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NAP Farm Impact Tool Webinar

Monday 2nd June 2025

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Housekeeping

- You are automatically muted
- Use the Q&A function (not the chat box) to ask questions
- Up-vote questions you want to answered
- If you have issues – leaving and re-joining usually fixes them
- The webinar will be recorded
- Please complete the feedback survey at the end
- This webinar qualifies as a Dale Farm Future Strong KE Event – opt in via feedback survey

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Bringing Science and Farming together

- An independent farmer-led levy body
- **PURPOSE:** To make the NI ruminant livestock sector more competitive, profitable and sustainable
- Strong emphasis on-farm research and innovation

AgriSearch Actions on NAP to date

- Initial Scientific Critique conducted by Sinclair Mayne
- Initial Impact Analysis using Beacon Farm Network Data
- Ongoing analysis around justification for lower fertiliser N limits
- Engaging with key stakeholders to co-ordinate our actions
- Development of a NAP Farm Impact Tool
  - Aim to work with key industry stakeholders to build up a broader in-depth picture of how the NAP proposals would affect farms and the wider industry

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The NAP Consultation document outlines a wide variety of new measures which include:

- Fertiliser & Feed Database
- Slurry movement database (all movements to be notified and verified within 4 days)
- Lowering the limits on N fertiliser application
- P fertiliser use on grassland only permitted in exceptional cases
- A new definition of “intensive” farms (above 150kg (organic)N/ha)
  - Slurry exports cannot be included for
- A banded approach for organic N loading from dairy farms
- P Balances for all “intensive farms”
  - 10kgP/ha limit to be introduced in 2027
  - 8 kgP/ha limit to be introduced in 2029

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What are the key NAP measures that the calculator looks at?

- Working out the organic N loading per Ha (using new figures for dairy cows)
  - With slurry exports taken into account (in relation to whether a farm needs a “derogation” (above 170kgN/ha) and if derogated is the farm is below the upper limit of 250 kgN/ha
  - Without slurry exports taken into account – to determine if the farm is deemed as intensive (above 150kgN/ha)
- The calculator works out additional land needed to stay below the 150 kgN/ha allowance or below the derogation threshold / upper limit.

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What are the key NAP measures that the calculator looks at? (2)

- Working out the permitted N application for grassland
  - Current limits for grassland fertiliser are
    - 272 kgN/ha/year for dairy farms
    - 222 kgN/ha/year for beef & sheep farms
  - Under the limits proposed in the new NAP consultation the N permitted for silage production would range from:
    - 22 – 242kgN/ha for non-derogated farms (depending on system)
    - 150 – 210 kgN/ha for derogated farms
  - For grazing ground the N limits would range from 50 – 180 kgN/ha
  - The calculator assumes the upper limit in each range
- The calculator then compares this to current fertiliser usage

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What are the key NAP measures that the calculator looks at? (2)

- Working out the Phosphorus Balance per farm
  - **P Inputs:** Livestock purchased, slurry / manure imports, purchased feed, straw, silage etc, purchased P fertiliser
  - **P Outputs:** Livestock sold, produce sold (e.g. milk, eggs, crops etc), slurry / manure exports,
- The calculator then divides this by area farmed to calculate the phosphorus balance per Ha.
- The calculator then works out how many extra Ha of land or what stocking rate reduction is needed (if any) to achieve the 2027 & 2029 limits of 10 kgP/ha and 8 kgP/ha.

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Data needed for the calculator

- Area farmed (Ha) and a % split of grazing, silage and arable fields
- Average livestock number over a year (these can be obtained from the NIFAIS Portal – select the Nitrates Stock Count)
- Slurry (M^3) / manure (t) imports and exports
- Numbers and average weights of livestock moving in and out of your herd (numbers can be obtained from the NIFAIS portal)
- Details of purchased feeds, straw, fodder etc (t)
- Details of produce sold (milk, eggs, crops etc)
- Current fertiliser usage (tonnes bought and %N, $\%P_2O_5$, $\%K_2O$)

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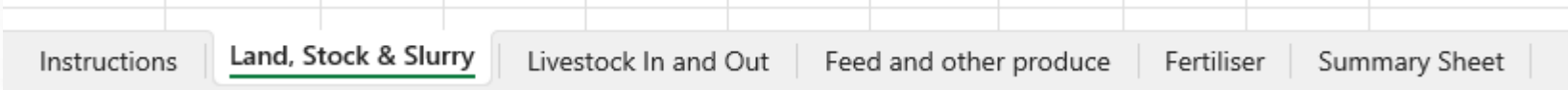
Accessing the Calculator

- The calculator is in the format of an Excel Spreadsheet and can be downloaded from the AgriSearch website www.agrisearch.org
- The calculator is comprised of a series of worksheets / tabs which should be completed in sequence.



