



**Planning Land Application of Nutrients for  
Efficiency and the EnvironmenT**

**Livestock Manure N Farm Limit  
Help file**

**PLANET version 3.3  
(Scotland)**

# Livestock Manure N Farm Limit

The Nitrate Vulnerable Zone (NVZ) regulations establishes a rule which limits the loading of livestock manure to land that is in an NVZ on farms in Scotland. In any year beginning 1 January, the total amount of nitrogen in livestock manure that is applied to a farm, whether directly by grazing animals or by spreading, must not exceed 170 kg N multiplied by the area of land on the farm that is in an NVZ (in hectares). If the farm has an approved application for derogation, the limit is increased to 250 kg N multiplied by the area of the farm (in hectares).

The nitrogen from manufactured fertiliser, and any other organic manure that does not originate from livestock (e.g. sewage sludge, compost), does not count towards the limit.

For details of these regulations, see the NVZ Guidance available from the PLANET Library.

The PLANET Livestock Manure N Farm Limit module calculates the N capacity and N loading of a farm and will help assess if the farm is compliant with this limit.

## Important


The information supplied in the PLANET software is for guidance purposes only and is not intended to fully substitute for professional agricultural advice. The specific statutory elements concerning water and nitrates are set out in the relevant national legislation and you should refer to this legislation to find out exactly what you must do. The nutrient recommendations provided by PLANET are in line with national industry standard guidance. If in doubt, farmers should seek help from a qualified adviser.

The user is responsible for ensuring the accuracy and completeness of all data entered and used by PLANET, and for any commercial decisions taken based on any of the PLANET recommendations or other outputs of this software. Use of the PLANET software is subject to the terms and conditions of the PLANET User Licence.

PLANET v3 has been developed by ADAS and SRUC with funding and support from Defra and the Scottish Government. The software is maintained by ADAS. Support is provided by ADAS (in England and Wales) and SRUC (in Scotland). For further information, visit [www.planet4farmers.co.uk](http://www.planet4farmers.co.uk) or ring the PLANET Helpline on 08456 023864.

## Getting started

To use this module, you must first either create a new farm file or open an existing farm file. If you are starting a new file, then as a minimum you must enter the Farm name, STD code and Postcode in the Farm Details tab before you can open the module – but you do not need to enter any other information. You will be prompted to save any changes before you enter the module.


To use the module, select the Livestock Manure N Farm Limit icon  from the task bar at the top of the screen, or select *Livestock Manure N Farm Limit* from the *View* menu.

The module will appear with three tabs (screens).

- Farm and Livestock Details
- Imports and Exports
- NVZ Compliance

You will then need to enter information for your farm into the Farm and Livestock Details tab, and then into the Imports and Exports tab. The NVZ Compliance tab is the output tab providing calculated values for the permitted livestock manure N capacity and the calculated N loading of the farm.

Further information to help with data entry is provided throughout PLANET by hovering over column

headers that have an  icon, or by clicking in any data entry cell and then pressing the F1 key. This will take you to *Help* about the current screen.

**Important.** You can only save one set of data in this module. For instance, if you enter data for a calendar year then this will be saved on your computer. However, if you then edit this data (e.g. for a later calendar year) the original data will be overwritten and only the new data will be saved. Therefore, if you wish to keep a permanent record of the PLANET calculation and report for a particular calendar year, you should either print out a hard copy of the PLANET report before making any edits to the data, or use the *Save As* function in the *File* menu to save each set of data as a separate Farm file which you will need to name individually.

## Farm and Livestock Details Tab

**Farm Details**

Calendar year: 2010  
 Area of farmed land in an NVZ: 80.00 ha  
 Area of farmed land not in an NVZ: 20.00 ha  
 Total area of farmed land: 100.00 ha

Does the farm have derogation: No  
 Permitted livestock manure total N capacity: 13,600 kg N/yr

Livestock group	Livestock type	Average number for year	Occupancy %	N standard kg/yr	Total N produced kg/yr
Cattle	1 dairy cow (6000-9000 litres milk yield)	150		101.0	15,150
Cattle	1 dairy heifer replacement, 13 months to first calf	35		61.0	2,135
Cattle	1 dairy heifer replacement, 3-13 months	35		35.0	1,225
Cattle	1 calf, up to 3 months	50		8.4	420
Cattle	1 bull for breeding, 25 months and over	1		48.0	48
<b>Total</b>					<b>18,978</b>

