

The universal fertiliser with sulphur



PIAMON[®] 33N + 30S03

The guarantee of success



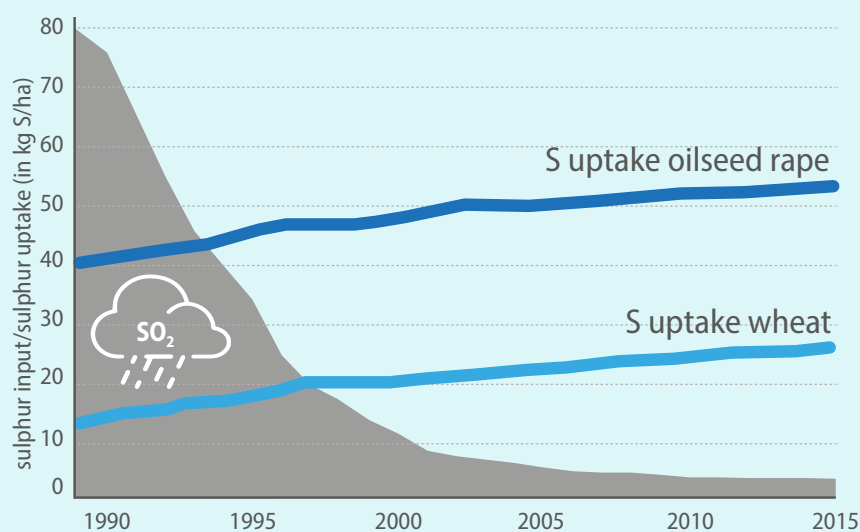
The future of fertilisation

PIAMON® 33N + 30S03 – Prevent sulphur deficiency

Environmental protection measures such as flue gas desulphurisation have resulted in sulphur inputs from the atmosphere being reduced to below 10 kg S/ha per year in many areas.

Only small quantities (10 to 40 kg S/ha) are released from the soil reserves annually. That is often not sufficient to supply the plant with an adequate level of sulphur. The amount of sulphur in the soil available to the plant may be subject to considerable fluctuations depending on the location and the fertilisation. There is often a sulphur deficiency at times of low mineralisation, such as before or at the start of growing.

Reduced sulphur inputs from the atmosphere since 1990



Sulphur deficiency situation of winter wheat and winter oilseed rape;
Federal Environment Agency; emission development 1990 to 2015 (status 02/2017)

Prevention of sulphur deficiency

The sulphur requirement of most agricultural crops is 75 kg S03/ha* so the sulphur input from the atmosphere and the provision from the soil are today no longer sufficient to replace the extraction of average harvests.

Increased sulphur extraction is also observed due to the ever higher yields and quality objectives. Sulphur deficiency often occurs as a result of this. In addition to a reduction in yield, even latent sulphur deficiency may lead to lower protein qualities, lower harvest qualities and poorer N-exploitation.

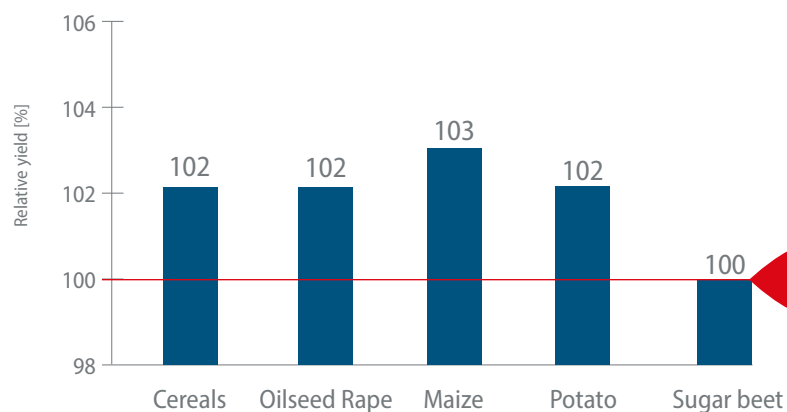
* Source: Nutrient Management Guide (RB209)

