NFU Consultation Response

Date: 27 March 2014

Contact: Paul Hammett
Tel: 01638 672106
07778 337852

Email: paul.hammett@nfu.org.uk

‘Making the most of every drop’

NFU response to Defra and Welsh government proposals for reforming the water abstraction management system

The NFU represents 55,000 farm businesses in England and Wales involving an estimated 155,000 farmers, managers and partners in the business. In addition we have 55,000 countryside members with an interest in farming and the country. The NFU has a key role to play in shaping a new and improved system for the management and regulation of water resources in England and Wales. We look forward to working with government and its regulatory agencies to create a system that links water security to food security, and gives the nation’s farmers and growers a fair share of water.

SUMMARY RESPONSE

Linking surface water allocation to availability (consultation questions 1-4)

The NFU agrees that the current system is not flexible enough to improve the efficient use of water while protecting the environment; neither can it ensure fair treatment for existing and future abstractors.

We seek a new system that links food security to water security, and allocates a fair share of water to farmers and growers to grow our food. To achieve, this abstraction reform should:

- Be underpinned by government policies that recognise and promote the link between food and water security
- Recognise that farmers and growers need secure access to water to make long-term business investment in future food production
- Safeguard against significant water export from agriculture and horticulture in future trading regimes
- Proceed at a measured pace to allow businesses sufficient time to adjust and invest in water security and efficiency
- Deliver improved water security in the food and farming/growing sector (particularly during dry and drought conditions) over a longer timescale which in turn supports national food security
- Help farmers and growers to move from business planning based on annual water availability to systems that secure water for two, or even three, consecutive dry winters
- Promote the need for a 25 year supply and demand plan for ‘Water for Food’
- Facilitate the maximum utilisation of available volume of water at all times
- Be underpinned by measures to store more surplus water and encourage the construction of more reservoirs through incentives for investment and innovation (for example through tax capital allowances)

- Deliver a system that is simple, flexible, and cost effective to administer

Linking groundwater allocation to availability (consultation questions 1-4)

'Making the most of every drop' considers future options for the management of surface water, but management of groundwater has been largely overlooked.

Proposals for reform of groundwater abstraction should be properly developed and subject to their own separate public scrutiny. Government should:

- Apply the same principles and procedures to surface water and groundwater abstraction (wherever practicable)
- Produce a clear statement on the management rules that will be applied to groundwater, and in particular
- Ensure that future short-term reductions or restrictions to access to groundwater are based on annual – not daily or hourly – volumes.

Linking water allocation to availability in dry and drought conditions

'Making the most of every drop' only addresses the management of water in 'normal' conditions (although we accept that the driver for changing the current system is to accommodate long term revision of what might be considered 'normal').

Devising solutions to water scarcity during dry conditions and drought must be part – and indeed a key part – of this review process. In particular we believe that if government is serious in its commitment to equality amongst all users then it must abolish 'section 57 restrictions' (uniquely applied to spray irrigators) as part of the reform process.

Water discharges (consultation questions 5 & 6)

We agree that abstractors who currently discharge water should continue to do so in line with current practice.

Charging for abstraction (consultation questions 7 & 8)

Government proposes a charging system that will reflect actual use rather than licensed volume. Abstraction charges should be based on:

- A mechanism that limits charges to the recovery of costs incurred in administering the system – charging must not become a tax raising measure
- Actual not licensed use
- Lower charges for high flow water.

Farmers and growers already benefit from 'two part tariff' charges and so are unlikely to benefit from the proposed changes to charging. We fear that charges will inevitably be levied to meet additional administration costs of a new system – the new system should be as simple as possible to minimize these costs.

Trading (consultation questions 9 & 11)

Farmers and growers view trading as an important tool in the efficient management of water but by no means the most important aspect of reform. Trading mechanisms should:

- Safeguard against significant water export from agriculture and horticulture in future trading regimes
- Be improved without delay and in advance of the introduction of a reformed abstraction system so that trades are administratively simple and thereby quick and low cost to make
- Enable pre-trade approvals
- Allow both permanent and temporary transfers of all or part of licensed volumes.

Two options for reform (consultation question 10)

Of the two options proposed for replacing the current system, the 'current system plus' option is overwhelmingly preferred by farmers and growers. A small minority of licence holders recognise some potential advantages of 'water shares', but even they doubt that this option is feasible or affordable in practice.

Review process for future abstraction permissions (consultation questions 12 & 13)

We agree that all new 'abstraction permissions' in a catchment or management unit should be periodically reviewed collectively; decisions taken should apply equally across all sectors.

Transition to a new system – A fair share of water for farming (consultation questions 14, 15 & 18)

In allocating and managing water, the new system must deliver equity amongst all users. Abstraction licences, particularly licences of right, are a valuable business asset and existing 'property rights' of licence holders must be fully recognised during transition.

In ensuring a fair transfer of 'water for food' from the old to new system, arrangements for transition the new system should:

- Transfer existing licensed volumes to new authorisations (not historic average used volumes)
- Avoid prioritisation or a hierarchy of need between users in different sectors
- Eliminate differentiation between types of user based on relative consumptiveness
- Acknowledge the historical rights established by holders of 'licences of right' through a hierarchy of transferred allocation
- Abolish 'section 57 restrictions'[1] that uniquely apply to spray abstraction and
- Accommodate new entrants

The mechanism for transferring entitlements from the current regime to a new system will be critical. Volumes actually used by farmers will depend on a range of factors, not least rainfall.

The transfer of licensed volumes would properly recognise historic rights and reduce or avoid inevitable compensation claims from licence holders resulting from the deprivation of proprietary rights.

[1] Environment Agency has powers to restrict spray irrigation under the Water Resources Act 1991 http://www.environment-agency.gov.uk/homeandleisure/drought/131105.aspx

Notwithstanding the above, any transfer of used volumes must adequately recognise farmers' irregular usage. Farmers and growers typically grow crops to match licensed volumes available in a dry/drought year. Abstraction needs fluctuate wildly depending on cropping rotations and rainfall.

The special characteristics of farmers and growers, the special regulatory provisions sometimes applied to them should be considered in the transition arrangements. In particular the needs of currently unlicensed trickle irrigators (with no formal historic volumes – licensed or used) must be fully accommodated.