  - Land, stock and slurry (including milk sales)
  - Livestock in and out
  - Feed and other produce (in and out)
  - Fertiliser
- The final summary sheet displays the results

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Land, Stock & Slurry (1)

			% Used for mainly grazing	% Used for Silage	% Used for arable	Total Check
Please enter land area farmed (Hectares)			50%	50%	0%	100%
			0	0	0	OK
Total Litres of milk sold			**Milk Yield per Cow**	-		

"Error" will appear if the total is not 100%

- Data is entered in the coloured sells (usually yellow)
- First of all, enter the total number of hectares farmed
- Then enter the % split of land used for grazing, silage and arable
  - Check the totals add up to 100% (error will appear if they don't)
- Enter the total litres of milk sold off the farm (in 12 months)
  - Do not count milk fed to calves

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Land, Stock & Slurry (2)

	Grazing Livestock							
		Average Livestock Numbers over a year	Current N Rates	Proposed N Rates	N Under Current Rates	N Under Proposed Rates	LU / Head	LU per Class
12	Dairy Cows		100	88	-	-	1.00	0
13	Suckler Cows		52	52	-	-	0.80	0
14	Breeding Bulls		52	52	-	-	0.80	0
15	Cattle > 2 Years		45	45	-	-	0.80	0
16	Cattle 1-2 Years		39	39	-	-	0.60	0
17	Bull Beef (0-13 months)		30	30	-	-	0.40	0
18	Cattle 0-1 years		19	19	-	-	0.40	0
19	Ewe >1 yr		9	9	-	-	0.10	0
20	Ram >1 year		9	9	-	-	0.08	0
21	Lambs 0-1 years		4.4	4.4	-	-	0.04	0
22		0						

- Enter average number of grazing livestock over 12 months
- Calculator will calculate the appropriate N rate for dairy cows based on the yield per cow (current rates are also used to illustrate the change)
- There are additional tables for pigs and poultry

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Land, Stock & Slurry (3)

Liquid / slurry manure types	Dry matter content (%)	Slurry Imported (M3)	Slurry Exported off Farm (M3)	Total Nitrogen (N) content by volume(kg N/m^3)[12]	Slurry N Imports (kg)	Slurry N Exports (kg)	Total phosphorus (P) content by volume(kg P/m^3)[12]	Slurry P Imports (kg)	Slurry P Exports (kg)	Proportion of total phosphorus to total nitrogen
Liquids										
Dirty water	0.5%			0.5	0	0	0.04	0	0	0.08
Cattle slurries										
Cattle slurry	2.0%			1.60	0	0	0.26	0	0	0.16
	6.0%			2.60	0	0	0.52	0	0	0.2
	10.0%			3.60	0	0	0.79	0	0	0.22
Separated cattle slurries (liquid portion)										
Strainer box	1.5%			1.500	0	0	0.130	0	0	0.09
Weeping wall	3.0%			2.000	0	0	0.220	0	0	0.11
Screw press	4.0%			3.640	0	0	0.530	0	0	0.17
Pig slurries										

- Enter M3 of slurry imported / exported and tonnes of solid manure
- Use orange cells for imports and green cells for exports
- There are also rows for digestate (you will need to provide the N & P levels)

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Livestock In and Out

Livestock Type	No Imported	Average Weight	Total Kg Imported	P Rate / kg	Total P
Dairy Cows		600	0	0.66%	0
Suckler Cows		860	0	0.66%	0
Breeding Bulls		1000	0	0.66%	0
Cattle > 2 Years		800	0	0.66%	0
Cattle 1-2 Years		450	0	0.66%	0
Bull Beef (0-13 months)			0	0.66%	0
Bull Beef (6-13 months)			0	0.66%	0
Cattle 0-1 years		250	0	0.66%	0
Dropped Calves				0.33	0
Ewe >1 yr		55	0	0.54%	0
Ram >1 year		75	0	0.54%	0
Lambs		48	0	0.54%	0
Pigs			0	0.50%	0
Poultry			0	0.50%	0
					0

- Two identical tables – one for imports and one for exports
- Please adjust the weights of animals as appropriate
  - Weight not age is the critical factor
- Include fallen stock as they are leaving the farm
- Births are **NOT** included in inputs

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Feed and Other Produce (1)

- Enter purchased feeds
  - Updated P values have been used for this spreadsheet for concentrates
  - Lower P values can be used if you have evidence of this
- Straw, silages, straights etc should also be entered
- Blank fields provided for any feeds not listed
  - You will need to provide a P% values

IMPORTS OF FEED, FORAGE, STRAW ETC			
Agricultural Product	**Amount (t)**	**P Content (% fresh weight)**	**kg P Imported**
Dairy Concentrates		0.47%	0
Dairy Concentrates		0.47%	0
Other Ruminants		0.43%	0
Other Ruminants		0.43%	0
Poultry Concentrates		0.50%	0
Pig Concentrates		0.48%	0
Straw		0.10%	0
Silage		0.06%	0
Hay		0.30%	0
Oats		0.29%	0
Barley		0.30%	0
Wheat		0.26%	0
Maize		0.25%	0
Full fat soya		0.45%	0
Linseed		0.81%	0
Rape		1.10%	0
Soya		0.68%	0
Sunflower		0.93%	0
Gluten		0.96%	0
Citrus		0.10%	0
Wheat distillers		0.77%	0
Corn distillers		0.77%	0
Peas		0.44%	0
Palm Kernal		0.63%	0
Pollard		1.00%	0
Soya Hulls		0.14%	0
Sugar Beet		0.10%	0
Barley Distilliers		0.78%	0
Calf Milk Replacer		0.70%	0
			0
			0
Grass fresh		0.06%	0
Whole crop wheat silage		0.09%	0
Forage Maize Fresh		0.07%	0
Forage Maize Silage		0.07%	0
	TOTAL		**0**

Feed and Other Produce (2)

- Enter details of exports of produce
  - Milk sales copied from first sheet
  - Other produce exports include:
    - Wool
    - Eggs
    - Straw & silage
    - Fresh Grass (i.e. sold as a standing crop)
    - Potatoes
    - Forage & Arable Crops
- Blank fields provided for any produce not listed
  - You will need to provide a P% values