PIAMON® 33N + 30S03 – the guarantee of success

The optimal combination of water-soluble sulphur, very easily available urea nitrogen and ammoniacal nitrogen in PIAMON® 33N + 30S03, allows plenty of plant cultivation and economic advantages to be achieved. The even distribution of both nutrients in a granule means that PIAMON® 33N + 30S03 can be used universally in all crops. This results in greater planning flexibility while saving on working hours and labour costs, also being easy on machines, plants and the soils.

- ✓ Optimal supply with nitrogen and sulphur
- ✓ High efficiency due to greatest possible nitrogen utilisation
- ✓ Improvement in yield and quality for late fertilising

Yield results for PIAMON® 33N + 30S03 in main crops



LAF Cunnersdorf: Average from 135 trials from 1999 to 2016

Intelligent fertilisation systems with PIAMON® 33N + 30SO3

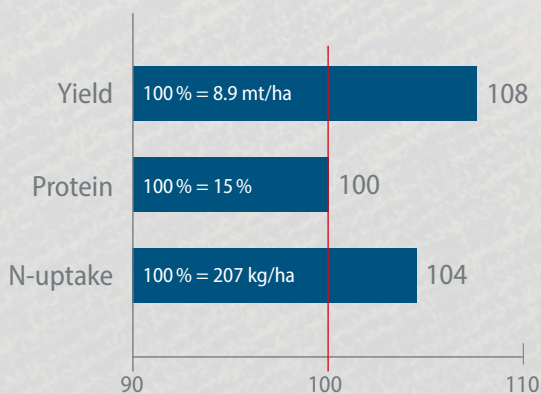
The use of PIAMON® 33N + 30SO3 is particularly economical. The simultaneous fertilisation of nitrogen and sulphur in one grain reduces fertiliser part applications.

Thanks to balanced plant nutrition, PIAMON® 33N + 30SO3 ensures maximum use of the nitrogen applied over the complete growing period. In addition to a higher yield, improved raw protein contents and sedimentation values can also be achieved depending on the crop.

Using synergy effects

As organic fertilisers only contain little sulphur which is available to plants, the combination with PIAMON® 33N + 30SO3 is recommended in order to guarantee an adequate supply of sulphur as well as nitrogen.

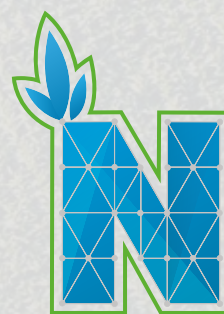
Blended ALZON® Mplus and PIAMON®33N + 30SO3 results in higher yields, good raw protein contents and it relieves pressure on the N-balance



Added efficiency in % compared with PIAGRAN® 46 (100%); LAF Cunnensdorf, N-fertilisation for winter wheat, fertilisation level 220 kg/ha N (2016); cereals-power = 58 % ALZON® M-plus and 42 % PIAMON® 33N + 30SO3



cereals-power
neo-N



OSR-power
neo-N

- ✓ High level of flexibility for the application
- ✓ Stabilised fertiliser
- ✓ Optimal N-S ratio
- ✓ More security for yield and quality

The universal fertiliser with sulphur

The correct nitrogen-sulphur ratio is decisive

The sulphur requirement for agricultural crops varies. Cruciferous plants such as rapeseed have a particularly high sulphur requirement due to their high oil content. The sulphur concentration in the plant dry matter of oilseed rape should not go below 0.45%. Concentrations should not go below 0.30% for wheat, as high yields and protein contents are otherwise endangered (DLG 2012). In the event of an acute deficiency, sulphur fertilisation should occur right at the start of growing and at the start of stem extension at the latest. An additional supply of sulphur for quality application encourages the formation of raw protein. The absorption of sulphur into the plant occurs in sulphate form.

