

SOUTHFORK
RUE DU TROT
ST SAVIOUR
JERSEY
JE2 7JQ



☎ 01534 852444
📠 01534 854193
✉ info@jerseyroyal.co.uk
🌐 www.jerseyroyal.co.uk

Deputy D Johnson
Chairman of Environment, Housing and Infrastructure Scrutiny Panel
Scrutiny Office
States Greffe
Morier House
St Helier
Jersey
JE1 1DD

18th January 2017

Dear Deputy Johnson

Review of Nitrates in Jersey's Water

Thank you for asking for Jersey Royal Company's view regarding the level of Nitrate in Jersey's waters, and the proposals that the Council of Ministers are looking to address the issue of high nitrates within the Islands water supply.

This issue of high nitrates has been a topical point for nearly 25 years, with greater focus in the last 10 given the increased concern for the environment and health of consumer's drinking water from mains supply or private boreholes.

The link between the intensity of agricultural production and the level of nitrates found in surface waters cannot be denied and the connection to the cyclical concentration of nitrates coinciding with the production of Jersey Royal potatoes is clear. However, the explanation for the islands high level of nitrates in water is not as straight forward as this implies and there are a number of factors involved.

1. Jersey is unique in that its water catchments cover much of the same land base that agriculture utilises. Many other countries can take water from non-intensive land areas such as uplands where there are few agricultural inputs. Therefore, it is not surprising that nitrates in Jersey are higher than other parts of the EU.
2. Nitrates are not just high as a result of agricultural, domestic, and amenity inputs, but are also naturally occurring being released from fertile soils. The greater the depth of soil the greater the quantity of nitrate released through the nitrate cycle. The Island just happens to have these deep and fertile soils derived from the underlying rock structure.

Registered Office: PO Box 437, 1st Floor, Kensington Chambers, 46/50 Kensington Place, St. Helier,

Jersey, JE4 0ZE

Even if agricultural inputs were to cease, nitrates would continue to be released from the soil to some extent. The effects of climate change with warmer wetter conditions also plays a role in increasing the rate of nutrient release.

3. One of the most important factors is the complex nature of land use on the Island which often goes unrecognised. The difficulties are presented to the differing sectors of the agricultural industry as a result of land being effectively swapped and rotated on a very short term basis. For instance a field that is in use by a dairy farmer in January and February could then be planted in by a potato Farmer in March, harvested in July and then put into a crop of brassicas by a different vegetable farmer in September. This is not uncommon and causes issues with determining the total amount of nutrients being applied in any 12 month period. It is unlikely that a farmer will pay for soil nutrient analysis on land that is in very short term use and this presents difficulties in determining nutrient applications required going forward. Ultimately this therefore presents an issue in devising a robust strategy for nutrient applications. It is likely that this short term swapping, although good from a rotational aspect could result in increased nutrients in water.
4. Additionally, there is a need for greater co-operation between government departments and the farming industry. I would highlight the complications that result with the production of green waste compost and sewage sludge and contracts that are in place to remove and utilise these products. These are alternative forms of nutrients that when applied to agricultural land add to the intricacies of controlling nutrients. There is pressure on certain government departments to move these products that often don't fit with the codes of practice being put forward by other government departments. In the past there seems to have been a disconnect between government departments.

To put these points into the terms of reference for your review, JRC's response would be as follows;

1. To consider the measures being taken, or are proposed, by the Council of Ministers to address the issue of nitrate levels within Jersey's water supply.

The measures taken to date including training, advice and economic incentives such as compliance with good agricultural practice in order to achieve the Single Area Payment. In addition the recommendations from the Nitrate Working Group have had some impact.

However, the impact of these changes are probably not as great as could be achieved with the more progressive farmers/growers changing practices, but not the whole industry.

The addition of the proposed Water Management Plan will have some impact, but a collaborative approach between the Environment Department, Jersey Water and the main industry bodies, including, The Jersey Royal Company, Albert Bartlett, Jersey Dairy and The Jersey Farmers Union would have the greatest effect. Key to this would be the ability of all parties to agree on the strategy going forward and a willingness to take action. It is our view that a farmer will take more effective steps if there are consequences. These can be more effective coming from the Marketing organisation responsible for selling the raw product and through the close relationship and monitoring that these organisations have on individual farmers. Monitoring of diffuse pollution by individual farms is much harder for a government department to police. It would also be much more economical for the industry to take responsibility rather than Government.