EXPORTS OF MILK, WOOL, EGGS & CROPS			
Agricultural Product	Amount (t)	P Content (% fresh weight)	kg P Exported
Milk (litres)	-	0.10%	-
Eggs		0.22%	0
Wool		0.04%	0
Potatoes		0.04%	0
Straw		0.10%	0
Silage		0.06%	0
Hay		0.30%	0
Oats		0.29%	0
Barley		0.30%	0
Wheat		0.26%	0
Maize		0.25%	0
Linseed		0.81%	0
Rape		1.10%	0
Peas		0.44%	0
Sugar Beet		0.10%	0
Grass fresh		0.06%	0
Whole crop wheat silage		0.09%	0
Forage Maize Fresh		0.07%	0
Forage Maize Silage		0.07%	0
			0
			0
	TOTAL		-

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Fertiliser Use

FERTILISER PURCHASED / USED					
Product Name	Tonnes	N %	P_2O_5 %	K_2O%	% Used for grassland
Urea		46%	0%	0%	100%
Can		27%	0%	0%	100%
					100%
					100%
					100%
					100%
					100%
					100%

- Enter in total tonnes of each type of fertiliser used and its N,P, K %
- Indicate how much of the fertiliser was used on grassland (this includes both grazing and silage)
  - If an all grass farm then keep values at 100%

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Worked Example

- 150 cow dairy farm on 90 Ha (50:50 grazing silage split)
- Milk yield per cow 8,750 litres from 3.5t conc (very efficient)
- 38 replacements kept each year (25%) calving at 24 months
- 2 Breeding bulls
- All other calves sold as dropped calves within a few weeks
- 30t of Calf / Heifer Nuts fed, 30t straw and 1.5t of calf milk replacer
- Fertiliser: 10t Urea, 30t CAN, 40t 23:0:10 (Total 245kgN/ha/year)
- Currently exporting 1,000 M_3 6% cattle slurry to stay below 170 kgN/ha Limit [Currently at 167 kgN/ha/year]

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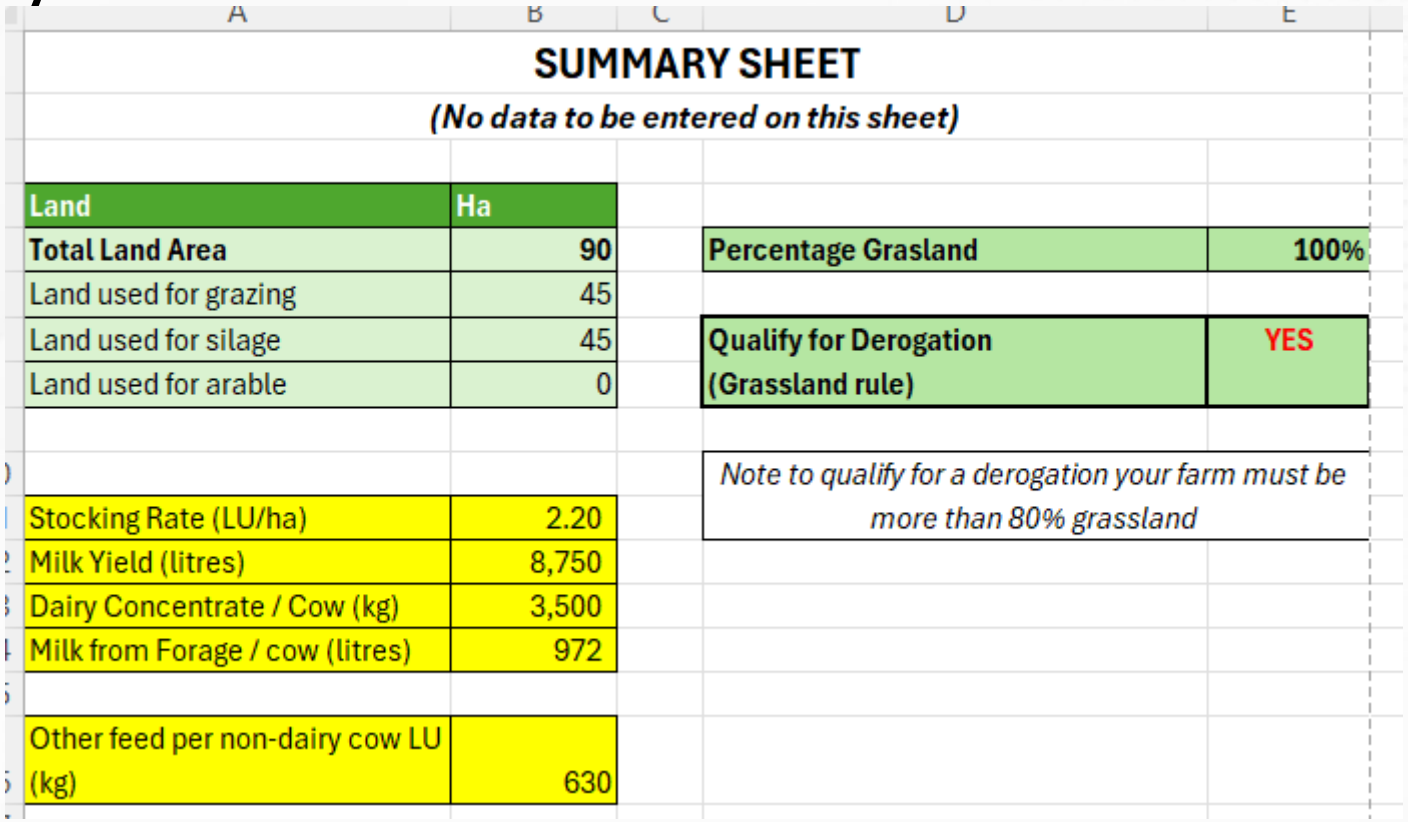
Summary Sheet – Land & Basic Performance



