Control of
Agricultural Pollution Regulations

Farm Workbook - Water Resources Regulations 2021 Guidance Notes

Please use the following guidance notes to support you to complete the Farm Workbook.

Overview Tab:

- Please complete the Date of Record each time you complete/update the Farm Workbook

1.1 Nitrogen (N) capacity of holding: This tab is to calculate the nitrogen capacity (from livestock manure) of your holding. Please add all owned, rented and common land you have available to your business. The information you include here will also automatically feed into tabs 3.1, 3.2, 3.3 and 3.4, which are the nitrogen planning tabs. Please include all land parcels that receive manure or fertiliser as individual field entries or any land parcel that are managed in the same way e.g. silage land with the same fertiliser and/or manure applications.

NB: If you plan to include rented ground, please speak to the owner to ensure they do not plan to include the land area in their calculations.

Common land can be included as one entry. The area of your common land can be found in your Basic Payment letter on your RPW Online account.

Please use the example table below to complete tab 1.1.

Field number or name	Grazed or cropped area (ha) including common land
Field 1 – Grazed all year	4
Field 2 – One cut and grazed	5.5
Field 3 – Two cuts and grazed	2.3
Field 4	3.3
Field 5	6.1
Silage ground – Two fields – Three cuts and grazed	15.4
Common land (details can be found on your Basic Payment letter on RPW Online)	15.6
Rented summer grazing: 10ha for 6 months (Total area divided by 12 months multiplied by length of rental (e.g. 6 months)) **NB: Please check that the owner you are**	10 / 12 * 6 = 5

renting from is not including this land in their calculation. If they do, you will need to reduce the number of days for those stock in tab 1.2.	
Rented winter grazing: 20ha for 6 months (As above)	20 / 12 * 6 = 10

1.2 Total N produced: This tab will calculate the total amount of nitrogen produced on your farm by livestock within the calendar year (January – December). Please complete this tab for all livestock on your farm using the examples below.

Example 1
Beef/Sheep/Poultry Farm:

Beef herd calving in April

- **40 suckler cows – 365 days**
- **40 calves (0 to 3 months (April - June)) – 90 days**
- **40 calves (3 - 13 months) – 40 average days on farm – 275 days**
- **Calves sold as stores therefore no calves older than 13 months**
- **1 bull - 365 days**

Sheep flock lambing in March (600 lambs born - lambs up to 6 months old are counted within the ewe figures)

- **200 ewes less than 60kg – 365 days**
- **200 ewes more than 60kg – 365 days**
- **270 lambs (6 - 9 months) – 90 days** (330 lambs sold before 6 months old)
- **120 ewe lamb replacements (from 9 months - first lambing) - 244 days** (they're on winter tack for 4 months therefore reduce days by 4 months). NB: Check with owner if they've counted the rented land in their calculations.
- **8 tups (over 60kg) – 365 days**

Type of Livestock		Number of stock	Days on farm	Total Nitrogen produced by each unit of stock (kg/annum)	Total Nitrogen produced
Cattle					
Calf (all categories including veal) up to 3 months		40	90	8	78.90
Dairy cow to first calf	From 3 months and less than 13 months			35	0.00
	From 13 months and up to first calf			61	0.00
Dairy cow after first calf reared	Annual milk yield over 9,000 litres			115	0.00
	Annual milk yield 6,000-9,000 litres			101	0.00
	Annual milk yield less than 6,000 litres			77	0.00
Beef cows or steers to 25 months	From 3 months and less than 13 months	40	275	33	994.52
	From 13 months and less than 25 months			50	0.00
Beef cows or steers from 25 months	Females or steers for slaughter			50	0.00
	Females for breeding weighing 500 kg or less			61	0.00
	Females for breeding weighing over 500 kg	40	365	83	3320.00
Bulls	Non-breeding 3 months and over			54	0.00
	Breeding – from 3 months and less than 25 months			50	0.00
	Breeding – from 25 months	1	365	48	48.00
Total Cattle Nitrogen				**kg/annum**	**4441**
Sheep					
From 6 months up to 9 months		270	90	2	133.15
From 9 months to first lambing, first tupping or slaughter		120	244	1.4	112.31
After lambing or tupping	Weighing less than 60 kg	200	365	7.6	1520.00
	Weighing over 60 kg	208	365	12	2496.00
Total Sheep Nitrogen				**kg/annum**	**4261**