If this approach was taken then the challenge for Government would be how to regulate to ensure the implementation of the Water Management Plan. In our opinion this could be effectively managed through these industry bodies rather than at individual grower level with the exception of independent farmers who are not represented by such groups. The new collaborative approach of the Action for Cleaner Water group is a good example of this.

Government therefore have an important role to ensure collaboration between these groups and government departments. This includes collaboration between each government department which we would suggest is not always the case at present.

2. *To assess whether the measures are achievable within the proposed timeframe and resources.*

There is some significant progress being made by the potato growing sector at present with many growers looking at moving away from broadcast application of fertiliser over the whole of a field to placement of fertiliser where the potatoes are planted. If this work is successful then the reduction in fertiliser applied to the growing crop of Jersey Royal potatoes could be between 10 and 15%, which is significant. The benefit of this change in practice is that the economic savings of expensive fertiliser can go some way to paying for any new equipment needed. However, due to the nature of potato planting on the Island it will not be easy to buy a machine off-the-shelf from a manufacturer, but may take a year or two of development to get to the manufacturing stage. However this could potentially provide the biggest reduction in fertiliser inputs in a few short years, more than the industry has achieved in the past 15 years.

The same approach should be taken by the dairy sector. Whilst placement of inorganic fertiliser to grass crops is not economical or practical, the injection of slurries and sludge's rather than surface application will ensure that nutrients are utilised more effectively and reduce nitrates and phosphates entering water supplies.

This highlights the need for the whole industry to work together and for the lead bodies in each of the sectors to promote good practice and use the mechanisms available to ensure individual farmers compliance.

Even with these changes taking effect with the natural processors taking place, the speed and level of reduction of nitrates in Jersey's waters cannot be guaranteed. Careful and accurate monitoring will be required to determine the ongoing success of these approaches.

The (circa) 30% reduction of support to the agricultural industry may mean that change in practice could be slower than expected or required. It is common practice in catchment sensitive farming areas of the UK that the water boards responsible for these areas actually contribute to supporting farming and the required changes in practice in these areas. This could be a real way forward for Jersey, and more cost effective for Jersey Water to support change in farming practices rather than invest in nitrate removal at their treatment works. This could also be achieved without the need for increased Government funding.

3. To determine whether the proposals are sufficient for addressing the elevated levels of nitrate found in surface waters and groundwater.

Whilst we believe that the adoption of best practice will be sufficient to bring nitrate levels below that required by Jersey Water to meet EU standards, natural processors and background levels may mean that these changes may take time. It is likely that with the geographical locations of Jersey Water reservoirs and the most productive land on the Island that Jersey Water will have to continue to blend water from different sources.

With the levels of nitrates found in some ground waters it is difficult to assess whether any changes however radical will ensure that some private wells and boreholes will ever fall below current EU limits.

4. To assess the challenges faced by the Council of Ministers in maintain an adequate supply of clean water with reduced concentrations of nitrate.

The challenge faced by Government is not an easy one, and in all honesty should have been tackled much earlier. However, the Island nitrate levels are where they are and it is our belief that the most effective way for Government to tackle the issue is through close co-operation with the industry bodies rather than directly with individual farmers (with the exception of non-representative independent farmers). The challenge for Government is how they monitor and ensure all stakeholders are actively promoting and following good practice.

Support for the agricultural sector is also important as farmers are less likely to take tough decisions to implement change in what is a tough economic climate. Again this support doesn't have to be at the individual farmer level but could be strategic support promoting the industry.

5. To determine what role the agricultural industry and water utilities have in helping to reduce nitrate levels in Jersey's water.

This point has been covered in all of the previous statements.

Although these comments are directly related to the issue of nitrates in Jersey's waters, many are just as relevant for the issue of phosphate and pesticides diffuse pollution too.

I hope that these remarks are useful and should you require any further explanation of the points raised or if I can be of any further assistance please feel free to contact me.

Yours sincerely

Mike Renouard
For and on behalf of The Jersey Royal Company Ltd