We reject the proposal to claw back an additional volume of currently unused licensed water which would be held by the Environment Agency in a 'water reserve' for allocation to new and expanding businesses. We believe that spare, unused licensed volumes should remain with licence holders and be managed by them.

Proportionate implementation (consultation questions 16 & 17)

Government recognises that catchments vary considerably across the country in their character and water balance. There seems little point in changing water management arrangements in catchments where water is in surplus and where current arrangements work well.

We doubt that implementation of reforms in catchments which are 'water available' in status serves any useful purpose (the costs would exceed the benefits). The Agency's 'Restoring sustainable abstraction' (RSA) programme must be used to bring catchments currently described as 'over abstracted' into 'over licensed status' – reform should not be implemented in 'over licensed' catchments until the RSA programme is complete.

We believe that reform options should be implemented only in those catchments that are 'over licensed'.

We agree that the new system should be introduced on a catchment by catchment basis.
The new system should focus more on local decision-making. Government should:

- Produce a national set of management/licensing rules capable of being adopted in catchments on an 'as needed' basis
- Promote opportunities for more hands-on management of water by users in a catchment, particularly in those catchments where a single use (such as food production) relies on a common source. We believe that groups of farmers and other users have much expertise and local knowledge to contribute to the decision-making process.

The Environment Agency should:

- Enforce national rules adopted in a particular catchment but play a reduced role in decisions relating to the local management of water
- Encourage abstraction at high flows and promote co-operation between users to better manage low flows by, for example, better co-ordination of abstraction between users. In low flow conditions, for example, different users could be given access to water at different times of day or days of the week thereby maintaining more regular flow
- Improve monitoring to give all users the benefit of real-time knowledge of water availability and need
- Encourage user groups, such as abstractor or water resources groups, to become more involved in collectively managing water.

WATER & FOOD SECURITY – THE CASE FOR AGRICULTURE & HORTICULTURE

We recognise Government's desire to reform the way that abstracted water is managed and regulated in response to future pressures of population growth and climate change. Global pressures facing water, food and energy are well documented.

Climate change

In 'Making the most of every drop' Defra explains that, along with population growth, climate change is driving abstraction reform.

There are three key sources of uncertainty in the latest climate projections identified in UK climate change predictions (UKCP09)[2], namely uncertainty in:

- Natural climate variability
- Climate models and
- Rates of future emissions.

In the near-term (the next one to two decades), most of the uncertainty is associated with natural variability. In the medium term (mid-century), the build-up of greenhouse gases is expected to be significant enough for systematic shifts in the UK climate to start to become evident even though year-to-year variability will still occur. The central estimate of average annual precipitation (any form of water that falls to the earth's surface, such as rain, snow, sleet, or hail) suggests little change anywhere in the UK.

A shift towards generally wetter winters is expected; but the future response of UK summer rainfall is less well-understood. UKCP09 suggests that there is a greater likelihood that summers will be drier, but wetter summers are not ruled out. Nevertheless, whatever happens to seasonal averages, a greater fraction of precipitation is expected to fall as heavy events.

It is clear therefore that while a new abstraction system should be designed to recognise more variable high and low flows, overall there will be similar volumes of water available to abstract. Regulatory change should address the two extremes of water surplus and scarcity, and be accompanied by complementary measures to **capture, store, distribute and use water**.

Water for food and the need for food security

Government's 'Foresight' study, 'The Future of Food and Farming: Challenges and choices for global sustainability'[3], published in 2011 set out the challenge faced by the global food system over the next 40 years:

- Global population size increasing to over nine billion by 2050
- Increased wealth leading to demand for a more varied, high-quality diet requiring additional resources to produce
- Greater competition for land, water and energy; increased impact of climate change; continuing globalisation with accompanying economic and political pressures. The report concluded that the need to reduce greenhouse gas emissions and adapt to a changing climate will become imperative.

The Foresight report went on to identify five key challenges that need urgent action:

1. Balancing future demand and supply sustainably – to ensure that food supplies are affordable

[2] http://ukclimateprojections.metoffice.gov.uk/21678

[3] http://www.bis.gov.uk/assets/foresight/docs/food-and-farming/11-547-future-of-food-and-farming-summary.pdf

2. Ensuring that there is adequate stability in food supplies – and protecting the most vulnerable from the volatility that does occur
3. Achieving global access to food and ending hunger – producing enough food in the world so that everyone can *potentially* be fed is not the same thing as ensuring food security for all
4. Managing the contribution of the food system to the mitigation of climate change
5. Maintaining biodiversity and ecosystem services while feeding the world.

Amongst the priorities for action by policy makers set out in the Foresight report, one stands out in the context of abstraction reform - the recommendation that government must 'anticipate major issues with **water availability for food production'**.

British agriculture has a critical role to play in securing food supplies for the long term. But farmers can only deliver if Government takes its own commitment to increasing food production seriously, recognises the value of domestic production and puts in place a policy framework that will enable Britain's producers to optimise productivity while protecting the environment in a changing world.

We believe that the way that water is managed and licensed is a key part of this wider policy framework.

The UK food supply chain is a web of interlinked producers, processors and consumers, of which the agricultural producers constitute a central feature. Those producers need a reliable supply and a fair allocation of water. A report[4] published by the Migration Advisory Committee in 2013 analysed Defra statistics showing total consumers' expenditure on food, drink and catering services in 2011 exceeded £178bn. The table on the following page summarises the research.

[4] 'Migrant Seasonal Workers: The impact on the horticulture and food processing sectors of closing the Seasonal Agricultural Workers Scheme and the Sectors Based Scheme', a report by the Migration Advisory Committee

Overview of the agriculture and horticulture
Value and volume of home-production marketed in the UK, imports and exports of fruit and vegetables (2011)

	Value (£m)	Volume (million tonnes)	Home production as a proportion of total volume (value) of home supply of crop type [1] [2]
Vegetables			
Home Production	**1,213**	**2.57**	**58 (40)**
Field	910	2.30	
Roots and onions	312	1.25	
Carrots	118	0.69	98
Brassicas	222	0.45	
Cabbage	81	0.23	94
Cauliflower	45	0.10	42
Legumes	74	0.23	
Other	302	0.37	
Lettuce	132	0.13	49
Protected	303	0.27	
Mushrooms	114	0.07	41
Tomatoes	94	0.09	18
Imports	1,878	1.99	
Exports	73	0.09	
Total Home Supply [1]		4.47	
Potatoes			
Home Production	**700**	**6.12**	**85**
Imports		1.67	
Exports		0.55	
Total Home Supply [1]		7.23	
Fruit			
Home Production	**637**	**0.43***	**12 (19)***
Orchard	157	0.28	
Apples	106	0.23	35
Pears	15	0.03	18
Plums	12	0.01	17
Soft	441	0.14	
Strawberries	279	0.11	70
Raspberries	118	0.02	66
Glasshouse		39	
Imports	2,620	3.32	
Exports	88	0.13	
Total Home Supply [1]		3.61*	