Poultry - 16,000 layers

- **15,500 - 365 days** (taken into account of mortality over the year)

Poultry					
Chickens used for production of eggs for human consumption	Less than 17 weeks			0.23	0.00
	From 17 weeks (caged)			0.41	0.00
	From 17 weeks (not caged)	15500	365	0.55	8525.00
Chicken raised for meat				0.39	0.00
Chickens raised for breeding	Less than 25 weeks			0.31	0.00
	From 25 weeks			0.74	0.00
Turkey	Male			1.37	0.00
	Female			1.03	0.00
Ducks				0.91	0.00
Ostriches				1.4	0.00
Total Poultry Nitrogen				**kg/annum**	8525
[2F] Total Nitrogen produced from *livestock* on the holding				**kg/annum**	**17228**

Dairy herd calving in Sept – 25% replacements

- **100 cows – 365 days**
- **100 calves (0 - 3 months (Sept - Nov)) – 90 days** (if sold at 2 months old reduce days)
- **25 calves (3 - 13 months (Jan - Oct)) – 300 days (only 25 calves are kept for replacement, remaining calves sold at 3 months)**
- **25 calves (from 13 months up to first calving) – 365 days**
- **1 bull – 365 days**

Type of Livestock		Number of stock	Days on farm	Total Nitrogen produced by each unit of stock (kg/annum)	Total Nitrogen produced
Cattle					
Calf (all categories including veal) up to 3 months		100	90	8	197.26
Dairy cow to first calf	From 3 months and less than 13 months	25	300	35	719.18
	From 13 months and up to first calf	25	365	61	1525.00
Dairy cow after first calf reared	Annual milk yield over 9,000 litres			115	0.00
	Annual milk yield 6,000-9,000 litres			101	0.00
	Annual milk yield less than 6,000 litres	100	365	77	7700.00
Beef cows or steers to 25 months	From 3 months and less than 13 months			33	0.00
	From 13 months and less than 25 months			50	0.00
Beef cows or steers from 25 months	Females or steers for slaughter			50	0.00
	Females for breeding weighing 500 kg or less			61	0.00
	Females for breeding weighing over 500 kg			83	0.00
Bulls	Non-breeding 3 months and over			54	0.00
	Breeding – from 3 months and less than 25 months			50	0.00
	Breeding – from 25 months	1	365	48	48.00
Total Cattle Nitrogen				**kg/annum**	**10189**

1.3 Imported livestock manure: If you import any type of livestock manure, please include it as one entry per manure type. Please choose from the drop-down menu in column B the type of manure you import and add in the quantity in column C.

1.4 Exported livestock manure: If you export any type of livestock manure, please include it as one entry per manure type. Please choose from the drop-down menu in column B the type of manure you export and add in the quantity in column C.

If you do not import or export any manure onto your holding, please leave these tabs empty.

2.1 Slurry (excluding pigs): This tab is to be completed for livestock that produce slurry only (NB any livestock only producing farm yard manure do not need to be included).

Column D: Please include all livestock that produce slurry on the farm.
Column F: Please include the number of days that slurry is collected i.e. number of days that the animals are housed.
Column G: please include the % that livestock is producing slurry e.g. if young stock is on straw bedding as well as having access to the yard (slurry area), please include the % split.

2.2 & 2.3 Additional water: This tab is to calculate any additional water entering the slurry storage. If lightly fouled water is collected in another tank, do not include here.

Uncovered area: This includes any open yards or walk ways that you have, that would collect slurry in your slurry store. Also, please include your slurry store if it is not covered. To work out the area m^2, you need to multiply the length by the width of the yard/slurry store area.

Typical rainfall: Please click in the rainfall data map link and click on the map where your farm is based to get the average rainfall figure.

Dairy wash water: If you have parlour washing or other wash water entering the slurry storage, please complete the following sections.

Number of animals: Include the number of cows.

Daily wash water: Include the volume of water per cow used**.**
Example figures are: Low pressure hose = 20 litres per cow per day. High pressure hose = 30 litres per cow per day.

Storage period conversion factor: This figure is completed for you. Please see the comment in the box if you want to update the figure.

Additional foul runoff: If you have any other foul run off entering your slurry store, please include it here.

