

Using the NVZ excel workbook

On first use the workbook should open at the “Home” page, if not click on the “Home” button, which appears on each sheet. The Home page is used to record the field information relating to the farm i.e. the field name area and soil type. **Note that this information is associated with a field identifier.** The field identifier is then used to capture fields in the Nmax planning sheets. If more than one crop type is being grown in a particular field then each part of the field should be given a different name e.g. Stackyard A, Stackyard B etc

Once you have completed the home page, you should print off a copy for quick reference when completing other sheets.

If you grow grass you must select the locality that best reflects the location of your farm. The locality is selected from a drop-down list from a drop down list. This will be used to determine the Site Class

The default number of fields is 30. If you require more fields click on the “Add Fields” button.

Use the buttons to navigate to the relevant sheets

Field Identifier	Locality	Croppable Area	Soil Type
1		8.7	S/L
2	Stackyard	10.3	OMS
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
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23			
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25			
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29			
30			

- Calculating Nmax for arable crops
- Calculating Nmax for Grassland
- Nitrogen available from livestock manure applications
- Individual Field Records by crop type
- Annual chemical fertiliser inventory
- Record of organic manure moved off/on to holding
- Average annual stocking rates
- Autumn Nmax WOSR
- Available spreading land and 170 Kg/N/ha loading limit
- Calculating compliance with the 170 kg/N/ha loading

Enter the field name or FID, utilisable field area (i.e. the area of the field used for cropping or grass) and soil type for each field in the NVZ

Nmax calculator for arable crops

Important – You can only work on one crop type at a time (including grass). If the crop type has had an application of livestock manure, or an application is planned you will also have to complete the manure planning sheet.

Each crop type should then be saved as a different file e.g. Wheat 09, Winter Barley 09, Grass 09 etc. This will save the whole workbook with associated planned manure applications and the field records for each crop type.

The screen shot below shows a simple example for 2 fields of Winter Wheat (apologies for the small size!)

Note that boxes requiring an entry are shaded yellow. The other boxes will be completed automatically, depending on information entered elsewhere

The screenshot shows the 'NmaxMaster15Feb09' Excel spreadsheet. At the top, there are navigation buttons and a 'Harvest Year' dropdown set to 2009. Below this, a 'Plan manure applications' section contains dropdowns for 'Crop type' (Winter Wheat) and 'Standard yield' (8 t/ha), along with an 'Average Yield for crop on this farm' field. The main table has columns for Field ID, Field, Crop Area, Previous Crop, Soil Type, Standard Nitrogen Rate, Adjustments (Yield, Market), Adjusted Nmax limit (Nitrogen rate, Total N), Balance to be applied as manufactured N (Available N from organic manure, Balance to be applied as Manufactured), and Adjust for excess winter rainfall. Two fields are listed: 'Stackyard' (cereals) and 'Pumpchouse' (potatoes). A 'Clear Sheet' button is at the bottom left. A summary row at the bottom shows 'TOTAL' with a crop area of 25.7 ha and an adjusted Nmax of 5633 kgN/ha. A yellow box at the bottom right states 'Nmax less available N from PL manure applications'.

Callout boxes:

- Enter the Field Identifier that was used to identify this field on the home page
- Navigation buttons
- Select the crop type from the drop-down list
- Enter the average yield for the crop type on your farm, only if you achieve higher than standard yields
- Enter the harvest year
- Enter Y is winter rainfall exceeded 450mm
- Use this button to clear the sheet for working on another crop type. Remember to save the crop type you have just been working on first!
- If the crop type is Winter Wheat or Spring Barley, enter a Y next to fields intended for milling or high N malting
- Select the previous crop from the drop down list
- Note that planned manure applications are automatically populated from the manure planning sheet

N available from livestock manure applications

Important : The crop type on the organic manure calculator sheet must match the crop type that you are working on.

As with the Nmax calculator, entries are only required in the yellow shaded boxes. The remaining boxes will be completed automatically.

Make sure that the crop type matches the crop type that you are working on

Click to clear sheet for working on another crop type. Make sure you have saved the current crop type first!

