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Building synergies between Horizon 2020 and EIP-AGRI Operational Groups

The EuroDairy Thematic Network

Ray Keatinge, Network Coordinator (AHDB)

AgriResearch Conference, Innovating for the Future of Farming and Rural Communities, 2-3 May, 2018

First some definitions !

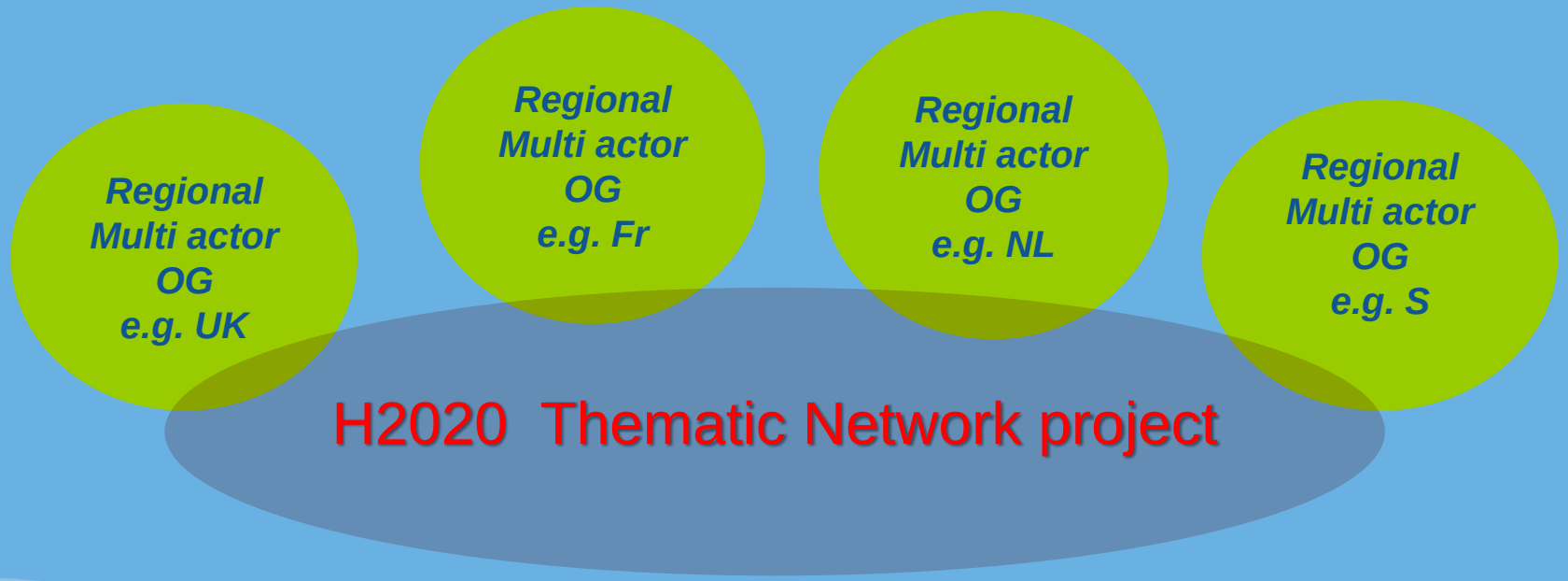
'Thematic Network'

- 'Multi-actor' group focussed on sharing knowledge on innovation and best practice cross border
- Measure funded under Horizon 2020 (European Innovation Partnership)

Operational Group'

- Regional 'Multi-actor' group focussed on a particular problem, constraint or opportunity
- Combining scientific and practice based knowledge
- Developing and innovating to produce implementable solutions
- Which can be demonstrated & shared more widely
- Measure funded under Regional Rural Development Programmes

EuroDairy Thematic Network links Regional Operational Groups



EuroDairy focus on common challenges for EU dairy farmers

- Long-term price volatility
- Relative competitiveness
- Environmental regulation
- Societal scrutiny of animal production
- Quality of life for farmers
- Industry development - infrastructure, land mobility, succession

No soft landing post milk quotas

Economic, social & environmental sustainability – EuroDairy themes for innovation & best practice

