



Bottom-up approach for services/dysservices linked to dairy farming Ireland

New challenges for dairy sector sustainability in Ireland

Analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - Ability to grow and utilise grass in a low cost system of production - Green image of production underpinned by Origin Green programme - Strong traceability and quality assurance standards - Economic sustainability of dairying - Family farm structure that's embedded in rural economy - Low carbon footprint of milk production - Strong environmental and food safety regulation of the sector - Quality of research & extension support - Animal welfare conditions and image of outdoor grazing system - Growing number of markets - Well educated workforce - Pre-dominant co-operative governance structure of the dairy processing 	<ul style="list-style-type: none"> - Shortages and cost of labour - Environmental effects of dairy expansion (GHG, Ammonia, Water Quality, Biodiversity, soil fertility, Ecoli) - Milk price and income volatility - Work-life balance and isolation - Age profile of farmers and lack of generational renewal - Excessive dependence on N fertiliser - Land mobility - Animal waste storage deficits and inefficient application methods - Poor soil fertility and nutrient use efficiency - Effects on Animal Welfare of Dairy Expansion
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> - Branding of true grass based system of production - Improved soil fertility and nutrient management - Pathways to increased profitability - Collaborative farming to overcome labour shortages - Big data sharing to generate better resolution environmental & social sustainability metrics - Become a leader in sustainability - Capitalise on the growing world demand for milk based protein - Increase productivity per cow using genetics - Automation and use of ICT to reduce labour demand - Generation of metrics around animal welfare standards to alleviate consumer concerns - Develop sustainability metrics to include carbon sequestration in soil/grassland 	<ul style="list-style-type: none"> - Breaches in environmental targets (GHG, ammonia, water quality, biodiversity) and subsequent loss of Nitrates Derogation. - Labour shortages and effect on work-life balance - Animal Welfare impacts of rapid dairy expansion - Brexit - Attractiveness of dairy farming as a career for young people – Lack of generational renewal - Liquidity effects of milk price / income volatility - Effect of intensification on green image - Changing consumer trends/awareness - Move to veganism - Ineffective Knowledge transfer around the environmental effects of agriculture - Potential future free trade agreement - Antimicrobial resistance - Food safety incident

Services and dysservices and indicators used to measure them

Category	Services	Dysservices	Innovative Practices
Provisionning	<ul style="list-style-type: none"> • Food Production (milk & meat) • Safe and Quality Food • Indigenous industry generating significant exports and positive balance of payments 	<ul style="list-style-type: none"> • Generation of unwanted male calves • Excess animal waste generation <p>Potential animal welfare issues around rapid dairy expansion</p>	<ul style="list-style-type: none"> • Encourage branding the milk from grass concept to capitalise on quality of product • Sexed semen to address calf issue • Encourage / incentivise suckler farmers towards dairy beef production • Low cost capital solutions to increase on-farm slurry storage capacities <p>Generation / promotion of animal welfare sustainability metrics</p>
Rural vitality	<ul style="list-style-type: none"> • Sustaining rural communities • Direct employment in rural areas • Indirect employment in rural areas <p>Agri-tourism</p>	<ul style="list-style-type: none"> • Consolidating smaller farms mean fewer farm families in rural areas 	<ul style="list-style-type: none"> • Mitigation of income volatility - Income smoothing mechanisms <p>Rural tourism initiates link to natural landscape</p>
Environmental Quality	<ul style="list-style-type: none"> • Maintaining managed landscapes • Low carbon milk/meat production <p>Carbon sequestration of grassland</p>	<ul style="list-style-type: none"> • GHG and ammonia emissions • Nutrient transfer to watercourses <p>Biodiversity loss</p>	<ul style="list-style-type: none"> • Branding of low carbon milk • Low cost solution to covering slurry stores / slurry additives • Use of slurry injection systems • Precisions agriculture – use of GPS technology to optimize nutrient applications spatially • Incentivise that promote renewal initiatives (e.g. anaerobic digestion technology) among groups of intensive famers in a spatial area • Increased clover in sward • Use of protected urea
Cultural heritage and quality of life...	<ul style="list-style-type: none"> • Maintaining a traditional way of life • Maintaining co-operative structures - avoiding corporates • Keeps people living in rural areas <p>Sense of “Meitheal” - co-operative labour system among neighbouring farmers</p>	<ul style="list-style-type: none"> • Increased workloads leads to poor work-life balance and burnout • Isolation in the workplace • Expansion / opportunities of dairying is alienating other sectors - Creating division among farmers 	<ul style="list-style-type: none"> • Incentivise / promote collaborative farming structures • Incentivise earlier generational renewal