SUMMARY SHEET

(No data to be entered on this sheet)

Land	Ha
Total Land Area	**90**
Land used for grazing	45
Land used for silage	45
Land used for arable	0

Percentage Grasland	**100%**
Qualify for Derogation (Grassland rule)	**YES**

Note to qualify for a derogation your farm must be more than 80% grassland

Stocking Rate (LU/ha)	2.20
Milk Yield (litres)	8,750
Dairy Concentrate / Cow (kg)	3,500
Milk from Forage / cow (litres)	972
Other feed per non-dairy cow LU (kg)	630

- Calculator works out stocking rate, yield and concentrate information (good sense check)
- Percentage grassland used to work out if the farmer qualifies for a derogation

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Summary Sheet – Organic N Loading

- Due to the high rate of N for their higher yielding dairy cows their Organic N Loading has gone up from 168 to 191 kgN/ha
- >11.27 Ha needed to avoid a derogation
- Holding N is higher as slurry exports are not counted.
- 42.11 Ha needed to avoid intensive category

Organic N	kgN
N from Grazing Livestock	19,816
N from Pigs	-
N from Poultry	-
N from Slurry Imports	-
N from Slurry Exports	- 2,600
Total Organic N / year (kg)	**17,216**
Organic N / year / ha	**191.29**
Total Organic N for Intensive Rule	**19,816**
Organic N / year / ha	**220.18**

Note: Currently if your organic N loading is above 170kgN/ha you must apply for a derogation which allowes you to stock up to a maximum of 250kgN/ha

Derogation Needed	**YES**
Extra Land to avoid derogation (Ha)	**11.27**
Extra Land to qualify for derogation (Ha) if over 250kgN/ha)	**- 21.14**

*Note: Under proposals farms with a **holding** organic N loading of above 150kgN/ha will be considered **"intensive"** and will be subject to a P balance. **Slurry exports cannot be included in this calculation** (but imports are included)*

Intensive Farm Category	**YES**
Extra Land to avoid intensive category (Ha)	**42.11**

N Fertiliser Allowance

N Fertiliser Allowance

MAX N Rate for Grazing	**180**
Max N Rate for Silage	**210**

Max kgN Allowed	
Grazing	8,100
Silage	9,450
Total Grassland	**17,550**
Actual N used on Grassland	22,050
Reduction Needed	**20.41%**

- As the farm is now above the “derogated” threshold the maximum N that can be applied to silage ground is 210 kgN/ha
- Under new rules the farm would need to cut his fertiliser N use by >20%

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P Balance

- If the current slurry exports are maintained, then the farmer would be able to meet the derogation and the 2027 / 29 P Balances.
- However…..

Phosphorus Balance

Inputs	KgP
Livestock in	13.2
Feed and other produce	2642
Slurry Imports	0
Fertiliser	0
Total Inputs	**2655.2**

Outputs	KgP
Livestock out	199.98
Milk, crops, wool, eggs	1312.5
Slurry Exports	520
Total Exports	**2032.48**

P Surplus / Deficit (kgs)	**622.72**
P Surplus / Deficit / ha	**6.9**

Note: Currently derogated farms have to have a P (phosphorus) balance of below **10kgP/ha**. Under the proposals this limit will be extended to all **"intensive"** farms in **2027**. The consultation proposes a further reduction to a maximum surplus of less than **8kgP/ha in 2029**.

Land needed to ger below 10kgP/ha	**-27.728**
or Stock Reduction	**-44.5%**
Land needed to get below 8kgP/ha	**-12.16**
or Stock Reduction	**-15.6%**

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Slurry Export Considerations

- Slurry is typically exported to beef and sheep farms.
- At present (assuming bare ground) under 170kgN/ha limit you could export up to 65 M^3/Ha (14,298 gallons)
- If the importing farm goes over 150 kgN/ha then the 8kgP/ha limit applies. Restricting them to importing 15M^3/ha (3,300 gallons)
- Given the extra paperwork involved it is likely that most beef and sheep farmers will stop accepting slurry imports.

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P Balance (without slurry exports)

- With no slurry exports the P Balance increases to 12.7 kgP/Ha
- To achieve 10kgP/ha target either 24.3 Ha extra land needed or a stocking rate cut of 21%
- To achieve 8kgP/ha target 52.8 Ha of land or 37% stocking rate cut needed.

Phosphorus Balance

Inputs	KgP
Livestock in	13.2
Feed and other produce	2642
Slurry Imports	0
Fertiliser	0
Total Inputs	**2655.2**

Outputs	KgP
Livestock out	199.98
Milk, crops, wool, eggs	1312.5
Slurry Exports	0
Total Exports	**1512.48**

P Surplus / Deficit (kgs)	**1142.72**
P Surplus / Deficit / ha	**12.7**

Note: Currently derogated farms have to have a P (phosphorus) balance of below **10kgP/ha**. Under the proposals this limit will be extended to all **"intensive"** farms in **2027**. The consultation proposes a further reduction to a maximum surplus of less than **8kgP/ha in 2029**.

Land needed to ger below 10kgP/ha	**24.272**
or Stock Reduction	**21.2%**
Land needed to get below 8kgP/ha	**52.84**
or Stock Reduction	**37.0%**

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What if the system is stressed?

