

# LEARNING LESSONS FROM THE 2018 AGRICULTURAL DROUGHT



The record-breaking heatwave may already seem like a distant memory, but many farmers are still struggling with the aftermath of the hot, dry summer that followed a cold, late spring. They are now planning for 2019 with some trepidation.

Agriculture is on the front line of climate impacts. The latest IPCC UKCIP18 climate projections are clear about the greater chance of hotter, drier summers in future. Learning lessons from this year's drought is critical so our food supply can be more resilient, and our farmers can better manage the volatility of an uncertain climate in future.



“This unprecedented spell of weather really should be a wake-up call for us all. It’s a timely reminder that we shouldn’t take food production for granted”

Minette Batters, NFU president

# PRINCIPLE POLICY ASKS

because water for food production must be a strategic priority



## PLAN

-  Promote contingency planning among farmers to help them better understand the risks of water supply disruption and how to manage them;
-  Develop long-term multi-sector collaborative plans for managing water scarcity where food production is recognised as a priority user;
-  Develop and promote best practice in the management of resources like soil and fodder across all sectors to improve farm resilience;
-  Ensure strategic planning of straw supply and demand across the straw industry, uniting the supply chain.



## PROTECT

-  Develop policy measures to support farmers in managing the impacts of weather and market-related volatility, including droughts and water scarcity;
-  Deliver maximum and timely flexibility in the application of water abstraction rules;
-  Make prompt payments and introduce rapid derogations to rules governing farmed environment schemes;
-  Remove blockages in the planning and licensing regulations that impede the construction of more on-farm water storage reservoirs.



## PAY

-  Introduce incentives through the tax system to encourage investment in farm reservoirs and new farmed environment schemes to encourage water efficiency measures delivering more crop per drop;
-  Invest in improved monitoring and measuring of abstraction to make best use of available water;
-  Continue investment in the UK's weather forecasting capability, especially in the medium-term forecasts and those aligned to real-time water availability monitoring, to support drought planning.

 Recommendations for the agricultural sector

 Recommendations for local and national government and its agencies

# WHAT CAUSED THE 2018 AGRICULTURAL DROUGHT AND SHOULD WE WORRY?

## THIS YEAR

Farmers experienced a late start to the growing season caused by below average temperatures for much of March and the first half of April.

The summer which followed was:

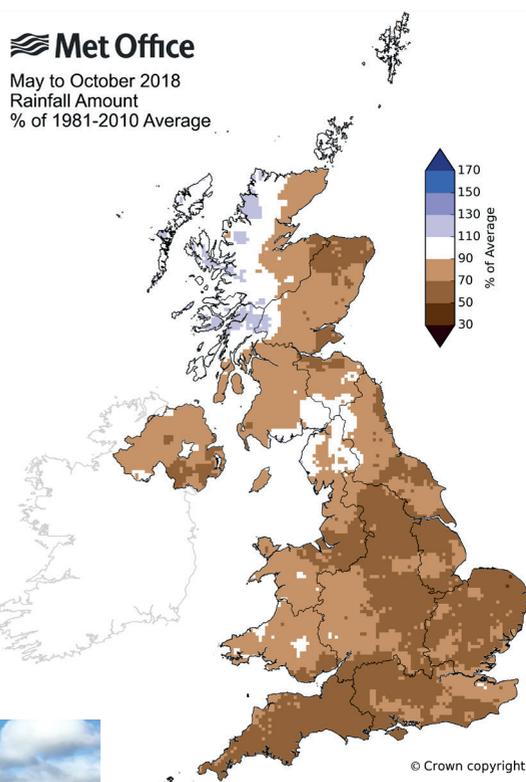
- the joint hottest on record
- in the top five driest for England and
- in the top five sunniest for the UK

Although September rainfall was above average, some locations had only half the usual amount. Even into October, rainfall was below normal in many areas; only 73% of average in England.



### LOOKING FORWARD TO 2019

For farmers, this drought is not yet over. Farming is an indicator for the status of Public Water Supply in 2019.