Resource efficiency

- Feed efficiency
- Nutrient management
- Carbon, energy and water

Animal care

- Reducing antibiotic inputs
- Optimising the housed environment
- Practical welfare assessment

Socio-economics

- New business models
- Improving quality of life
- Tactics for volatility

Biodiversity

- Combining profitability with environmental management

‘Engine room’ of EuroDairy – 120 Pilot farmers

EuroDairy

Robert Craig
Dolphenby Farm
Penrith
GB

Innovations

Socio-economic resilience

Resource efficiency

Biodiversity

The herd
- Specialist dairy farm
- 400 cross-bred cows
- 6000 litres/cow/year
- 4.88% fat & 3.87% protein
- Specialist rotational grazing system from early February until December
- Spring 12 week block calving
- 140 home reared heifers
- Stocking rate 2.57 livestock units/ha
- Average age at first calving: 24 months

The Farm
- 279 ha agriculture area
- Furthest paddock 2km from the parlour
- Workforce: 4 full time + 2 relief milkers

Aspirations
- Optimise grassland productivity to grow 14 t DM grass/ha annually
- Improve fertility parameters to achieve <10% empty rate
- Create surplus heifer stocks to sell as bonus cash flow
- Produce 11000 litres/ha or 910kg milk solids annually

Innovations
- Progressive expanding business aiming to maximise milk from grass in a profitable simple system
- Assessing sustainability indicators as part of Nestle milk producer group
- KPI's are set and achieved to drive high production from grass
- System depends on grazing through the year with in calf heifers outwintered on grass and monitored by regularly weighing
- The dry cows are managed on deferred grazing and silage bales before being housed in free stalls
- Desired breeding traits include productivity, longevity and aggressive grazing
- Heat observation is done by staff three times per day during the mating period
- Staff management and motivation is delivered through regular attendance of courses and discussion groups
- Their moto is 'simple and enjoyable ☺'

Areas of interest
- Soil management
- Externalities of farming and environmental impact

EuroDairy

Tom Rawson
Houghton Lodge Dairy
Leicester
GB

Innovations

Socio-economic resilience

The herd
- Specialist dairy farm
- 800 cross-bred cows
- 5000 litres/cow/year
- 4.75% fat & 3.65% protein
- Milk from forage 3104 litres/cow/year
- Rotational grazing system February to November
- Spring and autumn block calving
- Stocking rate 2.55 cows/ha
- Average age at first calving: 24 months

The Farm
- £1 million of seed capital invested to bring life back to a redundant dairy unit
- 428 ha agriculture area
- 273 ha grazing platform
- Workforce: 5 full time and in hand machinery operations

Aspirations
- 20% return on tenant's capital
- 19% profit retained after rent and finance
- Mature cows yielding their body weight in milk solids
- Reduce concentrate use to 700kg cow/year
- Build up to 1000 cows
- Increase milk from forage to 3500 litres/cow/year
- 2018 year business profit of at least 8pence/litre

Innovations
- Innovative business model involving share capital and crowdfunding
- Two new 24:48 swing over parlours
- Borehole - £30,000 digging project found water at 100m down
- 20,000 concrete sleepers at £5.05 each for cow tracks to improve infrastructure
- Infrastructure of more than 40km of electric fencing invested to set up paddock grazing
- Reseeding ground previously laid to arable
- Grass is key to keep cost low however meal can be fed through parlour feeders
- Landlord provides the straw in exchange for manure and help with cleaning out

Areas of interest
- New business models

EuroDairy

Neil & Jane Dyson
Holly Green Farm
Buckinghamshire
GB

Innovations

Socio-economic resilience

Animal care

Resource efficiency

The herd
- Specialist dairy farm
- 500 Holstein cows
- 9000 litres/cow/year
- 4.2% fat & 3.25% protein
- Milking 3 times/day
- Housed in free stalls with sawdust on mattresses
- Autumn seasonal block calving
- 120 home reared heifers
- Average age at first calving: 23-24 months

The Farm
- Has been in Jane's family for 100 years
- 210 ha Agriculture area
- 170 ha arable land
- 40 ha permanent grassland
- Workforce: 6

