

Climate change and adaptation strategies in beef and sheep production



This Fact Sheet is a summary of the Climate Change Adaptation Survey and Workshop carried out by the *agri benchmark* Beef and Sheep online Conference 2020. For the full comprehensive report go to: <http://www.agribenchmark.org/beef-and-sheep/publications-and-projects.html>

Climate change affecting livestock producers across the globe

- Most severe impacts are occurring in the southern hemisphere – worst Africa and South America



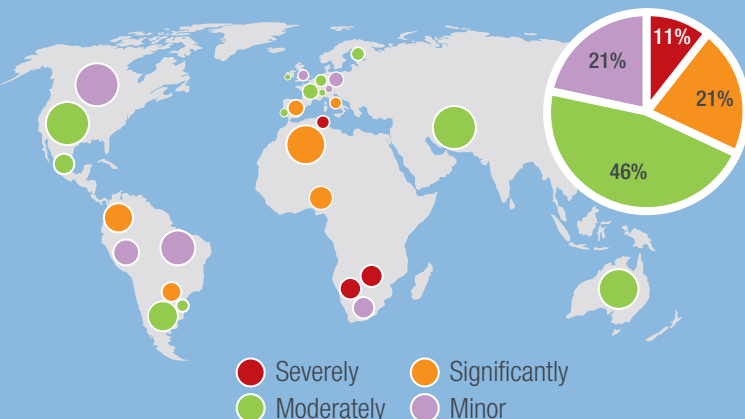
- Least impact in the high latitude countries of Europe and Canada

How is the climate changing?



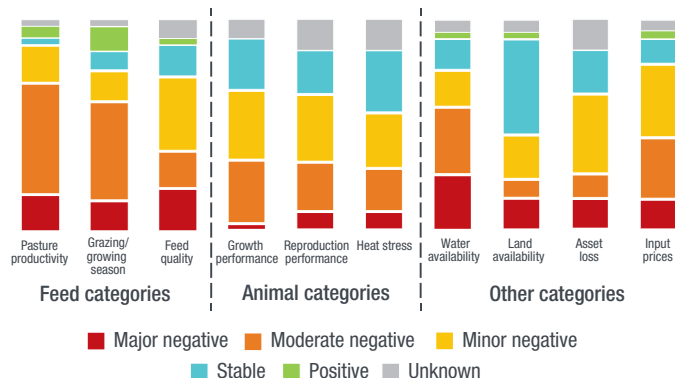
- The climate has changed remarkably quickly and will continue to do so for the foreseeable future
- A 'normal' year might become less probable
- Producers need to prepare for an increase in 'unusual' weather variability

Is climate change affecting livestock producers in your country?



- Climate change is affecting livestock producers across the globe but these effects are varied
- It has the potential to reduce the attractiveness of livestock farming and threatens the social and nutritional status of rural families and communities globally
- The severity of economic impact depends on the magnitude and frequency of events, and producers' levels of preparedness and ability to react to it

Impact of climate change on livestock producers (in what way is it impacting)



These climate changes are:



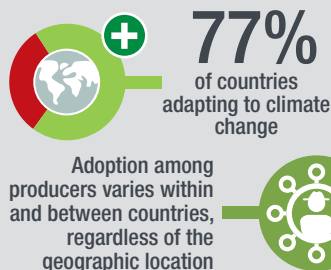
Negatively impacting feed productivity in almost all countries



Negatively affecting water availability in 70-80% of countries

Climate change is having an economic impact on livestock producers in all countries – two thirds reported a moderate, significant or severe negative impact. Brazil and South Africa are the only major beef and sheep producers with only a minor impact.

Producer adaptation



Is in a wide variety of ways



Can be: planned or forced/simple or complex/costless or costly/high risk or low risk



Are often interrelated and applied as a set



The main adaptations are in feed and in almost all countries



Producers in almost all countries changing animal management



In most countries producers increasing water access, storage and reticulation

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► Adaptations



Feed

Pasture management
Supplementary feeding
Pasture/fodder type or species
Combined livestock/feed systems
Feed storage
Alter timing of sowing/harvest



Animal/herd management

Herd management
Change timing of breeding, weaning
Stocking rate/culling/marketing
Genetics
Shelter



Water

Storage
Reticulation
Efficiency & Quality



Other

Financial management/farm planning
Insurance
Advice/Research/Training
Land-use changes
Networks

► Where to from here...

► This qualitative and subjective research:



paints a consistent and believable picture of the impact of climate change on livestock producers around the world



has un-earthed useful and transferable adaptations

► World best practise adaptations should be shared



► More rigorous academic and policy development study is warranted

► Adaptation case studies (findings of these case studies can be found in the full report)

► Matching cattle to feed: Australia



► Integrated crop-livestock production systems: Brazil



► Improved permanent pasture use via strip grazing and cow herd performance: France



► Transhumant sheep production on grassland: Spain



► Sheep containment areas: Australia



► Working with the weather: Ireland



► Rotational grazing & holistic pasture management: Paraguay



► Adapted feed ration and animal productivity improvement: Tunisia



► Cattle heat stress reduction via ventilation: Italy



► agri benchmark member countries:

agri benchmark is a global, non-profit and non-political network of agricultural economists, advisors, producers and specialists in key sectors of agricultural value chains. It is operated as an international network of research partners coordinated by the Thünen Institute – the German Federal Research Institute for Rural Areas, Forestry and Fisheries.

The Beef and Sheep network has membership in 37 countries and covers all major red meat producing and exporting countries bar India – covering around 75% of beef production and 55% of sheep production.

