The impact of the LEAF Marque in delivering more sustainable farming:

- understanding the added value to farmers
The research – what we did

• Interviews and case studies with LEAF Marque farmers and growers, winter 2017
• Self-reported changes and discussion about the impact of the LEAF Marque system
• Comparison with previous CCRI study in 2013 for consistency
• Case studies approved by participants, focusing on business strategy, attainments to date, and future goals
Financial Benefits

Significant extra income can derive from LEAF Marque membership; 36% of those who answered the question reported improved income, 23% reported receiving a premium for their product due to LEAF Marque.

97% said LEAF Marque had secured them access to market opportunities.

36% of those who answered the question said LEAF Marque had improved the quality of their product.
Organisation & Planning

69% of respondents said LEAF Marque had **helped them with the paperwork** for regulations or accreditation schemes.

36% of respondents who answered the question said LEAF Marque had **helped them join an environmental scheme**, giving opportunities to create synergies between conservation on the farm and gaining extra income.
Soil Fertility Management

64% of participants who answered agreed LEAF Marque had improved the condition of their soil.

34% participants regularly test soil organic matter, scoring 3.5 – 7 (out of 10).

90% of participants who answered the question reported improvements in the condition of the soil and the life within it.

47% were testing for increased soil biodiversity, from counting earthworms to experimental work with University researchers.

28% of participants reported improved water infiltration on their fields.
Crop Health & Protection

A general decrease in the use of plant protection products: falls of 8 – 20%, with resulting cost savings

For many growers and farmers, the tool of first choice is biological control:
- e.g. use of nematodes and bacillus, predatory insects, Falcons for bird scaring.

Improved farmland biodiversity is an important tool in pest management, encouraging pollinators and protecting predators
- e.g. insects, raptors, owls, snakes - to boost populations of beneficial insects

Trend to lower use of herbicides, with targeting
- “herbicides applied to 40% of our land rather than 100%”,

Widespread use of weed-suppressing green manures and fumigant cover crops.
Energy Efficiency

54% of participants who answered the question said LEAF Marque improved *energy efficiency in their business*, with savings reported at £10,000 - £17,000 per year.

*Savings in electricity were widespread:* on specific pieces of equipment can be considerable, on lighting, such as Light-Emitting Diode (LED) bulbs, or changing energy provider. Reported savings range from 10-33% of the annual bill.

In one case saving of £12,000 in one year.

Incremental *savings in fossil fuel through greater efficiency* in operations and better matching of machinery, with one report of a 46% saving per hectare cultivated after 9 years.

One participant saved 6,200 litres petrol in a year, 2 others reported they had expanded area farmed but held their fuel consumption at the same level.
Another said moving to a no-till system saved them 30% in fuel.
Energy Production

2 large-scale businesses are carbon neutral.

51% participants generate renewable energy, either electricity or heating. With electricity, excess is sold into the national grid. Heating is a direct saving to the business,

One larger business reported annual savings of £12,000 and income from the RHI and a payment of £16,000 in one year from biomass grown on their land. One participant reported creating 600 tonnes of woodchip for the boiler from 60 hectares of woodland on the estate.
20% have access to reservoirs, 11% have own boreholes, 14% access to large rivers.

**Treating water as a limited resource** stimulated precision management options tailored to individual systems:

- Only irrigating to start germination
- Controlling humidity in greenhouses
- Using Ultraviolet light to lower bacterial levels in the water for salad crops
- Changing the pH of water for poultry production
- Self-sufficiency for polytunnels through rainwater harvesting
66% of participants who answered the question said biodiversity on their land had improved because of LEAF Marque certification.

Participants reported bird species increases, including

- over 40 species on one farm;
- 3x the number of species on another;
- rises in the absolute number of species on many.

9 LEAF Marque certified businesses had been, or are part of, Higher Level agri-environment schemes.

53% of participants who answered the question, said LEAF Marque improved the landscape value of the farm.
Community Engagement

71% of participants who answered the question said LEAF Marque had **improved their relationships with the public.**

Reported benefits include better understanding by the community, resolution of complaints, sympathetic hearing of planning issues and improved sales from the farm.

Several pointed to the strategic importance of better relationships regarding recruiting new staff and understanding policy support mechanisms.

47% of participants who answered the question said that LEAF Marque had **improved their engagement with the wider agricultural sector.**

LEAF Marque certified businesses are collaborating with leading researchers to improve their operations and secure their intellectual property.
Consumers expect very high levels of welfare - not achieving this would be a threat to the continuity of the business.

Poor animal health reduces optimal performance, by increasing costs and lowering productivity.
Pollution Control & By-product management

32% of participants have secondary markets for their produce. Most common way of absorbing excess production includes wholesale markets for processing into juices, jams and packaged foods.

11% report sending waste products to anaerobic digestion (AD) so that energy can be recovered and nutrients returned via the digestate.

The creation of risk registers tailored to each business.

Improved physical security around storage facilities (bunding, bio-beds), not moving some potential pollutants (slurry) across water sources and avoiding some chemicals altogether (metaldehyde, glyphosate), reducing risks.

Working with responsible bodies such as National Parks, Natural England and water companies to reduce diffuse pollution at source.
Conclusions (1)

Farmers report economic benefits:
LEAF Marque allows managers to engage in a critical reflection on the strategic direction of their activities; particularly important where management capacity is limited.

LEAF Marque provides participants with valuable market opportunities;
e.g. a premium, or access to higher value supply chains.

It lowers the costs of collaborating with other businesses in LEAF Marque, fostering networks.

Integrated Farm Management and close attention to detail in farming operations offers significant incremental savings, so operations can be more efficient.

“There are so many [benefits], and they are so subtle it is hard to choose one particular thing ... LEAF has made us go a lot further than we would have gone.”

“[LEAF Marque] has certainly given us a greater awareness of why we are using [products]. We would have been driven by chemical companies in the past, and now we are encouraged to ask exactly why. Over the last 5 years we have reduced our chemical inputs considerably.”
Farmer members recognise environmental benefits:

Being in LEAF Marque results in marked improvements in farmland birds, insects and mammals, working in synergy with other programmes and schemes. These have wider benefits to the farming system, such as pest management, as well as inherent value.

LEAF Marque, working with other drivers, has changed the emphasis on crop protection towards integrated pest management, with reduced use of fossil fuels and potentially polluting chemicals.

The integration of farming operations realises synergies, e.g. management of resistance in weeds and pests focusing on biological controls and ecosystem management together.

“We put in grass leys, and we are monitoring earthworm counts before and after, to see if we can see any improvements”

“We are taking organic matter samples more regularly, and moving to minimal tillage – it is a high priority, it is changing and we are seeing great benefits”
Conclusions (3)

Farmers also report and value social benefits:

LEAF Marque requirements **build confidence in dealing with other compliance schemes**

LEAF Marque provides **opportunities for farmers and growers to network**, exchange relevant expertise and information, and opportunities for personal growth

LEAF Open Farm Sunday enables Marque-certified businesses to showcase their activities, **establishing and enhancing goodwill and understanding in the local community**, building pride in the farm team

Empowered by training around LEAF Marque; members increasingly represent their businesses and the industry more broadly, in a **bottom-up effort to change public awareness about food and farming**

“[LEAF Marque] has changed the way we communicate with staff, staff environmental awareness has been raised, I really like that part of LEAF – and we are happy to go beyond that”

“LEAF have very good connections with different stakeholders, and that is advantageous to us as a business.... I wouldn't want to lose the invitation to the party - bringing people together is very, very important, those connections should not be underestimated”
Thank you!

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