1. Select the **Calendar year** from the drop-down list. This is the 12 month period starting 1<sup>st</sup> January for which you are going to enter data.
2. Enter the **Area of the farm in an NVZ** including the area of rough grazing land but excluding areas of surface water, any hard-standing, buildings, roads or woodland unless the woodland is used for grazing. Be careful to enter information in hectares (ha).
3. Enter the **Area of the farm not in an NVZ**.
4. The **Permitted livestock manure total N capacity** (as kg N/year) for the farm is calculated using the maximum permitted livestock manure N loading of 170 kg N/ha averaged across the area of the farm that is in an NVZ. If the farm has an approved derogation for the calendar year then select 'Yes' against **Does the farm have a derogation?** – the permitted livestock manure N capacity will then be calculated using the limit of 250 kg N/ha.
5. Next select the **Livestock group** and **Livestock type** for each type of livestock that you have on the farm during the calendar year. For each Livestock type, you will first have to select the appropriate Livestock group (e.g. cattle), then select the Livestock type (e.g. 1 dairy cow, 6000-9000 litres milk yield). You must include livestock kept on any land in an NVZ that you rent under a Short Limited Duration Tenancy of 2 years or longer.
6. Enter the average **Number** of each livestock type that are on the farm for the whole calendar year, including livestock kept on any land in an NVZ that you rent under a Short Limited Duration Tenancy of 2 years or longer. Allow for livestock that are grazed on any seasonal land or land that is not in an NVZ (e.g. the 'Area of land not in an NVZ') – this manure does not count towards the manure N loading of the farm. If livestock are on the farm (land in an NVZ) for only part of the year then enter the pro-rata number. For instance, if there are 30 dairy heifer replacements for just 4 months then enter the number 10 which is the pro-rata average number for the year ( $30 \times 4/12 = 10$ ); this is equivalent to having 10 heifers for the whole year. For pigs and poultry where there are usually several 'batches' of livestock grown in a year, enter the number of 'places' – the standard values of **Total N produced** for these livestock types are expressed on a per place

basis . Poultry are in units of 1,000 bird places so, for example, enter 50 for 50,000 laying hen places.

7. Once you have entered details for each livestock type, the standard value for the **Total N produced** by 1 unit of the livestock type is shown automatically. These are standard values that have been set in the Regulations. The total N produced by each livestock type is calculated automatically by multiplying the **Number** of livestock by the **Total N produced** by 1 unit. The total N produced by all livestock on the farm is summed and appears at the bottom of the screen. You cannot change these standard values for cattle or sheep but you can for pigs and poultry if you have used the ENCASH computer software. ENCASH calculates a specific value for the total N produced by a livestock type based on the specific diet and production system on your farm.
8. To delete a row of information, highlight the row by clicking on the small cell at the far left hand end of the row then press the *Delete* key. If you hold down the Control key, you can select multiple rows. To clear all the information on this tab (screen), click the right mouse button and select **Clear this tab**. To clear information on all the tabs (screens) in this module select **Clear all tabs**.
9. When you have entered details for all the livestock kept on the farm, click on the **Imports and Exports** tab. If you have not imported or exported livestock manures during the calendar year, click on the **NVZ Compliance** tab.

## Imports and Exports Tab

This allows you to enter details of any imported or exported livestock manures (if any). Enter details of all livestock manures imported onto, or exported off, the 'Area of the farm that is in an NVZ' during the calendar year, including home-produced manure applied to the 'Area of the farm that is not in an NVZ'. If you do not import or export manures leave this tab blank and move straight to the NVZ compliance tab.