Aspirations
- Continue to improve profitability and resilience by actively planning and regularly reviewing budgets

Innovations
- Attention to detail with minimal use of technology
- 0% mortality of replacement heifers reared in a high bio-security unit
- Graduate training programme to encourage staff personal development
- Use of sex semen is being trialled and compared against non-sex semen
- Slurry separation to exchange muck for straw with arable neighbour
- Fresh calvers temperature and blood ketone levels are monitored
- Monitor dry cows urine pH to balance Dietary Cation-Anion Balance (DCAB) diets to eliminate milk fever
- Rumen fluid samples taken to help balance feed rations
- Scientific methodology to calculate quantity of feed offered
- Genomic breeding is used on two-thirds of the herd. Traits for milk yield, solids and legs and feet are selected
- In the top 10% of Arla farms for low carbon footprint due to a biomass boiler, solar panels and exclusion of soya from the rations

Areas of interest
- Staff management

‘Engine room’ of EuroDairy – 42 Operational Groups

Operational Group: **Résilience Lait Normandie**

Start and finish date: 30/03/2016 to 31/12/2019

EuroDairy Topics: Socio-economic Resilience

Location:

Objective:

- Identify economic and social resilience ways in different systems
- characterize measurement criterias and develop adequate measurement tools
- Communication about différents actions to improuve resilience

Number of farmers: 7

Website: http://www.chambre-agriculture-normandie.fr/ (not available yet)

Coordinator: Catherine BAUSSON - catherine.bausson@normandie.chambagri.fr

Partners:

Funding Organisms:

Operational Group: **Free walk barns 2.0**

Start and finish date: 2012 – April 2018

EuroDairy Topics: Animal Care

Location: 15 dairy farmers across the Netherlands

Objective:	A so called free walk barn for dairy cows is characterized by no cubicles, an alternative floor instead of concrete and more square meters per cow for lying and moving. Participating dairy farmers in this group want to further improve this innovative system especially regarding the organic bedding materials and management. Animal health, especially claws, udder health and fertility are monitored as the main objective is to increase longevity (how long a cow stays in the herd).
Website:	www.vrijloopstallen.nl
Coordinator:	Bram den Hollander, IDV-advisory.
Contact:	In Dutch bram@idv-advies.nl or in English: koops@zuivelnl.org
Partners:	15 dairy farmers in cooperation with a supplier of roof material and research. Executed by IDV-advisory.
Funding Organisms:	National government and participating farmers.

Operational Group: EuroMaito (EuroMilk) project

Start and finish date: 1.1.2017 – 31.12.2018

Location:

EuroDairy Topics: (delete those which are not studied in your group)

Resource Efficiency Biodiversity Animal Care

Objective: (using keywords)

- Milk production, resource efficiency, economy, forage yield, animal welfare, biodiversity

Website: http://euromaito.savonia.fi/

Coordinator name and contact: Natural Resources Institute Finland (Luke), sari.kajava@luke.fi

Partners: Savonia University of Applied Sciences and ProAgria Rural Advisory Services

Number of farms: 12

Funding Organisms (names and logo):

The European Agricultural Fund for Rural Development: Europe investing in rural areas

Osuuskunta ItäMaito Henkkija Atria faba Suomentieto

EuroDairy recruitment: 'Official' & 'non-Official' OG's

Country	Total	RDP	Non RDP	Country	Total	RDP	Non RDP
France	3	2	1	Denmark	0	-	-
Italy	6	6	-	Ireland	0	-	-
Belgium	6	6	-	Slovenia	0	-	-
Germany	7	7	-	Portugal	1	1	-
Finland	1	1	-	Sweden	3	1	2
Spain	3	3	-	UK	3	1	2
Poland	0	-	-	Netherlands	5	-	5

28 'Official' ; 10 'Unofficial'

Synergy of Operational Groups & Thematic Networks

Network Offer

- Knowledge exchange across borders
- Demand-driven access to expertise
- Intelligence on OG's in other countries
- Inventory of practice based innovations
- Additional outlet for dissemination
- Lend weight to new applications

Operational Group offer

- Clusters of proactive multi-actor groups
- Worked examples of innovation and best practice
- End-user insight and engagement
- Inspiration to other farmers