Note:
Trade figures relate to fresh produce where distinguishable.
Trade figures will include the import of crop types not grown in the UK.
All import data for strawberries relates to fresh produce only.
Basic Horticultural Statistics include dried vegetables in the import and export figures. This differs to the Agriculture in the United Kingdom publication which does not include dried vegetables in the trade figures.
*Does not include glasshouse output.
Figures may not sum due to rounding.
[1]Total home supply equals home production *less* exports *plus* imports.
[2] Proportion of total volume of home supply of crop type equals volume of home production (of the crop) *divided by* the total volume of home supply (of the crop).
Source: Defra (2012a) and Defra (2012b)

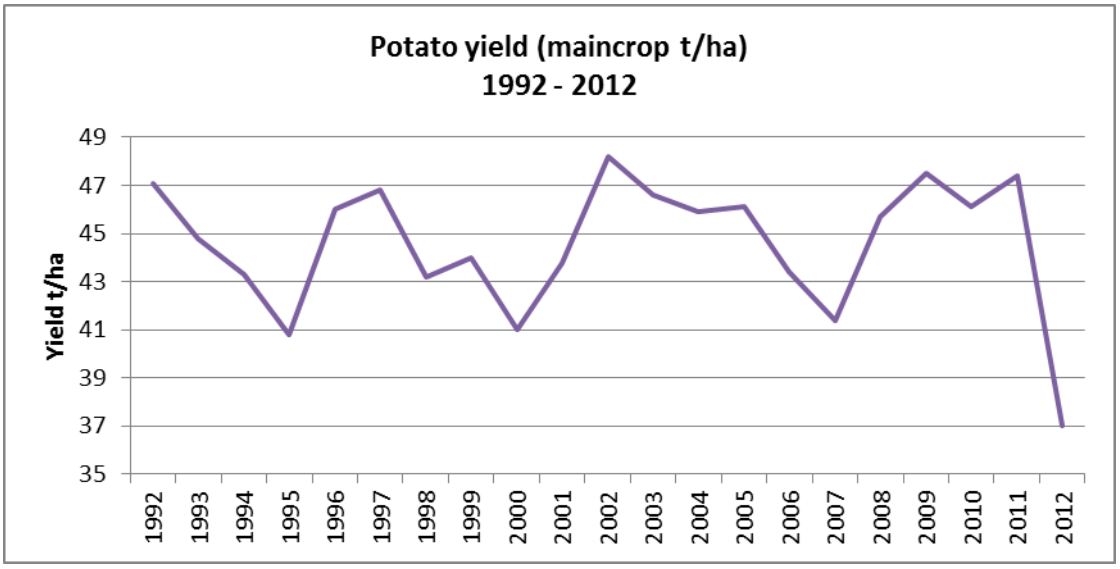
Is there a link between water availability, yield and prices?

Crop yields vary from year to year. Rainfall (and therefore the need to irrigate) is one important factor in farm production, but others include hours of sunshine, soil temperature, ground conditions at planting/harvesting, timing of crop sowing, disease and so on. Whatever the climatic conditions, a secure supply of abstracted water is increasingly needed for our higher value crops such as potatoes, root crops (carrots and onions) and salads. Water is also a key input for the soft fruit sector, where UK production has been characterised by considerable growth.

As well as climatic conditions, there are a number of other changes that occur over time that can impact on yield, production and market trends. Taking the potato sector as an example, supply and demand factors that have shaped the industry include:

- Rationalisation of grower numbers
- Migration of growing areas to lighter soils
- Introduction of new varieties
- Trend towards pre-packed rather than loose potatoes
- Larger proportion of the potato crop used for processing.

These changes have been accompanied by an increase in the use of irrigation in potato production over time so that the impact of dry summers on crops can be better managed by growers. Nevertheless there remains some considerable **volatility in potato yields** as shown in the graph[5] below, with climatic conditions (both wet and dry years) a contributory factor to this yield variation.



The table[6] that follows highlights those years that experienced 85% or less of the long term summer average (1910-2012). It compares actual rainfall with this average, and lists the yield recorded in the applicable year. In addition, it shows the year-on-year change recorded in the farm gate price for potatoes.

[5] The Potato Council
[6] The Potato Council

Year	% of long term summer rainfall	Yield t/ha	Year on year change in farm gate price
1994	79%	43.3	28.6%
1995	42%	40.8	23.5%
1996	70%	46	-4.1%
2000	81%	41	-4.9%
2003	72%	46.6	35.7%
2006	77%	43.4	24.6%

In four of the six years, when average summer rainfall varied significantly from the long term average, there was a significant increase in the farm gate price of potatoes. In addition, this change in farm gate prices appears to have been disproportionate, for example a 6% year on year drop in yield in 2006 coincided with a 25% increase in the farm gate price. Like any sector, volatility in supply, prices and producer returns represent a core business challenge, not only for growers but the entire supply chain.

Consistency in available water will deliver more consistent yields which will in turn **reduce volatility in farm gate prices.**

Some of the biggest year-on-year changes at the retail price level have coincided with years when rainfall has been below the long term average. For example, the dry year of 1994 saw farm gate prices increase by 28.6% compared to the previous year, with retail up by an average of 20.4% in the final two quarters of the year (following harvest of that year's crop). **Volatile yields do impact on retail prices.**

Year	Year on year change in farm gate price	Year on year change in Potato RPI Q3/4
1994	28.6%	20.40%
1995	23.5%	12.70%
1996	-4.1%	-13.30%
2000	-4.9%	7.70%
2003	35.7%	-1.30%
2006	24.6%	6.50%

Yield and price volatility of an irrigable commodity is a potentially serious issue. The Potato Processors Association (PPA) states that in 2013, the retail sales value of the UK market for processed potato products amounted to £3.9 billion. With about 57% of the UK consumption of potatoes in processed form, this accounts for approximately 3.2 million tonnes of potatoes annually. In addition to the industry's high added value products, the processing industry is a substantial employer, over 7,000 people are employed directly in the industry and if other dependent jobs are included the total rises to over 20,000.

