
- *Bruchid* bean seed beetles are likely to flourish in warmer temperatures
- New and changing species of pests, diseases and weeds could invade growing regions
- Increases of pea aphid, pea moth and silver Y moth, as pests are not eliminated by warmer winters
- Significant increase in weed communities



Productivity

- Drought could reduce yields
- Spring beans are very susceptible to summer drought
- More water required for higher yields and canopy cover
- Delay to autumn sowing of winter beans due to warmer weather and increased risk of disease
- Soil erosion from torrential rainfall and saturation

Extreme weather

- Extreme events: flooding and drought and potentially resulting soil erosion
- Increasing unpredictability of weather

ADAPTATION SUGGESTIONS FOR PEA & BEAN GROWERS

- Improve soil structure to increase water uptake and reduce risk of water logging
- Plan water resources now and storage facilities
- Check irrigation systems for efficiency and repair any leaks
- Apply compost to maintain maximum soil moisture
- Protect against extreme weather conditions – high winds, torrential rain etc
- Be aware of genetic research into optimum crop performance and drought tolerance, and utilise when appropriate

MITIGATION MEASURES FOR PEA AND BEAN GROWERS

Please refer to fact sheet 4 for mitigation measures.

Although some of the impacts might happen to a greater or lesser extent in the short, medium or longer term, it's important to think ahead for the future, especially in relation to issues such as building design and planting regions.



For news, events, and links to stories about how other farmers are managing climate change on their farms, please visit: www.farmingfutures.org.uk

With thanks to: ARF, BBRO, BPC, BPEX, Carbon Trust, CLA, Defra, EBLEX, Forum for the Future, HDC, HGCA, MDC, NFU, PGRO and UKCIP