- The farm example shown is very efficient, with 24 month calving, 25% replacement rate and no TB
- If we stress the system:
  - Feeding an extra 500kg meal due to poor weather / silage quality
  - Keeping an extra 10 heifers due to TB
  - Keeping extra 0-1 calves due to TB
  - 24 month calving slips to 30 months

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	Unstressed	Stressed
Organic kgN/Ha/year	220	249
Land Needed to avoid a derogation	25.6 Ha	42.0 Ha
P Balance (kgP/ha)	12.7	20.0
Land Needed to get below 10kgP/ha Limit (2027); or	24.3 Ha	89.6 Ha
Stocking rate cut needed to get below 10kgP/ha Limit (2027)	21.2%	48.9%
Land Needed to get below 8kgP/ha Limit (2029); or	52.9 Ha	134.5 Ha
Stocking rate cut needed to get below 8kgP/ha Limit (2029)	37.0%	59.9%

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	7,500 litres from 2t	7,500 Litres from 2.5t	8,750 litres from 3.5t	8,750 litres from 4t	10,500 litres from 5t
	Unstressed	Stressed	Unstressed	Stressed	Unstressed
Organic kgN/Ha/year	197	226	220	249	243
Land Needed to avoid a derogation	14.2 Ha	29.7Ha	25.6 Ha	42.0 Ha	38.9 Ha
P Balance (kgP/ha)	3.2	9.4	12.7	20.0	21.5
Land Needed to get below 10kgP/ha Limit (2027); or	N/A	N/A	24.3 Ha	89.6 Ha	103.8 Ha
Stocking rate cut needed to get below 10kgP/ha Limit (2027)	N/A	N/A	21.2%	48.9%	53.6%
Land Needed to get below 8kgP/ha Limit (2029); or	N/A	15.4 Ha	52.9 Ha	134.5 Ha	153.2 Ha
Stocking rate cut needed to get below 8kgP/ha Limit (2029)	N/A	14.6	37.0%	59.9%	62.8%

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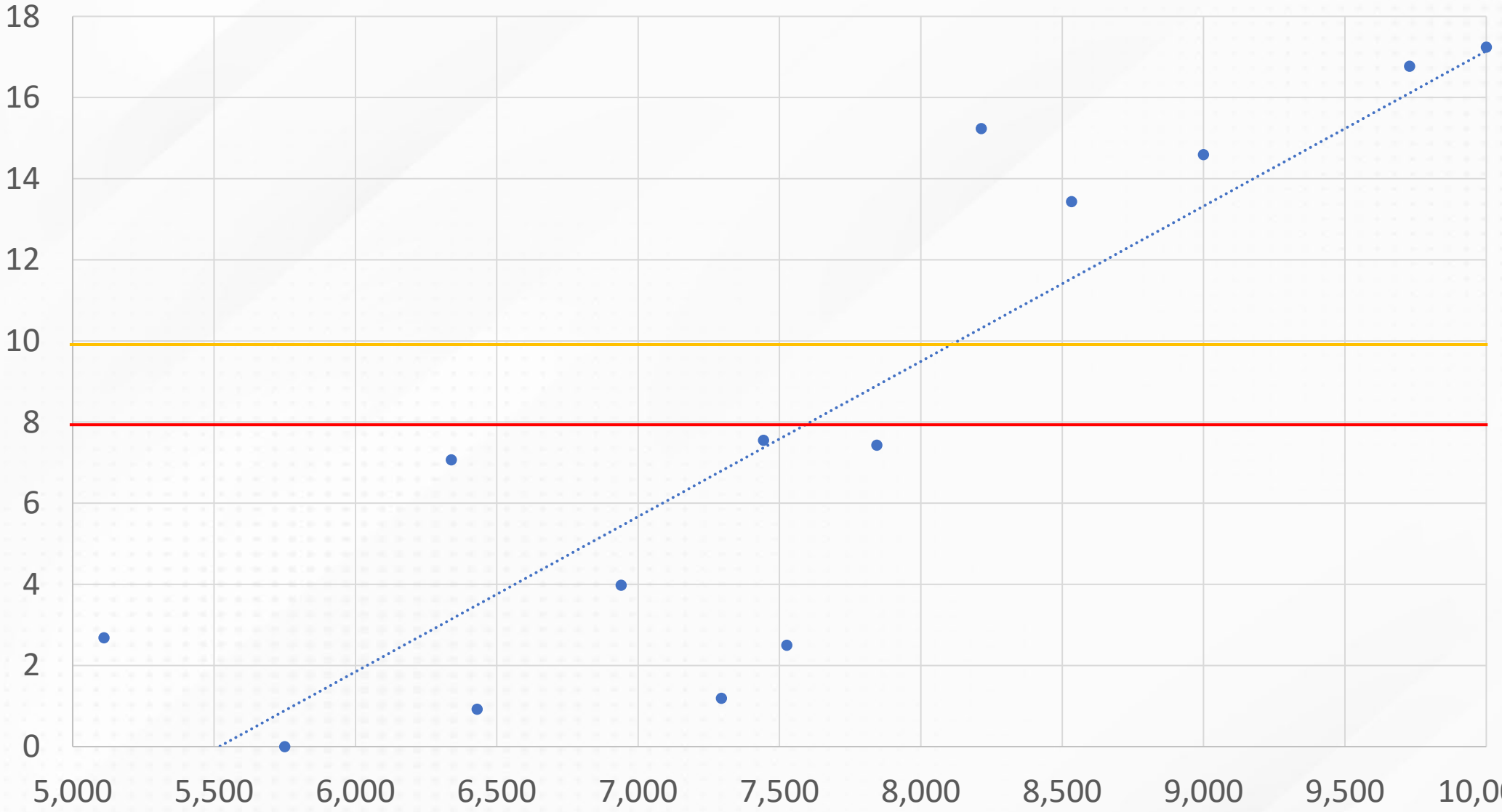
Milk Yields (litres / cow) V P Balance (kg P/Ha)