English OG - Engaging farmers on antibiotic use

1) Clear benefit to farmer

2) Practical, on farm

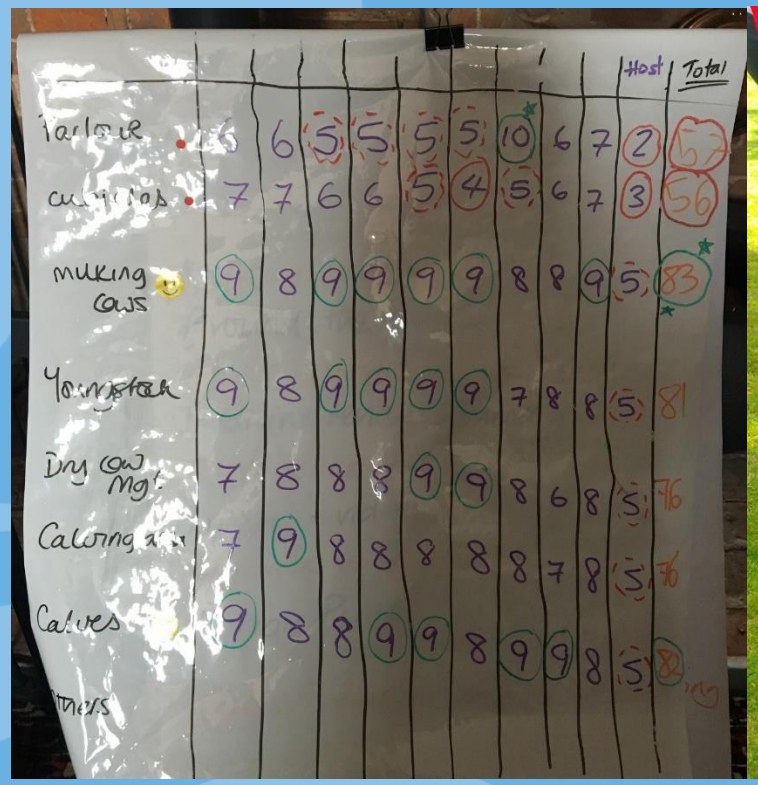
3) Farmer-led

4) Measure and monitor success

5) Facilitation

Bottom-up knowledge exchange

Constructive critique & action planning



Practical evaluation/end user feedback

Sharing knowledge cross border - antimicrobial use

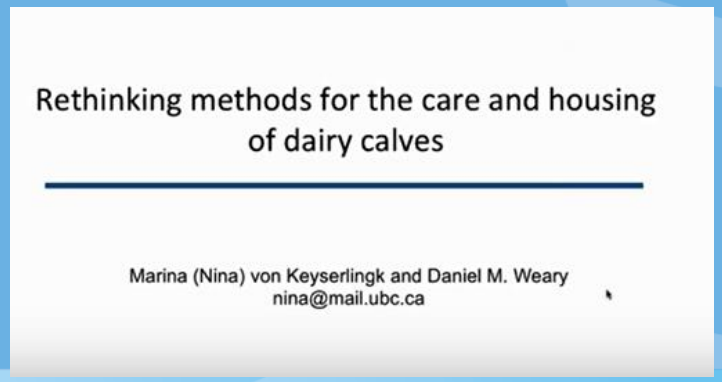
Farmer exchange

Visits to R and KE centres

Demonstrating innovation

Workshops

Webinars



Summary and conclusions

- EuroDairy demonstrates the combination of measures in support of the interactive innovation model
- The four sub-themes align well with identified sustainability challenges to the EU farm sector
- By adopting a broad definition of innovation (technical, social, organisational) the project can contribute to the modernisation of dairy farming
- Digital communication channels increase 'reach'
- Farmers also like to see and 'touch', learning from their peers, in a blended approach to learning

Summary and conclusions

- Development of management and leadership skills important, to increase 'absorptive capacity' for implementation of new technologies
- Local interpretation & language critical to spreading innovation and best practice across borders
- Key role of 3rd parties – advisors, supply chain actors, for effective engagement with AKIS
- Persevere with the model !