Working with LEAF and the Government of Jersey

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Agenda

- Introduction
  - JRC and LEAF
  - The Government of Jersey and LEAF
- Safeguarding Jersey’s countryside and the environment
  - Outline of key projects
  - List of future projects
- Summary
- The year ahead
- Open Farm Sunday
The Jersey Royal Company – Who are we?

JRC – A fully integrated farming and marketing company. – Why LEAF?

- LEAF Marque is a required standard for suppliers to Waitrose and The Cooperative

- Jersey as an island is **the first region in the British Isles to completely embrace LEAF**

- Under the Jersey Rural Economy Strategy, all suppliers have been set a target to achieve LEAF Marque status by the end of 2019 in order to qualify for area payments for 2020 and beyond
  - By the end of October 2018 all farming units were required to have completed their self-assessments
  - 81% of Jersey farmland is now included under the scheme, involving 41 businesses

- BASIS Introduction to IFM and LEAF Marque training – 26th and 27th March 2018
JRC involvement with LEAF

- Became members of LEAF in 1997
- LEAF Marque
  - First inspection was carried out on 10th October 2005, and our certificate was issued on the 18th October 2005
- 2018 – Started on a journey to become a LEAF Demonstration farm
  - Shadowed farm visit on 27th November 2019
LEAF Marque and the Government of Jersey
The RES was introduced in 2017

1. To drive forward continual improvement and innovation
2. To promote environmental best practice
3. To identify new market opportunities

- Farmers to receive payments for the environmental and social benefits (or ‘public goods’) that they deliver through an integrated approach to farming
- LEAF Marque to be part of the delivery mechanism through which the Government of Jersey is driving forward its sustainability objectives
- And the carrot... In order to receive support payments, an Island farmer will need to be LEAF Marque certified
Safeguarding Jersey’s countryside and environment
Where does LEAF fit in?

LEAF Marque is a farm assurance system, showing that food has been grown sustainably with care for the environment

- LEAF promotes Integrated Farm Management
  - LEAF is a business tool
  - LEAF encourages good practice and efficiency

LEAF - Delivering More Sustainable Food and Farming
Key projects and ongoing investment

JRC continually works on projects that embrace Integrated Farm Management to improve efficiencies through mechanisation and advanced practices, as well as being sympathetic to the environmental impact.

- Fertiliser placement and rate trials
- PCN control through biological means
- Soil sampling using GPS
- Blight disease forecasting
- Environmental projects – water and plastic
- Bespoke IT systems – accurate record keeping
Nitrate issue

The background

- Jersey has historic high levels of nitrates in ground and surface waters.
- Jersey Water is required to supply drinking water below the maximum allowable concentration of 50mg/l nitrate set by the EC Directive on the Quality of Drinking Water.
- Although there are many sources to the levels of nitrates found in the Island waters, and agriculture is a large contributory factor to this at specific times of the year.
- Nitrates also contribute to the algal accumulations often found in St Aubin's Bay during the summer months.
Fertiliser placement

- 2 planting frames developed and trialled over the course of 2017
- Precision placement of fertiliser around the seed tubers
- Reducing inputs and increasing environmental benefits
- 2018 season – we built 4 more frames to cover c.90% of the total area planted
Placement

Position of prills to potato

- Fertiliser prills are placed 30mm either side of the furrow and 30mm below the depth of the planted tuber

- Rates
PCN reduction work

- JRC **Manages its own** soil sampling to analyse PCN levels in over 1,400 fields
- JRC monitors and identifies the effect of biological controls used in the fight against PCN
- JRC work in conjunction with **UK specialist Dr Andrew Barker**
- Evidence shows that PCN levels are now reducing in target areas
- Results have shown **reduced damage and improved skin finish**
Soil sampling 1

The Jersey Royal Company continues to invest in field systems

- One of the more progressive steps last year was the purchase of a quad bike and using GPS to map out soil sampling
- This will ensure that there is more consistency year on year when comparing samples for PCN levels, as well as pH and NPK
- This year we upgraded the GPS mapping system to make it more accurate
- We have just negotiated a 12 month free trial with Intelligent Precision Farming – a tool that produces satellite imagery by field
Soil sampling 2

Example of how each field is mapped out which ensures more accurate testing
Satellite imagery

Example of how each field is mapped out – we can then overlay this with soil test results, and start to manage the land base on a more specific basis.
Soil probe

Bringing IT into the field

- The example attached is in one of our tea plantations (a low input crop)
- The probe is used to monitor and record the soil moisture deficit, as well as the level of nitrogen in the soil
Environmental projects – water & plastic

- JRC sits on the **Action for Cleaner Water Group** which is a collaborative body made up of representatives of the farming industry including The Jersey Farmers Union, The Environment Department and Jersey Water. The aim of the group is to improve the water quality of reservoirs, streams and other water sources in Jersey by reducing fertiliser and pesticide use.