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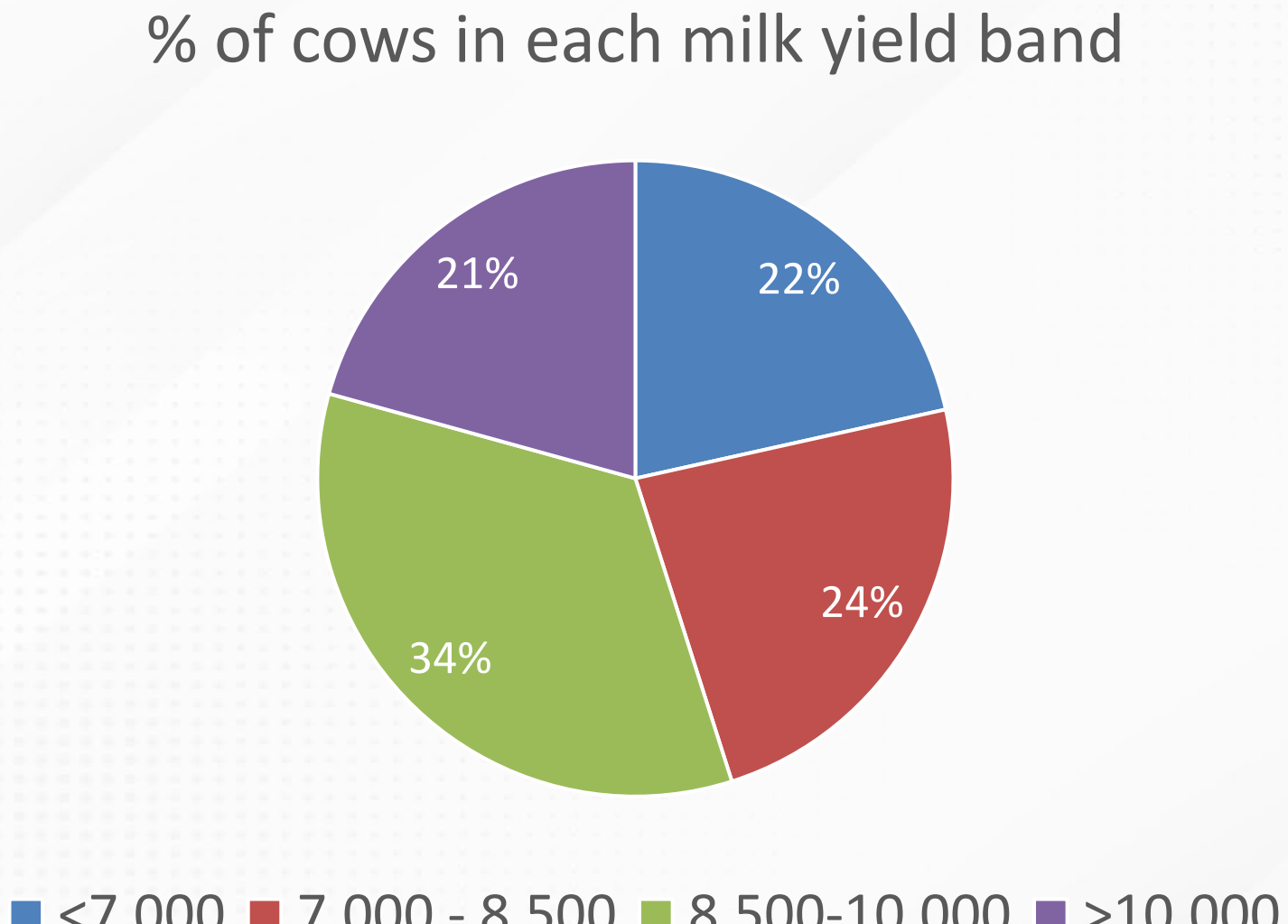
AgriSearch 2025 Dairy Farmer Survey



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Beef & Sheep Case Study

John Morrow, Agriculture Manager

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Suckler/Sheep Example

- 40ha (100ac)
- 40ac silage & 60ac grazing
- Closed Herd & Flock
- 1.68 Livestock units/ha
- 80,000 gallons of cattle slurry imported for silage.
- 24T of fertiliser sown/year

Suckler:

- 30 spring calving suckler cows to beef
- 24 months finishing
- 20% replacement rate
- 28 cattle sold/retained
- 1.3T concentrate fed/cow

Sheep:

- 100 lowland ewes
- 180 days to slaughter
- 25% replacement rate
- 1.5 weaning rate
- 60KG concentrate fed/ewe

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Average livestock numbers

Grazing Livestock							
	Average Livestock Numbers over a year	Current N Rates	Proposed N Rates	N Under Current Rates	N Under Proposed Rates	LU / Head	LU per Class
Dairy Cows		100	88	-	-	1.00	0
Suckler Cows	30	52	52	1,560	1,560	0.80	24
Breeding Bulls	1	52	52	52	52	0.80	0.8
Cattle > 2 Years	2	45	45	90	90	0.80	1.6
Cattle 1-2 Years	26	39	39	1,014	1,014	0.60	15.6
Bull Beef (0-13 months)		30	30	-	-	0.40	0
Cattle 0-1 years	28	19	19	532	532	0.40	11.2
Ewe >1 yr	100	9	9	900	900	0.10	10
Ram >1 year	4	9	9	36	36	0.08	0.32
Lambs 0-1 years	90	4.4	4.4	396	396	0.04	3.6