### Why was it an agricultural drought?

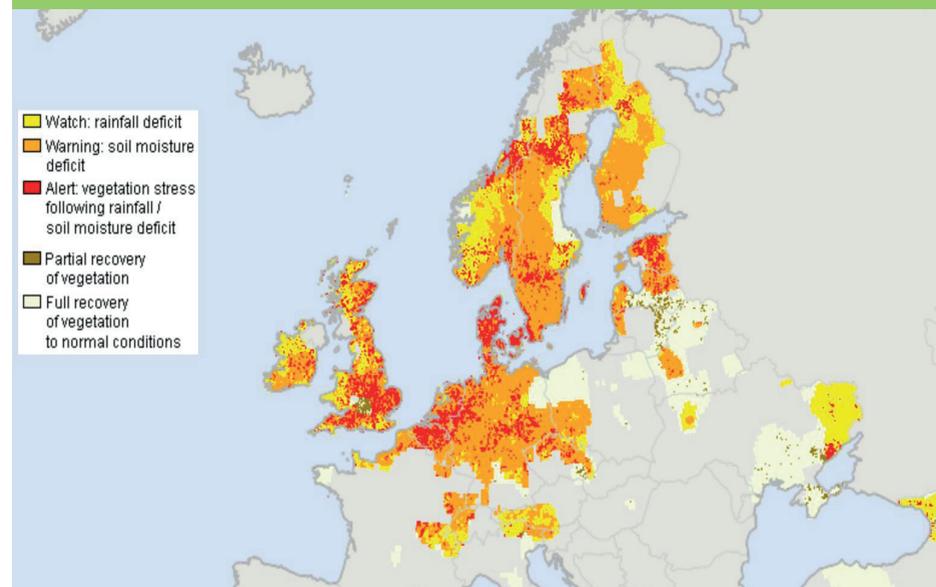
An agricultural drought happens when there isn't enough rainfall and moisture in soils to support crop production or farming practices such as spray irrigation.<sup>1</sup>

## A LONGER TERM TREND: A CHANGING CLIMATE



Nine of the ten warmest years have occurred since 2002. This century has so far been warmer than the previous three centuries. Changes in some types of extreme weather are already being seen.<sup>2</sup> And our farmers have to deal with the consequences; during the period 2005-2015 nearly 60% of farm businesses were affected by severe weather events.<sup>3</sup>

### This summer, we weren't alone, as the European Drought Observatory reported:<sup>4</sup>



### Risk of simultaneous crop failure

China and the US account for 60% of global maize production and the chance of severe weather simultaneously hitting both is as high as 6% per decade. Researchers said "This would be a scenario of multi-breadbasket failure in which impacts would be felt at the global scale. This is the first time we have been able to quantify the risk; it hasn't been observed in the past 30 years, but the indications are that it is possible in the current climate"

<sup>1</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/625006/LIT\\_10104.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/625006/LIT_10104.pdf)

<sup>2</sup> <https://www.metoffice.gov.uk/news/releases/2018/climate-extremes-report-supplement>

<sup>3</sup> <https://www.nfonline.com/cross-sector/environment/climate-change/climate-change-news/our-survey-says-weather-volatility-threatens-british-food-production/>

<sup>4</sup> <http://edo.jrc.ec.europa.eu/edov2/php/index.php?id=1153>

# FARMING ON THE FRONTLINE – THE CONTINUING IMPACT OF THE 2018 AGRICULTURAL DROUGHT



## RAIN-FED CROPS

- Variable yields
- Meeting quality as well as quantity specifications
- Increased fire risk
- Wild bird cover / flower mixes didn't grow



## MAINS/PRIVATE WATER SUPPLIES

- Low mains pressure and interruptions of supply affecting livestock farmers
- Vulnerability of those relying on private water supply



## LIVESTOCK

- Grass yields and quality down; milk yields down
- Autumn/winter forage stocks fed during summer
- Fertility affected; more animals sent for slaughter
- Low/no feed stocks for 2019



## FRUIT AND VEG

- Demand high but offset by increased production costs
- Lower yields and quality
- Growers used maximum permitted abstraction allocations

### Variable yields (compared with 5 year average)

- Wheat – down 6%, lowest yield since 2013
- Winter Barley – down 2%, Spring Barley down 10% and lowest yield since 2012
- Oilseed rape – slightly above average

“The extreme weather events have caused crop yields to become increasingly unpredictable.”