Farmers and growers need a resilient water supply

Figures provided by the Potato Processors Association demonstrate the impact of dry and drought conditions on farm output and thereby on consumer prices. The PPA states that the 1975/76 drought caused a reduction in potato yield of 26% while prices rose by 644%. Similarly in 1983 a yield loss of 10% was matched by price increases of 222%.

The consequences of reduced availability of water for food

We must build resilience to meet the demand of British consumers who want to buy more British food. Since weather extremes do not respect national boundaries, there is little doubt that a Europe wide drought would have had a major impact on food prices in terms of increased volatility.

Water security is a fundamental need for farmers and growers

Farmers and growers use less than 1% total water abstracted so water allocation for food production is minor compared to public and energy supplies. But they hold two-thirds of all abstraction licences issued and so a great many small/medium farm businesses will be significantly affected by administrative changes by proposed reforms.

Water is needed for food

Irrigated agriculture accounts for 20% of the UK crop value, but only 4% of cropped land. For every 10% restriction in abstraction, there is a potential 8% loss in net farm income. Water availability and productivity are closely correlated.

In our 'Why farming matters in the fens' report, the NFU states that 'the food and drink manufacturing sector is the largest single manufacturing sector in the fens and is key to the sustainable growth in the region. Food and drink manufacturers in the Fens generate a turnover of approximately £1.7million and, together with businesses that pack and distribute produce, employ 17,500 people in the Fens, accounting for 7% of employment'.[7]

In times of drought agriculture is invariably first to lose its allocation of water

The current system for licensing and managing water through mandatory and voluntary restrictions dictates that farmers and growers are the first to lose legal access to water in dry and drought conditions.

Our population is increasing

By 2031, we expect the total population of England and Wales to grow by an extra 10 million people – an increase of 18% per cent from 2006. Meanwhile the demand for locally sourced food will also continue to increase.

Pressures on agriculture will change because of climate change

By 2050, summer river flows may reduce by 35% while winter flows may increase by 10-15%.

These pressures will result in greater pressure on water for food

Current water consumption

Although farmers use only 1% of the total abstracted water volume, 92% of the average British consumer's water footprint is related to the consumption of (imported) agricultural products.

Climate change is global

Countries that the UK relies on to import food face (more extreme) water insecurity. In particular, regions we are particularly reliant on for imports face declining productivity.

We therefore face the prospect of price volatility, limited consumer choice and increased exposure to food insecurity

Abstraction reform must recognise and address these pressures and be used as a tool to improve the link between national food and water security.

[7] 'Why farming matters in the fens' http://www.nfuonline.com/final-document/

The significance of on-farm storage

The need to significantly expand total reservoir capacity in agriculture and horticulture is a common theme throughout our response. It is clear to us, and perhaps recognised by Defra, that the new system for managing and licensing water (whatever its final structure) will heavily rely on water storage to make it work.

Farmers and growers have positively responded to water scarcity over the past 25 years by building reservoirs. But a much bigger construction programme is needed if food production is to become more resilient to future climatic events (to say nothing of population growing in some of our key food growing catchments). Those reservoirs will need to be bigger – it is possible that the typical farm reservoir designed to store sufficient water for the next growing season may need to be enlarged to cope with a succession of dry years.

Defra clearly hopes that the new trading opportunities offered in the reform proposals will offer an incentive for farmers to build more storage. However, we believe that while trading will make reservoir construction more attractive, it will not in itself lead to increased capacity. Other incentives are needed to achieve that.

A recent study by Cranfield University[8] identified the various constraints faced by farmers and growers when planning a new scheme. The study found that the range of barriers is remarkably wide, but the single largest constraint (described as the 'show stopper') was difficulty in obtaining the considerable amounts of capital needed to invest in a project. Difficulty experienced in obtaining necessary permissions such as planning also featured in the report.

We agree that for abstraction reform to succeed then more reservoirs must be built, and we look to government to ensure that **appropriate incentives for reservoir construction** are in place to encourage that building programme.

Many recently built reservoirs have been part-funded through the Rural Development Programme for England (RDPE) and 'sustainable water capture and storage' schemes must continue to score highly in future programmes.

Moreover, we believe that the introduction of **capital allowances** in the tax system is an essential measure in encouraging this much needed building and investment programme.

A national water strategy

While reform of the regulatory system may lead to some improvement in how water is managed, it is only one element of a much bigger picture in our need for linked strategies for the security of water, food and energy.

At recent report from the Institute of Civil Engineers (ICE)[9] made a powerful case for the development of a 'coherent and coordinated strategic roadmap, which integrates demand and supply measures to ensure our water security.

We support ICE's recommends establish a UK Water Security Task Force to provide leadership on the UK's long-term water needs by addressing three key issues:

- Establishing how much water we currently have and how existing resources can be better used and shared
- Incentivise behaviour change to reduce water demand and consumption
- Developing new resources in a sustainable and cost effective way

[8] 'Water for agriculture: collaborative approaches and on-farm storage', final report FFG1112 by Cranfield University

[9] 'The State of the Nation: Water' report by ICE

DETAILED RESPONSE

LINKING WATER ALLOCATION TO AVAILABILITY

Q1 - What are your views on the proposal to convert seasonal licences into abstraction permissions based on water availability?

Farmers and growers seek both **security and flexibility of water supply**.

On balance we agree that the current system should be replaced by abstraction permissions based on water availability. However, our support is conditional on the creation of a new system that delivers **equality in the treatment of all users** in all sectors in terms of volumetric allocations and licensed conditions; and a system based on reasonable and evidence-based levels of protection afforded to the environment.

A reformed system must recognise that **farmers and growers need secure access to water** to make long-term business investment in future food production.

Proposals to reform **groundwater abstraction** (which accounts for more than 40% of water used in irrigation and is inadequately accounted for in these proposals) should be properly developed and subject to further scrutiny. For example, we would expect abstractions at high groundwater levels to be permitted at all times, not just outside periods of recharge.