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Livestock exports

Livestock Type	No Exported	Average Weight	Total Kg Exported	P Rate / kg	Total P
Dairy Cows		600	0	0.66%	0
Suckler Cows	6	650	3900	0.66%	25.74
Breeding Bulls	1	1000	1000	0.66%	6.6
Cattle > 2 Years		800	0	0.66%	0
Cattle 1-2 Years	21	625	13125	0.66%	86.625
Bull Beef (0-13 months)			0	0.66%	0
Bull Beef (6-13 months)			0	0.66%	0
Cattle 0-1 years		250	0	0.66%	0
Dropped Calves				0.33	0
Ewe >1 yr	25	80	2000	0.54%	10.8
Ram >1 year	1	100	100	0.54%	0.54
Lambs	130	46	5980	0.54%	32.292
Pigs			0	0.50%	0
Poultry			0	0.58%	0
					162.597

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Feed & Fertiliser imports

IMPORTS OF FEED, FORAGE, STRAW ETC			
Agricultural Product	**Amount (t)**	**P Content (% fresh weight)**	**kg P Imported**
Dairy Concentrates		0.47%	0
Dairy Concentrates		0.47%	0
Other Ruminants	29.4	0.43%	126.42
Other Ruminants	6	0.43%	25.8
Poultry Concentrates		0.50%	0
Pig Concentrates		0.48%	0
Straw	10	0.10%	10

Enter Data in this table only					
FERTILISER PURCHASED / USED					
Product Name	Tonnes	N %	P_2O_5 %	K_2O%	% Used for grassland
Urea	3	46%	0%	0%	100%
27 4 4	9	27%	4%	4%	100%
Zero P	12	24%	0%	8%	100%
					100%
					100%
					100%
					100%
					100%
					100%

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Summary

Land	Ha
Total Land Area	**40**
Land used for grazing	24
Land used for silage	16
Land used for arable	0

Stocking Rate (LU/ha)	1.68
Milk Yield (litres)	-
Dairy Concentrate / Cow (kg)	#DIV/0!
Milk from Forage / cow (litres)	#DIV/0!
Other feed per non-dairy cow LU (kg)	527

Organic N Loading

Organic N	kgN
N from Grazing Livestock	4,580
N from Pigs	-
N from Poultry	-
N from Slurry Imports	944
N from Slurry Exports	-
Total Organic N / year (kg)	**5,524**
Organic N / year / ha	**138.10**

Percentage Grassland	**100%**
Qualify for Derogation (Grassland rule)	**YES**

Note to qualify for a derogation your farm must be more than 80% grassland

Note: Currently if your organic N loading is above 170kgN/ha you must apply for a derogation which allowes you to stock up to a maximum of 250kgN/ha

Derogation Needed	**No**
Extra Land to avoid derogation (Ha)	**- 7.51**
Extra Land to qualify for derogation (Ha) if over 250kgN/ha)	**- 17.90**

N Fertiliser Allowance

MAX N Rate for Grazing	**180**
Max N Rate for Silage	**242**

Max kgN Allowed	
Grazing	4,320
Silage	3,872
Total Grassland	**8,192**
Actual N used on Grassland	6,690
Reduction Needed	**-22.45%**

Phosphorus Balance

Inputs	KgP
Livestock in	7.02
Feed and other produce	162.22
Slurry Imports	188.76
Fertiliser	156.96
Total Inputs	**514.96**

Outputs	KgP
Livestock out	162.597
Milk, crops, wool, eggs	120
Slurry Exports	0
Total Exports	**282.597**
P Surplus / Deficit (kgs)	**232.363**
P Surplus / Deficit / ha	**5.8**

Note: Currently derogated farms have to have a P (phosphorus) balance of below **10kgP/ha**. Under the proposals this limit will be extended to all **"intensive"** farms in **2027**. The consultation proposes a further reduction to a maximum surplus of less than **8kgP/ha in 2029**.

Land needed to ger below 10kgP/ha	**-16.7637**
or Stock Reduction	**-72.1%**
Land needed to get below 8kgP/ha	**-10.95**
or Stock Reduction	**-37.7%**

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Dairy Origin: Calf to beef system

- 40ha (100ac)
- 40ac silage & 60ac grazing
- 80 dropped calves purchased a year
- 24 months finishing
- 1.3T concentrates fed per head
- 28.5T of fertiliser sown/year

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Livestock numbers

Grazing Livestock							
	Average Livestock Numbers over a year	Current N Rates	Proposed N Rates	N Under Current Rates	N Under Proposed Rates	LU / Head	LU per Class
Dairy Cows		100	88	-	-	1.00	0
Suckler Cows		52	52	-	-	0.80	0
Breeding Bulls		52	52	-	-	0.80	0
Cattle > 2 Years	20	45	45	900	900	0.80	16
Cattle 1-2 Years	76	39	39	2,964	2,964	0.60	45.6
Bull Beef (0-13 months)		30	30	-	-	0.40	0
Cattle 0-1 years	78	19	19	1,482	1,482	0.40	31.2
Ewe >1 yr		9	9	-	-	0.10	0
Ram >1 year		9	9	-	-	0.08	0
Lambs 0-1 years		4.4	4.4	-	-	0.04	0