Tom Bradshaw, NFU combinable crops chair

## CASE STUDY

### LOST CROP, PRESSURE ON FODDER AND CASH FLOW COSTS

Peak District livestock farmer Barry Wager has lost a quarter of his silage crop and 40% of his hay. “I could just see the standing grass wilting away and I had to get a derogation to cut it early before it all vanished”. He’s already spent £7,000 on straw with another £10,000 earmarked for more feed to get through the winter.

Thankfully the farm has a borehole as the mains water supply failed several times, affecting Barry’s family.

### Cumulative impact on livestock

- The weather contributed to cow slaughterings increasing by more than 30,000
- Severe weather early in the year then the warm dry conditions led to one million fewer lambs compared to 2017

“Settling outstanding BPS monies over the summer and securing the prompt delivery of 2018 payments this winter have been vital to ease real cash flow pressures on farm. Despite our calls for bridging payments in 2019, frustratingly these have still not been confirmed by government.”

Stuart Roberts, NFU vice president

## CASE STUDY

### HELPING FARMERS TO HELP THEMSELVES



With his potato crop close to being written off, Staffordshire grower Richard Thompson seized the opportunity to trade water. In just over 24 hours, calls to the NFU and a neighbouring farmer, and conversations and exchange of data with the Environment Agency, led to the release of the small amount of water not being used by his neighbour, which saved his crop. “The flexibility and responsiveness of the EA was superb. It saved the money, over £50,000, I’d spent growing the crop” said Richard. “A simple water trading scheme can be transformational especially if it allows water sharing before the situation becomes an emergency”.

“This shows what farmers can do when Government and its agencies are actually proactive and flexible and make decisions at speeds appropriate for farm businesses. If only this had happened across the board”

Guy Smith, NFU deputy president

# TOWARDS A MORE DROUGHT-RESILIENT FARMING SECTOR AND FOOD SYSTEM: WHAT WE NEED

We believe that we cannot and should not be complacent about our ability to produce food. Our Drought/Dry Weather Summits brought the industry, governments and their agencies together to find real solutions for farmers and growers. We heard promises “to do whatever it takes”, to deliver “maximum flexibility” and to “move quickly”. In practice, the response was inconsistent and lacked urgency.

What you’ve read on previous pages is just a snapshot of the impacts of this year’s weather – the full effect won’t be known until next year. Many farmers were saved just-in-time by a rainy spell but such ‘near miss’ summer droughts expose the vulnerability of the UK’s farming sector, much of which relies on regular rainfall rather than on storage, to meet crop and animal welfare needs. This places our sector in sharp contrast to other water users like Public Water Supply.

NFU Cymru hosted a Dry Weather Summit with the Welsh Government on 25 July and the NFU held a Drought Summit with key Government representatives in London on 1 August. At the 1 August meeting the Secretary of State Michael Gove highlighted his desire to think about how the UK might tackle future droughts. Some key policy asks that were raised at the summits and in subsequent discussions are set out opposite:

*“The weather conditions experienced during the course of 2018 have highlighted the importance of future policy measures that provide stability to farm businesses and address volatility caused by factors beyond farmers’ control.”*  
**John Davies, NFU Cymru president**

*“We need to ensure that we have the infrastructure, regulation and plans to capture and store more and maximise water availability when we need it”*  
**Robert Caudwell, Chair, ADA**



## PLAN

- Promote contingency planning among farmers
- Deliver multi-sector solutions to water scarcity that recognise food production as a priority
- Develop and promote resource management to improve farm resilience
- Ensure strategic planning across the straw supply chain



## PROTECT

- Develop policy measures to support farmers in managing volatility
- Deliver maximum and timely flexibility in the application of water abstraction rules
- Make prompt payments and introduce timely derogations.
- Remove blockages in the planning and licensing regulations for on-farm water storage



## PAY

- Encourage investment in farm reservoirs and water efficiency measures
- Invest in improved monitoring and measuring to make best use of available water
- Continue investment in the UK’s weather forecasting capability