We fully expect currently unlicensed water use such as **trickle irrigation**, and licences which currently contain volumes allocated to trickle irrigation, to be fully incorporated into the new system.

We expect a revision in the regulatory approach to '**consumptive use'** which, for example, currently penalises agricultural and horticultural abstraction as 'consumptive' but that fails to consider the bulk export of water from water bodies for public use to be non-consumptive. On the contrary, this practice is more consumptive than agricultural use.

Devising solutions to water scarcity during dry and **drought conditions** must be a key part of this review process. In particular we believe that if government is serious in its commitment to equality amongst all users then it must abolish 'section 57 restrictions' (uniquely applied to spray irrigators) as part of the reform process so that all sectors are equally subject to restrictions at 'very low flows'.

Farm irrigation licences tend to be seasonally divided between 'summer' and 'winter' licences with abstraction permitted only during defined calendar months. Our experience of highly variable rainfall patterns in recent years (combined with predictions that this variability will significantly increase in the years ahead) means that we firmly support the conversion of volume-based seasonal licences into abstraction based on water availability. In particular, we welcome the opportunity for farmers and growers to have **access to high river flows** to fill reservoirs - irrespective of the calendar date.

Indeed, we believe that farmers and growers should be given immediate access to high flow water in the existing licensing system; there is no reason for delaying this sustainable measure until reforms are implemented.

Our questions on the proposed conversion to permissions based on water availability include:

- *To what extent will groundwater abstractions to fill reservoirs be permitted?*

Q2 - What do you think about the different proposed approaches to linking abstraction to water availability for surface water and groundwater abstractions?

We are sympathetic to the aims but are concerned that **charges** for water based on availability will make it more complex, irregular and expensive. On the other hand there are good reasons to incentivise reservoir owners to take surplus (flood) water by making it freely available.

Ideas for aligning abstraction to availability are highly dependent on the ability of abstractors to store water. Therefore we believe that **incentives for reservoir construction** must be offered. We doubt that the reform proposals by themselves will offer sufficient incentive for farmers and growers to construct their own storage; the provision of capital allowances and/or capital grants will be crucial for this purpose.

We agree that, for surface water 'current system plus' proposals:

- Additional abstraction should be permitted at high flows
- 'Hands off' conditions on existing licences should be transferred (although perhaps modified) to new abstraction permissions
- 'Very low flow' constraints should be equally applied to all users

We believe that the 'current system plus' **proposals for groundwater lack detail**. There is more to managing groundwater than 'linking groundwater allocations to long term availability'. Much more consideration needs to be given to similarities and differences between constrained and unconstrained aquifers.

In principle, the 'water shares' proposals may have some merit. However on the basis of current information provided they appear to be potentially unworkable in practice.

Q3 - Would it be helpful if abstraction conditions required abstractors to gradually reduce their abstraction at low flows before stopping, rather than being just on or off?

Yes, in transferring existing 'Hands off' conditions to new permissions it makes sense for them to be gradually introduced and removed as flows changed (rather than switched on and off).

Indeed this principle could be applied to the 'very low flows' restrictions proposed for all abstraction permissions. However it would be necessary for all users in a catchment to understand abstraction 'prospects' for the year ahead at an early stage to encourage efficient forward planning and management. A **'traffic light system'** would help farmers and growers to plan with reasonable certainty.

Q4 - Do you think the proposal to protect the environment using a regulatory minimum level at very low flows is reasonable? If not, how do you think we should protect the environment at very low flows?

Yes, but restrictions must be **equally applied to all users and agricultural 'section 57 restrictions' should be abolished.**

Closer scrutiny of the environmental needs of each catchment will be needed so that a proportionate reduction of environmental needs is considered as part of the decision making process. Notwithstanding the 'no deterioration' requirements for water bodies as part of the EU Water Framework Directive, it may be necessary to accept that lower standards of environmental protection will be unavoidable in some dry or drought conditions.

Where low levels (drought) are reached, **special provisions for container-grown plants and protected cropping** (such as salads and soft fruit) will be necessary.

WATER DISCHARGES

Q5 - What do you think of the proposal to require abstractors who discharge water close to where they take it from to continue to discharge a proportion in line with their current pattern?

We agree that abstractors who currently discharge water should continue to do so in line with current practice.

Q6 - How best do you think water company discharges should be regulated to provide reliable water for downstream abstraction without impacting on water quality objectives or constraining flexibility in water management?

This is a complex area needing detailed consideration in later stages of the Government's reform proposals. For farming and growing it is important that discharge consents allow the safe use of water downstream (i.e. without increased risk to animal or plant health by, for example, setting basic phytosanitary standards).

CHARGING FOR ABSTRACTION

Q7 - If you are an abstractor, how would these charging proposals affect your business?

The charging mechanism is intended to **recover the administration costs** involved in the regulation of water resources; we would strongly resist any attempt to deviate from this principle. Charging must not become a tax raising measure.

We agree that **higher charges should apply to more reliable water**.

We are concerned about the potential costs of a more complex regulatory regime, particularly one that features sophisticated trading mechanisms. The new system should be as simple as possible to keep charges to a minimum.

The consultation suggests a charging regime with 'incentives to encourage more efficient water use' but we fear this will be translated into a levy on abstraction when water is most needed in the crop growing cycle.

We need more detail to be able to comment on charging, but farmers and growers are unlikely to benefit from proposals to focus more on used volumes because they are already subject to 'two part tariff' arrangements.

Q8 - To what extent would a system that charges abstractors partly on permitted volumes and partly on actual usage (a two part tariff) encourage abstractors to use less water?

Most farmers and growers already benefit from 'two-part tariff' charging arrangements which combine licenced and used volumes. In this respect there will be no change. Farmers and growers should benefit from low charge or no charge high flow water for filling reservoirs.

TRADING; AND THE TWO OPTIONS FOR REFORM

Q9 - Would quicker and easier water trading benefit abstractors now? How beneficial do you think it would be to abstractors in the future?

Improved trading opportunities are a potentially useful part of the overall solution to managing scarce water resources and so farmers and growers will welcome the introduction of a simple, flexible, cost effective – and workable – trading system.

However we have a range of concerns about the emphasis in the consultation proposals that promote trading as the prime solution for long term water management.