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Livestock purchases & sales

Livestock Imports

Livestock Type	No Imported	Average Weight	Total Kg Imported	P Rate / kg	Total P
Dairy Cows		600	0	0.66%	0
Suckler Cows		860	0	0.66%	0
Breeding Bulls		1000	0	0.66%	0
Cattle > 2 Years		800	0	0.66%	0
Cattle 1-2 Years		450	0	0.66%	0
Bull Beef (0-13 months)			0	0.66%	0
Bull Beef (6-13 months)			0	0.66%	0
Cattle 0-1 years		250	0	0.66%	0
Dropped Calves	80			0.33	26.4
Ewe >1 yr		55	0	0.54%	0
Ram >1 year		75	0	0.54%	0
Lambs		48	0	0.54%	0
Pigs			0	0.50%	0
Poultry			0	0.50%	0
					26.4

Livestock Exports

Livestock Type	No Exported	Average Weight	Total Kg Exported	P Rate / kg	Total P
Dairy Cows		600	0	0.66%	0
Suckler Cows		860	0	0.66%	0
Breeding Bulls		1000	0	0.66%	0
Cattle > 2 Years	20	650	13000	0.66%	85.8
Cattle 1-2 Years	56	600	33600	0.66%	221.76
Bull Beef (0-13 months)			0	0.66%	0
Bull Beef (6-13 months)			0	0.66%	0
Cattle 0-1 years		250	0	0.66%	0
Dropped Calves	4			0.33	1.32
Ewe >1 yr		55	0	0.54%	0
Ram >1 year		75	0	0.54%	0
Lambs		48	0	0.54%	0
Pigs			0	0.50%	0
Poultry			0	0.58%	0
					308.88

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Feed and fertiliser inputs

IMPORTS OF FEED, FORAGE, STRAW ETC			
Agricultural Product	**Amount (t)**	**P Content (% fresh weight)**	**kg P Imported**
Dairy Concentrates		0.47%	0
Dairy Concentrates		0.47%	0
Other Ruminants	104	0.43%	447.2
Other Ruminants		0.43%	0
Poultry Concentrates		0.50%	0
Pig Concentrates		0.48%	0
Straw	10	0.10%	10
Calf Milk Replacer	3.2	0.70%	22.4
			0
			0
Grass fresh		0.06%	0
Whole crop wheat silage		0.09%	0
Forage Maize Fresh		0.07%	0
Forage Maize Silage		0.07%	0
	TOTAL		**479.6**

Enter Data in this table only					
FERTILISER PURCHASED / USED					
Product Name	Tonnes	N %	P_2O_5 %	K_2O%	% Used for grassland
Can	9	27%	0%	0%	100%
Zero P	12	24%	0%	8%	100%
27 4 4	6	27%	4%	4%	100%
Urea	1.5	46%	0%	0%	100%
					100%
					100%
					100%
					100%

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Summary

Land	Ha
Total Land Area	**40**
Land used for grazing	24
Land used for silage	16
Land used for arable	0
Stocking Rate (LU/ha)	2.32
Milk Yield (litres)	-
Dairy Concentrate / Cow (kg)	#DIV/0!
Milk from Forage / cow (litres)	#DIV/0!
Other feed per non-dairy cow LU (kg)	1121

Percentage Grasland	**100%**
Qualify for Derogation (Grassland rule)	**YES**

Note to qualify for a derogation your farm must be more than 80% grassland

Organic N Loading

Organic N	kgN
N from Grazing Livestock	5,346
N from Pigs	-
N from Poultry	-
N from Slurry Imports	-
N from Slurry Exports	-
Total Organic N / year (kg)	**5,346**
Organic N / year / ha	**133.65**

Note: Currently if your organic N loading is above 170kgN/ha you must apply for a derogation which allowes you to stock up to a maximum of 250kgN/ha

Derogation Needed	**No**
Extra Land to avoid derogation (Ha)	**- 8.55**
Extra Land to qualify for derogation (Ha) if over 250kgN/ha)	**- 18.62**

N Fertiliser Allowance

MAX N Rate for Grazing	**180**
Max N Rate for Silage	**242**

Max kgN Allowed	
Grazing	4,320
Silage	3,872
Total Grassland	**8,192**
Actual N used on Grassland	7,620
Reduction Needed	**-7.51%**

Phosphorus Balance

Inputs	KgP
Livestock in	26.4
Feed and other produce	479.6
Slurry Imports	0
Fertiliser	104.64
Total Inputs	**610.64**

Outputs	KgP
Livestock out	308.88
Milk, crops, wool, eggs	0
Slurry Exports	0
Total Exports	**308.88**
P Surplus / Deficit (kgs)	**301.76**
P Surplus / Deficit / ha	**7.5**

Note: Currently derogated farms have to have a P (phosphorus) balance of below **10kgP/ha**. Under the proposals this limit will be extended to all **"intensive"** farms in **2027**. The consultation proposes a further reduction to a maximum surplus of less than **8kgP/ha in 2029**.

Land needed to ger below 10kgP/ha	**-9.824**
or Stock Reduction	**-32.6%**
Land needed to get below 8kgP/ha	**-2.28**
or Stock Reduction	**-6.0%**

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Questions & Answers

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Next Steps

- AgriSearch will be working with industry partners to gather a number of farm case studies from across the ruminant livestock sector.
  - These will be used as part of a wider economic impact assessment
  - If approached, we would ask you to consider participating.
  - All such case studies will be kept anonymous
- Please fill in the feedback form
  - Option to sign up for our email bulletin and text updates
  - This webinar qualifies as a Dale Farm Future Strong KE Event – if you wish it to be counted then tick the appropriate box on the form
- Future events will also be featured on AgriSearch's Social Media Channels

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