

January 2019 Nutrient Management Guide (RB209) amendments

The Nutrient Management Guide (RB209) was updated in January 2018 and January 2019. Amendments made in January 2019 are highlighted in bold below. Digital copies, available at ahdb.org.uk/rb209, have been revised. The app, available for Apple and Android devices, has also been updated.

This document lists the changes that you should take into account when reading your printed copy of the Nutrient Management Guide (RB209) that has not been revised.

Section 1: Principles of nutrient management and fertiliser use

- **Page 13, added information about agricultural lime quality standards**

- Page 14, footnote of Table 1.2 should be:

- For mineral and organic soils, the target soil pH is 6.7 for continuous arable cropping and 6.2 for grass. Aim for 0.2 units above the optimum pH
- For peaty soils, the target soil pH is 6.0 for continuous arable cropping and 5.5 for grass. Aim for 0.2 units above the optimum pH

- **Page 21, a further information box has been added containing a link to AHDB's excess winter rainfall data**

- **Page 32, comprehensive guidance on sulphur management has been added**

Section 2: Organic materials

- **Page 12, Table 2.1, the availability of sulphur from organic materials has been updated**

- **Page 27, information on the Biosolids Assurance Scheme has been provided**

- Page 27, the further information box has an updated link for 'Sewage sludge on farmland: code of practice for England, Wales and Northern Ireland (2017)'

www.gov.uk/government/publications/sewage-sludge-in-agriculture-code-of-practice/sewage-sludge-in-agriculture-code-of-practice-for-england-wales-and-northern-ireland



Section 3: Grass and forage crops

- Page 4, the contents page has been updated:

- Phosphate, potash and magnesium recommendations, page 27

- Forage maize – nitrogen, phosphate and potash, page 27

- Wholecrop cereals – nitrogen, page 28

- Wholecrop cereals – phosphate, potash and sulphur, page 32

- Page 5, second to last bullet point in introduction section has changed to: Optimum soil pH – very low or high soil pH will reduce the amount of nutrients available to the plant. Optimum soil pH for grassland is 6.0 for mineral soils, 5.7 for intermediate organic soils and 5.3 for peaty soils. Aim to raise pH to 0.2 units above the optimum

- Page 18, a further information box has been added containing a link to AHDB's grassland reseeding guide

- Page 32, Table 3.27 has been updated:

Table 3.27 Phosphate and potash for wholecrop cereals

	P or K Index				
	0	1	2	3	4 and higher
	kg/ha				
Expected yield 30 t FW/ha					
Phosphate	115	85	55	0	0
Potash	220	190	160	100	0

The footnotes have also been updated to:

The amounts of phosphate and potash are appropriate to the fresh weight yields shown. Table 3.2 can be used to calculate offtake if wholecrop yields are known to be different, for example a spring-sown crop yielding 25 t FW/ha.

At Index 2, phosphate and potash can be applied when convenient during the year, but at Index 0 and 1, they should be applied and worked into the seedbed. To avoid damage to germinating seedlings, do not use more than 150 kg/ha of nitrogen plus potash on sandy soils.



- Page 32, a new example has been added on how to calculate phosphorus and potassium requirements for wholecrop cereals
- Page 33, under sodium, it should read that if sodium is recommended but not applied, increase potash by 100 kg K₂O/ha, not 10
- **Page 33, Table 3.29, the potash recommendation for fodder beet at Index 3 has been increased from 0 to 190 kg K₂O/ha**
- Page 34, a new example has been added on how to calculate phosphorus and potassium requirements for fodder beet

Section 4: Arable crops

- **Page 9, a further information box has been added containing a link to AHDB's excess winter rainfall data**
- **Page 22, guidance on repeating leaf tissue sampling and analysis two weeks apart has been added to rule out transient sulphur deficiency**
- **Page 24, information on the malate:sulphate sulphur deficiency test has been added**
- Page 29 and 32, under 'wheat grown for bread-making', the correct amount of extra nitrogen to increase grain protein by 1.1% should be 40 kg N/ha, not 60
- **Page 29 and 32, under 'wheat grown for bread-making', the guidance for additional nitrogen has been updated. It has changed from 'typically, application of an extra 40 kg N/ha will increase grain protein by 1.1%' to 'typically, application of an extra 40 kg N/ha could increase grain protein by up to 1%'**
- Page 34, the title of Table 4.21 should read 'Effect of economic changes on nitrogen rate – all cereals'
- **Page 36, the sulphur recommendation for winter and spring oilseed rape has increased from '50–75 kg SO₃/ha' to '50–80 kg SO₃/ha'**
- Page 40, Table 4.27 has been replaced:



Table 4.27 Effect of economic changes on nitrogen rate – oilseed rape

	N %	Fertiliser cost (£/tonne product)					
		138	207	276	345	414	483
Ammonium nitrate	34.5	138	207	276	345	414	483
Urea	46.0	184	276	368	460	552	644
Urea-ammonium nitrate liquid	28.0	112	168	224	280	336	392
Cost of fertiliser nitrogen	£/kg N	0.40	0.60	0.80	1.00	1.20	1.40
Change to recommend N for oilseed rape (kg N/ha)							
Grain sale price (£/tonne)	200	20	-20	-50	-70	-80	-100
	225	30	-10	-30	-60	-70	-90
	250	40	0	-20	-50	-60	-80
	275	50	10	-10	-40	-50	-70
	300	60	20	-10	-30	-50	-60
	325	70	30	0	-20	-40	-50
	350	70	40	10	-10	-30	-50
	375	80	40	20	-10	-20	-40
	400	90	50	20	0	-20	-30
	425	90	50	30	10	-10	-30
	450	100	60	30	10	-10	-20

- Page 40, the first sentence should read 'The recommendations in Table 4.25 and 4.26 are based on a breakeven ratio of 2.5'
- Page 41, first paragraph, third sentence should read 'Table 4.11 gives typical values of the phosphate and potash content in crop material per tonne of yield'

Section 6: Vegetables and bulbs

- **Page 21, an error in Table 6.9 has been corrected. Manganese deficiencies can be treated using a foliar spray of manganese sulphate**
- Page 38, the deficient value for magnesium in Table 6.23 should be <0.15, not 1.15
- Page 39, Table 6.24 – the potash recommendation at Index 2+ should be 150, not 15
- **Page 40, the subheading 'coriander and mint – nitrogen' should read 'coriander and mint – potash'**



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