Claw back of unused licensed volume

Defra believes that currently unused volumes of licensed water must be clawed back to avoid potential adverse environmental impact resulting from the future trading of water that is currently not actually abstracted. Furthermore, Defra intends to claw back those water volumes without compensating the licence holder.

While recognising the problem identified, we believe that an alternative solution – one that is simple, fair and practical - must be found to the blunt measures of removing unused volumes. We believe the solution lies in the application of trading rules.

It is our firm belief that farmers and growers should **retain their licensed volumes** in the transition to a new system. If offered the choice between sacrificing volumes to allow trading to be created on the one hand, or retaining volumes but losing opportunities to trade on the other, most farmers and growers would opt for the former.

And so while there are clear benefits of easier water trading, we strongly reject the proposed 'cost' of its introduction – namely the claw back of currently unused volumes of water. Farmers and growers tell us that if this is the cost of an improved trading platform then it is not a price they are prepared to pay.

Potential impact on food security

We are concerned about the potential impact on food security if traded water is 'exported in bulk' from the agricultural and horticultural sector. Many farmers and growers have forcefully expressed concern about their inability to financially compete with other users in other sectors in an open water trading market. Part of the reform debate has revolved around water being held by those who (monetarily) 'value it highest' but this fails to recognise the *ability to pay* of small family farming businesses.

We believe that **safeguarding mechanisms** to prevent such market distortions must be identified and introduced. Such is the importance of this issue that the NFU requests that trading is introduced on a pilot basis and that following a trial period a detailed investigation is conducted (pilot trading studies in a range of catchments) to identify the impact of trading on intra- and inter-sector abstraction access and use. In the context of strengthening the nation's food security, the Government should consider at that stage whether and in what form appropriate trading rules preventing water 'leaking from agriculture' should be introduced. Such a thorough review would be necessary before any wider roll out of a new trading system.

Trading in dry and drought conditions

Farmers and growers focus attention of their management of water on dry and drought conditions leading many to question the true benefit of water trading. What is the point of a sophisticated trading scheme if, when trading is most needed in extreme conditions, there is no water physically available to trade?

Limited hydrological connectivity

The trading proposals cannot overcome the major constraint to trading in the current system – the problem described in the consultation as limited 'hydrological connectivity'**.** Quite simply, in most water bodies and aquifers there are relatively few potential trading partners. This will not change.

Trading opportunities *before* reform

Nevertheless we believe that administratively simple and quick trading mechanisms could and should be introduced without delay and **before** the introduction of a reformed abstraction system.

Studies should be commissioned now to test the process of **'pre-trade approvals'** in pilot catchments. Practical obstacles to the trading or transfer of all or part of licensed volume on a permanent or temporary basis should be explored and resolved.

General remarks on trading

Although the ability to trade water was introduced by the Water Act 2003, the current trading process is slow, administratively complex and spatially constrained and so few trades are currently made in practice. We do not understand how these existing constraints could be removed from a new system, and so the benefits of trading may always be limited.

We do not believe that increased trading opportunities afforded by abstraction reform will in themselves be sufficient for farmers to invest in the construction of storage reservoirs necessary to make to system work. Fiscal incentives to encourage investment in storage capacity are essential for this to happen.

We note that Defra has closely studied reform and trading experiences in other countries and particularly Australia during the development of its reform proposals. While we applaud the principle of absorbing ideas from around the globe, discussions with our farming colleagues in Australia lead us to believe that a new system here should not be based on their experience. Too many characteristics of the two nations are so very different.

In particular, no matter how flexible and sophisticated a future trading regime may become, a major constraint to trading will remain and prove difficult to overcome - the **modest number of potential trading partners** given the relatively small size of surface and groundwater catchments in England and Wales, particularly in comparison to, for example, the Murray Darling basin in Australia.

Meanwhile the **costs of monitoring and communicating water** availability could continue to escalate. Farmers and growers will not want to pay for something that is not perceived as being sufficiently valuable. Consequently, views on the potential administration costs of a water shares system in particular range from 'expensive' to 'very expensive'.

Farmers and growers are alive to the business opportunities of selling water and they understand the greater commercial opportunities that on-farm storage offers them in this respect. But there remains an inbuilt resistance within the farming community to treating water as a commodity.

We agree that trading should be unnecessary in 'basic catchments' (indeed we see little point in implementing reform in catchments designated as 'water available').

We have some questions on how the trading market will work:

- *Under what circumstances will parties be able to permanently and temporarily trade allocations? How can farmers between 'consumptive' irrigation licence allocations with other less consumptive sectors?*
- *What will happen when traded water cannot be used by the 'buyer' because of the implementation of a 'very low flow' restriction?*

Q10 - To what extent do you see additional benefits in the wider range of trades that can happen under the Water Shares option, compared to the Current System Plus option?

In principle 'water shares' offer added flexibility, particularly for groundwater. Some farmers and growers accept that 'water shares' could have value in some catchments if the system was supported by a fully functioning and collaborative catchment management structure. But even those growers lack confidence that a workable supporting structure could be delivered.

In practice the water shares option is likely to be too complex and too expensive and so we **favour 'current system plus'**. In particular we believe that the complexity of water shares would compromise both the ability of users to effectively participate and the ability of the Environment Agency to administer it.

Of course comparison of, and choice between, the 'current system plus' and 'shares' options is difficult because current understanding their technical merits is so difficult.

Farmers and growers recognise some benefits of water shares:

1. The ability to fix periods for allocations adds certainty of water access during that time period
2. Extra clarity about water availability under different conditions means that water access could be better tailored to meet needs
3. Easier to match the needs of buyers and sellers/different trading parties
4. Possible to trade over short and/or fixed periods

However, farmers and growers also identify a number of potential pitfalls of water shares, not least the potential complexity of setting up a water share system, managing and enforcing it.

As previously stated, we are concerned about the potential impact on food security if traded water is exported in bulk from the farming sector and potential 'changes of water use' from one sector to another need further consideration – we need more detailed analysis of the implications of a loss of water from agriculture.

We accept that there are some benefits of shares, but those benefits could give rise to costs which farmers and growers would be unwilling or unable to pay. We fear that the administration and bureaucracy surrounding water shares (monitoring and publication of data) would be punitive.

Shares may offer greater flexibility in access to water but it is far from clear what price farmers and growers would be willing to pay for that flexibility.