2.5 Pig slurry: This tab is to be completed for pigs that produces slurry only (NB if livestock only produce farmyard manure, please do not include).

Pig slurry type (undiluted)
Column D: Please include all livestock that produce slurry on the farm.
Column F: Please include the number of days that slurry is collected.
Column G: Please include the % that livestock is producing slurry i.e. If pigs are on straw bedding as well as having access to the yard (slurry area), please include the % split.

Wash water calculator: This is for any pig system that washes down yards or pens producing contaminated water.

Column D: Please add in the number of animals concerned.
Column F: Please include the number of days the wash water will be collected.

Actual wash water (D32): If you have any wash water entering the slurry storage, please complete.
Rainwater (D33): If you have any rainwater entering the slurry storage, please add here.
Other foul run-off (D34): If you have any other fouled run-off entering your slurry store, please add the volume in here.

2.6 Slurry storage capacity: This tab is to calculate if your current storage is sufficient for the volume of slurry produced on farm.

Known storage capacity: If you know your slurry storage capacity from an infrastructure report or other calculation, please include it in this box (E7). If you know your storage capacity, there is no requirement to complete the remaining questions in this tab.

Rectangular store: If you have a rectangular store, please include the dimension here to work out the capacity. If you have an earth banked lagoon, please use the Slurry Wizard or contact the **Helpline** on **01974 847000** to work out the capacity.

Circular above ground store: If you have a circular store, please include the radius and height here to calculate the capacity.

STORAGE STATUS: This will indicate if you have enough storage currently on farm for the volume of slurry you are producing.

2.7 Poultry manure: This tab will calculate the total volume of manure produced by the poultry on farm.
Column D: Please include the average number of birds against the relevant category.
Column E: Include the total number of days the birds will be on farm from 1 October to 1 April.
Column F: Please include the % of manure that is collected. NB if you have free range layers, please reduce the % by the amount of time the birds are outside and that the manure produced is not be collected in the shed.

3.1 Optimum crop N requirement: This tab factors in the amount of available nitrogen that should be spread on fields depending on the crop type. You need to complete all field parcels or field groups that you plan to spread nitrogen on either as organic manure or manufactured fertiliser.

Column B & C: These are automatically completed.
Column D: Area of the field that will receive nitrogen.
Column E: Choose crop type from drop down menu.
Column F: Choose crop from drop down menu.
Column G: Choose option from drop down menu.
Column H: Please follow the link to RB209 page 13 Table 3.6 for SNS Status.
https://ahdb.org.uk/documents/RB209/RB209_Section3.pdf
Column I: Choose from the drop-down menu.
Column J: If a crop, add in the month in which it was planted.
Column K: If arable, include anticipated yield.
Column L: Please follow the link above to RB209 page 12 – 18 to determine the optimum amount of nitrogen for grass. For arable please click on this link – https://projectblue.blob.core.windows.net/media/Default/Imported%20Publication%20Docs/RB209%202022/RB209_Section2_2022_220224_WEB.pdf.pdf

Column M: Choose from the drop-down menu.

3.2 Plan for available nitrogen from organic manures

Column B & C: Automatically completed
Column D: Area of the field that will receive manure/slurry, remove all areas around water courses etc.
Column E: Automatically completed
Column F: Choose from the drop-down menu the type of organic manure.
Column G: Add in any other type of manure not listed in column F
Column H: Add in the number of applications of that manure type you intend to put on the field
Column I: Add in the dates of planned spreading.
Column J: Include the t/ha applied - see conversion tables in RB209 page 35
Column K: Automatically completed
Column L: If you test your farm manure, please include the nitrogen content here.
Column M: See tables in tab 5.1

3.3 Plan for manufactured nitrogen: This tab is to set out your plan for applying manufactured nitrogen fertiliser. The majority of information on this tab is automatically filtered through from information you inputted in earlier tabs. For those fields you plan to spread manufactured fertiliser, add the following data:

Column D: Add the area of the field that you will spread fertiliser on. Reduce field parcels for headlands and water courses etc.

Column I: Add the planned spreading date(s) for each field parcel.

Column J: Add the total amount of manufactured nitrogen fertiliser that is planned to be spread in kg/ha. This should not exceed the optimum figure from table 3.1

3.4 Record of actual N fertiliser: This tab needs to be completed as you apply manures and/or nitrogen fertiliser to your land.