

Practical Use of Manures

A clear solution for farmers



Taw Catchment NVZ Newsletter

Newsletter 4.

March 2008

Welcome to the final edition in this series of four newsletters.

We thought the best use of this edition was to provide a summary of the information presented at the workshops and evening meetings for your to use as a quick reference guide.

We have included abbreviated crop recommendations from RB209 as well as standard tables for manure nutrient content. Although these tables provide valuable information we continue to stress caution when relying on standard tables alone. If possible use individual farm soil and manure analysis.

As a final part of this project we will be sending out a "step by step" guide to slurry and FYM to back up what has been learned.

Finally we would like to thank you for your support through out this project. We hope that you have enjoyed the workshops and have already put some lessons learnt into practice.

The Creedy team will still be around so if you would like any further help or information please give us a call in the office.

Tel 01363 776162

E mail: john.morgan@creedyassociates.com

Target Crops and Fertiliser Recommendations from RB209

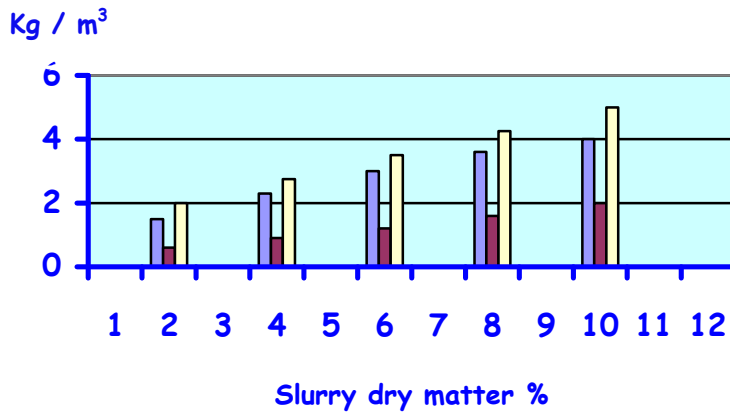
	Fertiliser Requirements (kg/ha)				Fertilizer Requirements (units/acre)			
	Soil Nitrogen Supply, P & K Index				Soil Nitrogen Supply, P & K Index			
	0	1	2	3	0	1	2	3
SPRING FEED BARLEY (grown on medium soils, yielding 6t/ha with straw removed)								
Nitrogen	-	150	120	80	-	120	96	64
Phosphate	105	80	55M	0	84	64	44	0
Potash	130	105	80M	20	104	84	64	16
WINTER FEED WHEAT (grown on medium soils, yielding 8t/ha with straw removed)								
Nitrogen	-	220	180	150	-	176	144	120
Phosphate	120	95	70M	20	96	76	56	16
Potash	145	120	95M (2-) 70 (2+)	25	116	96	76 56	20
STUBBLE TURNIPS (assumes tops are grazed)								
Nitrogen	100	90	80	60	80	72	64	48
Phosphorus	75	50	25	0	60	40	20	0
Potash	100	75	35	0	80	60	28	0
if sown after mid Aug apply 50kg/ha of phosphorus for index 0 only								
FORAGE MAIZE (40t/ha fresh yield)								
Nitrogen	120	80	40	20	96	64	32	16
Phosphate	110	85	60	20	88	68	48	16
Potash	230	205	165	110	184	164	132	88
Apply all K before seedbed preparation. P and 10-15kg of N should be in seedbed								
1ST CUT GRASS SILAGE (assuming 23t/ha with 25% DM)								
Nitrogen	150	120	120	-	120	96	96	-
Phosphate	90	65	40M	20	72	52	32M	16
Potash last autumn	60	30	0	0	48	24	0	0
Spring	80	80	80 (2-) 60 (2+)	30	64	64	64 (2-) 48 (2+)	24
2ND CUT GRASS SILAGE (assuming 15t/ha with 25% DM)								
Nitrogen	110	100	100	-	88	80	80	-
Phosphate	25	25	25M	0	20	20	20	0
Potash	125	100	90M (2-) 60 (2+)	40	96	80	72 48	32

Note: M = maintenance dressing for all mineral soils except light sand. All the above figures are abbreviated from RB209. Please refer to back to RB209 for the full details.

www.defra.gov.uk/farm/environment/water/csf

The England Catchment Sensitive Farming Delivery Initiative (ECSFDI) is delivered in partnership by Natural England, the Environment Agency and Defra

Nutrient Content of Manures



The Slurry Graph give you an idea of the **TOTAL** nutrients contained in dairy slurries of different dry matter contents....

Dirty water Thin soup Medium soup Thick soup Porridge

Autumn Applications on medium to heavy soils

... These tables show you the **AVAILABLE** nutrients for crop growth depending on when they are applied.

Manure	Dry matter (%)	kg/ tonne (=cubic metre)				Units/1000 gallons			
		N	P ₂ O ₅	K ₂ O	SO ₃	N	P ₂ O ₅	K ₂ O	SO ₃
Dairy:									
Slurry	2 (thin soup)	0.3	0.3	1.8	0.2	2.7	2.7	16.2	1.8
	6 (medium soup)	0.5	0.6	3.2	0.4	4.5	5.4	29	3.6
	10 (porridge)	0.4	1.0	4.5	0.6	3.6	9	41	5.4
		kg/tonne				units/ton			
FYM: fresh	25	0.6	2.1	7.2	0.9	1.2	4.2	14.4	1.8
FYM: old	25	0.6	2.1	4.7	0.9	1.2	4.2	9.4	1.8

Spring Applications on any soil type

You can see that spring applications have a greater available nitrogen content. Available P and K levels are not affected by date of application.

Manure	Dry matter (%)	kg/ tonne (=cubic metre)				Units/1000 gallons			
		N	P ₂ O ₅	K ₂ O	SO ₃	N	P ₂ O ₅	K ₂ O	SO ₃
Dairy:									
Slurry	2 (thin soup)	0.8	0.3	1.8	0.2	7.2	2.7	16.2	1.8
	6 (medium soup)	1.1	0.6	3.2	0.4	9.9	5.4	28.8	3.6
	10 (porridge)	0.8	1.0	4.5	0.6	7.2	9.0	40.5	5.4
		kg/tonne				units/ton			
FYM: fresh	25	1.2	2.1	7.2	0.9	2.4	4.2	14.2	1.8
FYM: old	25	0.9	2.1	4.7	0.9	1.8	4.2	8.4	1.8

And Finally.... Conversion Factors

Acres and Hectares

Multiply acres by 0.41 for ha
 Multiply ha by 2.47 for acres

Units and Kilograms

Multiply units by 2 for kg
 Multiply kg by 0.5 for units

Metres cubed and Gallons

Multiply m³ by 220 for gallons

Quantities per ha and acre

Multiply tonnes per ha by 0.4 for tons/acre
 Multiply tons / acre by 2.5 for tonnes / ha
 Multiply kg/ha by 0.8 for units per acre
 Multiply units per acre by 1.25 for kg/ha

Quantities per Volume

Multiply kg/m³ by 9 for units per 1000 gallons
 Multiply kg/tonne by 2 for units per ton