We have some questions on how the trading market will work:

- *Would trading be suspended during a drought?*

Q11 - Do you agree that participation in abstraction trading should initially be limited to those with a direct interest in abstracting water?

Yes, absolutely. Only parties with direct interest in water should be involved. However those who have recently used abstraction rights should be able to engage in trading; we believe such right holders should engage in the initial stages of trading to ensure an adequate pool of licences can be traded.

We note that this provision in the consultation is designed to avoid the trading of water by those who have no intention of using it. However, we are also concerned about the potential trading distortions that could arise from brokers being involved in trades. Farmers and growers have unhappy memories of previous attempts at regulation through market controls and we should avoid repetition of those

failures. In particular they are concerned that speculators will move in and distort the market, making water both more expensive and less available.

Furthermore, trading rules must be carefully developed to ensure that overall volumes of water for farming and growing do not diminish. We must have sufficient 'Water for food'.

Whilst we understand the desire to manage water through market mechanisms (charging more for high reliability water for example) water can never be merely a 'commodity'.

The potential role in trading decisions (in some catchments) of intermediary bodies responsible for the movement of water such as internal drainage boards (IDBs) and the Canal and Rivers Trust should be considered and clarified.

.

THE REVIEW PROCESS FOR FUTURE ABSTRACTION PERMISSIONS

Q12 - Do you support our proposals for a more consistent approach to making changes to abstraction conditions? If not how would you improve the proposals?

In principle yes, but we are concerned about the impact of transition on small businesses which are hugely dependant on reliable access to water. The success of a new approach will depend on **consistent implementation**.

We are particularly interested in Defra's plans for all new abstraction permissions to be **constrained at 'very low flows'**. In the current system, spray irrigation abstractions are restricted through 'section 57' restrictions in drought conditions, often at a time when public supply abstractions are permitted to continue because of special measures such as drought permits and orders.

We believe that abstraction reform offers a major opportunity to overhaul the management of water in drought conditions. In particular reform should address the current unfairness in the management of water for food production. A key feature of the reformed system should be the **abolition of the principle of section 57 restrictions**. Instead, all users would be equally subject to restrictions at 'very low flows'.

Q13 - What notice periods do you think would best balance the needs of abstractors and the environment?

A six-year CAMS cycle may be sufficient for some businesses, but we would normally expect notice periods of two CAMS periods (12 years) to recognise the needs of business planning. Furthermore we would expect notice periods of four CAMS periods (24 years) to apply to reservoir owners abstracting low risk, high flow water to reflect the major capital investments made by these businesses.

Q14 - Do you support the proposal to remove the payment of compensation for changes to abstraction conditions and to phase out the collection of the Environmental Improvement Unit Charge through abstraction charges?

No, we strongly reject the uncompensated revocation of abstraction rights. For many abstractors their licences are essential business investments and a fundamental **property rights** which must be respected and will be eligible to compensation from the public purse – not from other abstractors – if those rights are eroded.

Therefore, the transitional arrangements should seek to avoid detriment to licence holders which would inevitably trigger compensation claims. Abstraction licences, particularly licences of right, are a valuable business asset and the most valued features of existing 'property rights' of licence holders must be fully recognised during transition.

We object to the proposal to remove the payment of compensation for changes to 'abstraction permissions'. The consultation paper states at page 44 " *..if individual abstractors receive compensation there is little incentive for them to take measures to address the impact of reduced water availability, such as water efficiency measures or developing water storage facilities*." We entirely disagree with this statement, and we question whether there is any evidence to support such an assertion. Compensation is given because an abstractor is either deprived of, or had conditions imposed upon, a proprietary right. In such a circumstance, the abstractor is almost certainly going to have to address the impact of the removal or limitation of the abstraction permission, including addressing the impact of reduced water availability, and the compensation could be put to use in doing so. The payment of compensation does not in our view act as a disincentive to abstractors to manage water resources.

Abstraction licences, and in particular non-time limited licences (known as licences of right), are a proprietary interest enjoyed by the abstraction licence holder. As such they are entitled to be compensated by the state if such a right is interfered with under the European Convention on Human Rights.

European case law has established that the deprivation of property without payment of an amount reasonably related to its value would amount to a disproportionate interference with an individual's rights under Article 1 Protocol 1 of the European Convention on Human Rights. Given that it is proposed in this consultation that no compensation at all should be payable, it is our view that this proposal is unjustifiable.

The current **EIUC regime** must become more transparent in the collection and disbursement of the tax.

Forward planning is essential for individual farm businesses, and access to a reliable source of water is a key element of planning for future irrigable crop production. Clarity and certainty (what is going to happen, when and how) will be vital for the successful transition from the current regime to a new system.

Clearly the transition of rights from existing licences to 'abstraction permissions' will form a crucial part of the reform process. Farmers and growers should be allocated a **fair share of water** and a range of options should be explored for delivering this. For example, existing volumes and conditions of water use could be guaranteed for a fixed term, say 20 years, to aid orderly transition and to allow farm businesses to adapt to change.

Any **transfer of used volumes** must adequately recognise farmers' irregular usage. Farmers and growers typically grow crops to match licensed volumes available in a dry/drought year and so unused volumes do not usually constitute headroom for the long term future. The special needs of farmers and growers should be fully accommodated in the transition arrangements.

In particular the needs of **currently unlicensed 'trickle' irrigators** (with no formal historic volumes – licensed or used) must be accommodated. At the time of this consultation, trickle irrigation falls outside the remit of the current licensing regime even though many of our grower members have been keen to obtain formal licences for many years. Defra is now preparing for the implementation of legislation to bring trickle irrigation into the existing licensing regime and it will have to accommodate the needs of long standing water users even in catchments that may have become 'over licensed' or 'over abstracted' in recent years.

We are keen to ensure that the transitional provisions for trickle irrigators – both bringing those historic but informal rights and allocations into the existing system then transferring those rights to the new system - are fair, simple, appropriate and proportionate. This is particularly important because trickle irrigators will obviously have no formal records of historic volumes of water used (although farm records of past use will have been kept); a mechanism will have to be devised to transfer adequate volume into the new system.