- JRC have taken a lead role in setting out the principles to improve water quality.

- A stand to highlight this was included as part of our LEAF Open Farm Sunday event.

- Project to reduce plastic usage both on the field & in the pack house:
  - 60% of field plastic reused yearly with all the rest recycled.
  - Looking at trialling biodegradable covers, but they have to be fit for purpose.
  - Packaging trials have enabled a plastic usage reduction of 25%.

- Packaging trials EVAP film – biodegradable biopolymer that can extend shelf life.
Potato blight – Disease forecasting

A disease forecast model is employed to predict when a blight period is likely to occur, so that an appropriate plant protection product can be applied to prevent the build up of disease in the crop.

The data required includes:
Actual weather data from infield weather stations
Weather forecasts
Growth recordings for the crop
Application history of product types previously applied

The system works on the basis that products are applied just before a blight event occurs.
Contact type products are used which are less mobile in the plant and easier to reach the target area
These products have the best environmental profiles

Should this application period be missed then more mobile products can be used including:
Translaminar products – that can move between leaf surfaces
Systemic products – that can move up and down the whole plant
JRC bespoke IT systems

- JRC has developed, and runs 2 bespoke IT systems for the field and pack house

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<td>Records all farm operations to the point of harvest, provides stock</td>
<td>Records all operations from intake at pack house, through to final customer delivery</td>
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<td>management &amp; provides live reporting</td>
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<td>Farming instructions received by all teams from the central office,</td>
<td>Crop can be selected for packing aided by live intake data assessments, ensuring the</td>
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<td>Field maps are all accessible via tablets and smart phones</td>
<td>best quality for the end consumer</td>
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<td>Operators can report soil conditions, weather, planting data all in</td>
<td>Multiple intake checks on all loads received at the pack house</td>
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<td>Contract growers also receive instructions to ensure consistency and</td>
<td>Full traceability data available from a unique on pack code</td>
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Future projects / ones just started

- **Field based**
  - *Project Discovery* – We will be taking a more holistic approach to the management of individual fields.
    - This will involve building up a database for each field to record details regarding soil management, drainage, access to irrigation etc
    - Involvement of more key members of staff throughout the business, and raising awareness of IFM through working parties

- **Workshop**
  - A bespoke IT system is being developed in-house to record workshop activities
    - Eg – Vehicle servicing records, management of spare parts,

- **Vehicle tracking**
  - An IT system to record all vehicle movement. The farm currently runs approximately 200 vehicles between tractors, minibuses etc – do we need them all?
    - Fuel usage
    - Vehicle tracking – assess usage of vehicles, speed of vehicles etc
**Summary points**

Integrated farm management is increasingly a core part of the way that The Jersey Royal Company operates.

The Company is constantly looking at ways to improve practices that resonate with everything outlined in the Jersey Rural Economy Strategy.

- **The big projects**
  - Nitrates
  - Catchment areas
  - PCN
  - Management of water and measurement of water retention in soils
  - Energy saving
The year ahead

The Jersey Royal Company will keep working with LEAF and the GoJ

- Assist to stage training days for other farming businesses
- Continue to raise awareness of IFM and the key projects that affect everyone
- Facetime a farmer
- Run another Open Farm Sunday event
- Continue to work towards achieving Demonstration Farm status, and maybe a launch event later in the year!
Open Farm Sunday – Local community relations

JRC ran its third LEAF Open Farm Sunday community event in 2018

Sunday 10th June 2018

- JRC is the only farm in the Channel Islands to participate in #OFS
- More attendees than 2016 & 2017; again very popular with families
- Potato harvesting was the ‘pick’ of the activities
- Tours of the pack house were very popular
- Brilliant staff involvement
- Another fantastic community day that has become a firm fixture in the JRC calendar
Cover crops – wildlife