Sulphur deficiency can result in problems with the nitrogen absorption. Nitrate cannot be converted as there is a deficiency in the sulphur containing enzyme nitrate reductase. The nitrogen incorporation in amino acids is thus disturbed and protein formation is inhibited. One kilogram of deficiency in sulphur per hectare can block the absorption of 10 kg of nitrogen.



The nitrogen-sulphur ratios of various crops

Crops	N/S ratio	S-fertiliser quantity kg SO ₃ /ha
Rapeseed	5:1	75 – 125
Grassland	8 to 12:1	50 – 100
Cereal/Sugar Beet/Potatoes/Maize	10:1	25 – 65

The nitrogen-sulphur ratio in the respective crops determines the sulphur requirement and the amount of sulphur fertilisation (source DLG: Schwefel-Düngung effizient gestalten, DLG Merkblatt 373, 2012).

PIAMON® 33N + 30S03 – solid yields – high quality

With PIAMON® 33N + 30S03 you simultaneously apply nitrogen and sulphur effectively in the optimum ratio. The following recommendations are based on a large number of tests in our agricultural applied research and in practice. They are to be adapted to the plant requirement in line with the specifications of the RB209 on the basis of local conditions.

You can find out further information about the appropriate use of PIAMON® 33N + 30S03 at www.adm-agri.co.uk and it is also available via your ADM Agriculture farm trader or the fertiliser department.

Recommendation for application:

Crop	Application date	kg/ha N	kg/ha S03	PIAMON® 33 + 30 (kg/ha)
RAPESEED				
1st application	End of February, start of March	79 – 119	72 – 108	240 – 360
2nd application	Green bud	59 – 99	54 – 90	180 – 300
WINTER CEREALS				
1st application	Start of spring growth	59 – 99	54 – 90	180 – 300
2nd application	GS 30	20 – 59	18 – 54	60 – 180
3rd application	GS 32	50 – 59	45 – 54	150 – 180
4th application (quality wheat)	GS 39	up to 50	up to 45	up to 150
SPRING CEREALS				
1st application	At sowing	40 – 99	36 – 90	120 – 300
2nd application	GS 30 - 31	20 – 59	18 – 54	60 – 180
MALTING BARLEY				
1st application	At sowing	20 – 99	18 – 90	60 – 300
MAIZE				
1st application	At sowing	50 – 99	45 – 90	150 – 300
2nd application	Emergence	20 – 50	18 – 45	60 – 150
POTATO				
1st application	For planting	59 – 99	54 – 108	180 – 360
2nd application	Before closing rows	40 – 59	36 – 54	120 – 180
SUGAR BEET				
1st application	At sowing	59 – 99	54 – 90	180 – 300
2nd application	Up to May 20	up to 20	up to 18	up to 60
GRASS LAND				
1st application	Start of spring growth	79 – 99	72 – 90	240 – 300
Re-fertilisation	After every cut	40 – 59	36 – 54	120 – 180
COVER/CATCH CROPS				
	At sowing	up to 59	up to 54	up to 180
VEGETABLES (HIGH CONSUMPTION)				
1st application	At sowing/planting	up to 20	up to 18	up to 60
Additional applications	Re-fertilisations	up to 36	up to 33	up to 110

*Rounded to the nearest whole number

Product characteristics of PIAMON® 33N + 30S03

EC FERTILISER

Fertiliser type

Urea ammonium sulphate 33/30
 33 % N total nitrogen
 22.6 % N ureic nitrogen
 10.4 % N ammoniacal nitrogen
 12 % S water-soluble sulphur

Typical values

Granule size (95 % of the product) 1.6 – 5.6 mm
 Average granule diameter: _____ approx. 3.5 mm
 Bulk density: _____ approx. 800 kg/m³
 Biuret content: _____ max. 0.9 %



PIAMON®
 33N + 30S03



Further information is available on the Internet:
www.adm-agri.co.uk

Any questions?
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