We have a number of questions about the transition arrangements:

- *Will the transition arrangements recognise that having a licence (but not necessarily using it) may be part of on farm business and contingency planning?*
- *Will the method for transitioning quantities take account of the way irrigators manage their licences? For example, irrigators will use their summer surface water licences first, and most often. If this is restricted, farmers will then start abstracting from their reservoir. When this is depleted, the following winter they would fill it again in time for the following irrigation season.*
- *Why reduce quantities during transition if everyone has a 'hands off flow', especially in water available catchments?*
- *Why reduce licensed volumes in 'water available' catchments?*

TRANSITION: MOVING TO A NEW SYSTEM; AND PROPORTIONATE IMPLEMENTATION

Q15 - Do you agree it is important to take measures when moving licences into the new system that would protect the environment from risks of deterioration?

Yes, we accept that 'no deterioration' of a water body as required by the EU Water Framework Directive is a factor in abstraction reform. But transition to a new system should not be a surrogate for resolving current unsustainability issues – that must remain the role of the RSA programme.

Neither should reform be used as a blunt instrument to seize unused licence volume.

Much of the emphasis in the reform proposals is on the **restriction of all abstraction at 'very low flows'.** Surely if this is properly implemented then other measures 'designed to protect the environment' (such as the claw back of unused volumes) become superfluous.

In terms of 'restrictions at very low flows' we agree that these restrictions must be **equally applied to all users in all sectors**, and we agree that restrictions should be gradually enforced and removed to reflect the current situation; this is a more responsive approach than using a simple 'on-off' mechanism.

Reference to future implementation of ecological flow constraints signals a very different way of regulating environmental needs – decisions must be based on sound science, evidence based and transparent. How can we ensure that future allocations for environmental needs are appropriate? And will environmental needs be exempt from potentially difficult choices about reductions in allocations amongst different users in different sectors?

We are disappointed with latest indications from Defra and the Environment Agency that the Restoring Sustainable Abstraction (RSA) programme may not be completed by the time of transition in some catchments (in the 2020s). Every effort should be made to ensure that reform is implemented in each catchment only after the RSA programme for that area is substantially implemented and delivered.

Once the RSA programme is near completion, the catchment moves from 'over abstracted' to 'over licensed' status. A fair regime is then needed to deal with the '**over licenced'** element of a catchment.

Reform should not be necessary in catchments where '**water available' status** exists.

Proposals for reform of **groundwater abstraction** should be properly developed and subject to their own scrutiny. In particular, consideration needs to be given to how groundwater is allocated and managed when it is linked to surface water and when it is not. We need to improve our understanding of how to deal with the interaction between groundwater and surface water.

Furthermore we believe that **graduated restrictions** should be incorporated into existing 'hands off' conditions on licences when they are transferred and incorporated into new abstraction permissions.

Q16 - Would you prefer us to consider the risks in each catchment when designing the rules for moving licences into a new system, or should we treat all abstractors in the same way regardless of water availability?

We favour a **catchment approach** which focuses on the greater involvement of all stakeholders in local water governance. We prefer the introduction of a reformed system on a catchment-by-catchment basis. This approach means that progress on implementation would be consistent with better understanding of the catchment and reacting to the local needs of users and the environment.

We support the gradual introduction of a new system in different catchments based on a proven need for change. Depending on the governance arrangements for managing water in each catchment, there could be more opportunities for greater collaboration between different users and different sectors

Reform should not be implemented in a given catchment until the Restoring sustainable abstraction (RSA) programme has substantially dealt with the 'over abstracted' issues of the catchment.

We accept the proposed designations of **enhanced & basic catchments.** However, the focus must be on resolving the over licensed element of over-licensed catchments. We are not convinced that it is necessary to introduce reform in 'basic catchments'.

Q17 - What would be the most effective method to calculate the new annual limits to be transferred into the new system (for example average annual, average peak or a combination of actual and licensed volumes)? And what assessment period should be used to calculate them?

We believe that existing licensed volumes should be transferred to the new system.

Any revised method for allocating volumes must be based firmly on **future business needs**; such a process would involve a demonstration of need by the abstractor, determination on a case-by-case basis, and appeal provisions.

Any future discussion of volume transfer based on historic use must **focus on peak use and include significant headroom.**

We understand Defra's concern that currently unused water could be brought back to use if simpler trading encouraged spare or surplus water into the trading market. However, we believe that 'claw back' is a clumsy and unfair method of reducing licenced volumes, especially for agriculture and horticulture where volumes used are highly seasonal. In our view, Defra should find an alternative mechanism to address the very specific issue of future trading of currently unused volumes of water.

For example, under the **current trading arrangements** licence holders are already prevented from trading water that they have not historically used. Therefore we see no reason why full licensed volume could not be transferred to new abstraction permissions but with **some limit on tradable volumes**.

Furthermore, it is possible that the problem identified could be addressed by managing water supply and demand through the catchment abstraction management strategy (CAMS) process rather than the claw back of currently unused licensed volumes).

Notwithstanding the above, any revision new annual limits calculated on historic use must recognise the different characteristics of crop growing.

Indeed, in drought conditions farmers are sometimes prevented from accessing their licensed volume so their actual used volume could fall well short licensed volumes because the water is not physically available to them.

In common with other users in other sectors, farmers plan their water need for peak years – they do not plan their businesses around 'past averages'.

Given the major difference in circumstances amongst different users across different sectors **we reject the idea of a single formula to which to calculate transferred volume**, not least because the justification case for allocation will differ for each sector.

We believe it will be important for every licence holder to be able to make a business case in determining his future allocation; and we think that an open and transparent decision making process should include a right of appeal.

Q18 - Do you support the establishment of a water reserve to support economic growth?

No. Licenced volume should remain with existing licence holders and there should be no claw-back. The needs of new businesses should be met by trading opportunities.

We understand the attraction of creating a water reserve but believe that such a reserve would only be meaningful and worthwhile in 'over licensed' catchments.

We believe that spare volumes should remain with licence holders and managed by them.

Other issues

Environmental Impact Assessment

The EIA included as an appendix to 'Making the most of every drop' suggests that the reforms proposals will result in a net benefit to users of £100m - £500m over 25 years. We cannot find a sectoral breakdown of this analysis which we suspect will accrue primarily to the public supply and energy sectors?

Given the importance of water for food production, we would welcome clarification on the calculated benefits for agriculture and horticulture.

For further information please contact:

Paul Hammett
National specialist (water resources)
01638 672106
07778 337852
paul.hammett@nfu.org.uk