**Farm Details**

Calendar year: 2010  
 Area of farmed land in an NVZ: 80.00 ha  
 Area of farmed land not in an NVZ: 20.00 ha  
 Total area of farmed land: 100.00 ha  
 Does the farm have derogation: No  
 Permitted livestock manure total N capacity: 13,600 kg N/yr

**Livestock Details**

Import/export	Date	Manure type	Quantity tonnes or m <sup>3</sup>	Total N content kg/t or kg/m <sup>3</sup>	Total N kg	Supplier/recipient
*						
Export	05/05/2010	Cattle FYM - fresh	250	6.0	1,500	John Smith
Export	03/04/2010	Cattle slurry, mech separated liquid	270	3.0	810	Bill Henry
Import	03/03/2010	Pig FYM - fresh	200	7.0	1,400	Bill Henry

Import total: 1,400  
 Export total: 2,310  
 Net total: -910

1. If you have previously entered data into the separate Organic Manure Imports and Exports module, you can load this data by clicking the *Load data* button. If you then select 'Yes' to loading the data, data for all Organic manure imports for the 12 month period will automatically be imported to this tab. **Note:** If you select to import data using the *Load data* button, this will overwrite any data that has already been entered into this tab.
2. If you do not want to import data using the *Load data* button, then select Import or Export from the **Import/Export** drop-down list.
3. Select the **Manure type** that is being imported or exported from the drop-down list e.g. Broiler/Turkey litter. If you apply home-produced livestock manure to the 'Area of land that is not in an NVZ', then you should enter this manure as an export so that this manure does not count towards the N loading of the farm. **Note:** On derogated farms, you are not allowed to import manure from non-grazing livestock (e.g. pigs or poultry) to any of the 'Area of land in an NVZ' during the calendar year.
4. Enter the **Quantity** of each manure type, being careful to enter information in the required units.
5. Once a manure type has been selected, it's standard **Total N content** will be shown automatically. This figure can be edited if you have undertaken specific sampling and analysis of the manure using the standard method (see NVZ Guidance leaflet 3). If you have selected an **Other** manure type, enter the total N content of this manure. The **Total N (kg)** of each manure type that is imported/exported is calculated automatically. The total N (kg N/yr) imported and exported in manure is shown at the bottom of the screen, as well as the net total (i.e. imports minus exports).
6. Click in the cell in the **Supplier/Recipient** column and enter details of the supplier of imported manures or the recipient of exported manures.

7. To delete a row of information, highlight the row by clicking on the small cell at the far left hand end of the row then press the *Delete* key. If you hold down the Control key, you can select multiple rows. To clear all the information on this tab (screen), click the right mouse button and select ***Clear this tab***. To clear information on all the tabs (screens) in this module select ***Clear all tabs***.
8. When information for all imports and exports of livestock manures during the calendar year has been entered, then click on the NVZ Compliance tab. You will be prompted to save any changes.

## NVZ Compliance Tab

This tab summarises the information that has been entered into the module and calculates the livestock manure total N **capacity**, **production** and **loading** for the 'Area of the farm in an NVZ'.

**Farm Details**

Calendar year: 2010  
Does the farm have derogation: No  
Area of farmed land in an NVZ: 80.00 ha  
Permitted livestock manure total N capacity: 13,600 kg N/yr  
Area of farmed land not in an NVZ: 20.00 ha  
Total area of farmed land: 100.00 ha

Livestock Details		Imports and Exports	NVZ Compliance
Description	Area (ha)	Manure total N (kg/yr)	
<b>Area and livestock manure total N capacity</b>			
Area of holding in an NVZ	80.00	13,600.00	
Area of holding not in an NVZ	20.00		
<b>Total</b>	<b>100.00</b>	<b>13,600.00</b>	
<b>Livestock manure total N loading</b>			
Home-produced livestock manures			
Grazing livestock		18,978	
Pigs and poultry		0	
Imported livestock manures			
Grazing livestock		0	
Pigs and poultry		1,400	
Exported livestock manures			
Grazing livestock		2,310	
Pigs and poultry		0	
<b>Net total from grazing livestock</b>		<b>16,668</b>	
<b>Net total from pigs and poultry</b>		<b>1,400</b>	
<b>Compliance with N Farm Limit</b>			
Livestock manure total N loading over the farmed area		18,068	

## Report



To view and print a report, select the report icon from the task bar at the top of the screen. The report includes some information about this NVZ rule but further details can be found in the NVZ Guidance available from the PLANET library.

To return to other modules in PLANET select the required icon from the task bar or use the *View* menu.