Enter the field identifier that was used to identify this field on the Home page

Select the season of application

Enter the manure reference number for the manure type being applied. Refer to Appendix 1 in Booklet 9 of the NVZ Guidance pack

Enter the actual area spread

Enter the total quantity applied

Field ref	Field	Soil Type	Ref No.	Total N (kg/t)	Season Applied	% N available to the next crop	Area spread (ha)	Amount applied (t/m ²)	crop (kg/ha)
1	Pumphouse	S/L	36	4.4	Spring	50	10	300	66.00
2	Stackyard	OMS	36	4.4	Spring	50	10	300	66.00

Microsoft Excel - NmaxMaster15Feb09

File Options... Validation... Conditional Formatting... Type a question for help

CROP: Winter Wheat HOME Plan manure applications Clear Sheet

Nmax: 5633 kg Applications of manufactured nitrogen Applications of organic manures

Available N applied to date: 660 kg Fertiliser type eg 20:10:10

Field Identifier	Field Name or Number	Date Sown	N	P	K	Amount Applied kg/ha	Total N applied kg	Manure Reference Number or organic manure type	Nitrogen content kg (t/m ³)	Quantity Applied (t/m ³)	Total N applied	Total N available to crop (kg/ha)
1	Stackyard											
	Application date											
	Application date											
	Application date											
	Application date	15/02/2009						36	4.4	30	1080	66.00
	No planned manure application											
	No planned manure application											
	No planned manure application											
2	Pumphouse											
	Application date											
	Application date											
	Application date											
	Application date											
	Planned manure application							36	4.4	30	1080	66.00
	No planned manure application											
	No planned manure application											
	No planned manure application											
	Application date											
	Application date											

start 2 EN 14:04

Previous crops

1-2 Year high N leys, grazed within 2 months of ploughing out or during Sep or Oct	1-2 HNG
1-2 Year low N leys, not grazed within 2 months of ploughing out or during Sep or Oct	1-2 LNNG
1-2 Year high N leys, not grazed within 2 months of ploughing out or during Sep or Oct	1-2HNNG
1-2 Year low N leys, grazed within 2 months of ploughing out or during Sep or Oct	1-2LNG
1-2 Year high N leys, grazed within 2 months of ploughing out or during Sep or Oct	3-5 HNG
1-2 Year high N leys, grazed within 2 months of ploughing out or during Sep or Oct	3-5 HNNG
1-2 Year high N leys, grazed within 2 months of ploughing out or during Sep or Oct	3-5 LNG
1-2 Year high N leys, grazed within 2 months of ploughing out or during Sep or Oct	3-5 LNNG
	Beans
	Carrots
	Cereals
	Combining peas
	Grain lupin
	Grazed fodder
	Hemp
Harvested fodder (whole crop)	HFWC
Harvested fodder (root only)	HFRO
Leafy brassica vegetables	LBV
	Linseed
Leafy non-brassica vegetables	LNBV
	Oilseed rape
	PGHNG
	PG HNNG
	Potatoes
	Swedes
Thick permanent grass, low N	Thick PGLN
Thin permanent grass, low N, low clover	Thin PGLNNC
	Turnips (removed)
	Vining peas
	Whole crop lupins

Manure References for Separated Slurries

For use with the calculator, cattle and pig slurries that have been separated through strainer boxes, weeping walls or by mechanical means are given unique reference numbers as shown in the table below.

Cattle Slurry	
Manure Type - Separated - Strainer Box	Ref No
Surface Applied (not incorporated)	24
Ploughed In (within 6hrs)	24a
Band Spread	24b
Shallow Injected	24c

Cattle Slurry	
Manure Type - Separated – Weeping Wall	Ref No
Surface Applied (not incorporated)	25
Ploughed In (within 6hrs)	25a
Band Spread	25b
Shallow Injected	25c

Cattle Slurry	
Manure Type - Separated – Mechanical	Ref No
Surface Applied (not incorporated)	26
Ploughed In (within 6hrs)	26a
Band Spread	26b
Shallow Injected	26c

Pig Slurry	
Manure Type - Separated – Mechanical	Ref No
Surface Applied (not incorporated)	40
Ploughed In (within 6hrs)	40a
Band Spread	40b
Shallow Injected	40c