

UAN in brand quality!

SOLIDE BASE

Quality

- ✓ Yield
- ✓ Unerringly



**PIASAN<sup>®</sup> 28**

The compatible one

**skw.**  
PIESTERITZ

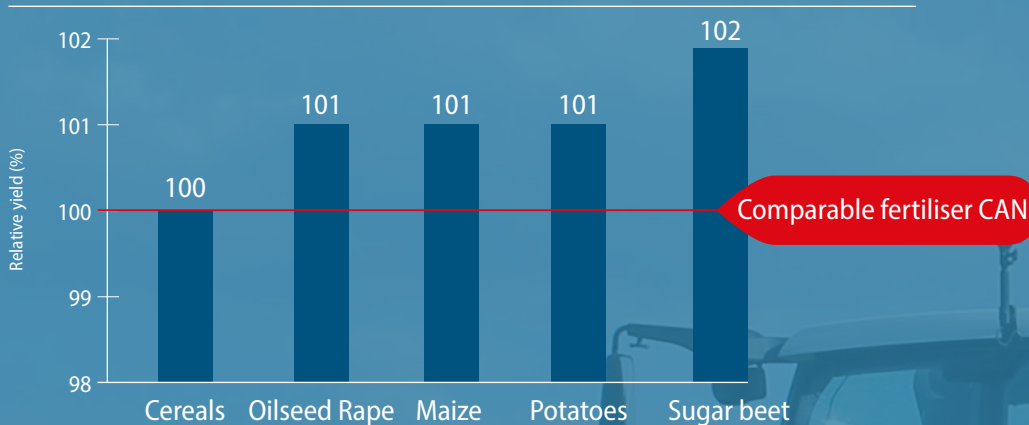
*The future of fertilisation.*

# PIASAN® 28 – Right up to the edge for solid yields.

As a liquid fertiliser with a particularly favorable combination of the nitrogen forms nitrate, ammonium and urea nitrogen, PIASAN® 28 offers a range of plant cultivation and economic advantages.

PIASAN® 28 can be used in all agricultural crops. It is easy to handle and even the smallest quantities of nitrogen can be dosed precisely. Fertilisation can be made more efficient as a result of large application widths and the combined application with plant protection agents, micro nutrients and growth regulators. In addition, nitrogen uptake with PIASAN® 28 can also occur via the leaf. This makes better yields possible, particularly under dry weather conditions. PIASAN® 28 achieves yields which are at least comparable to solid fertilisers and mostly even higher.

## Yield results with PIASAN® 28 in main agricultural crops



Relative yield, averages from 244 tests – LAF Cunnersdorf 1995 to 2014

## Tremendous accuracy for supply of nutrients right up to the edge

Spreading errors are stress on the nerves and they cost money. They are not initially perceptible up to a magnitude of 25 % but they can lead to noticeable loss of yield. Liquid fertilisers can display their strengths when accuracy is crucial. With PIASAN® 28 it is easier to adhere to the distance requirements of the Fertilisation Ordinance. The very precise fertiliser application guarantees the full fertiliser quantity and thus yield right up to the edge. The reason for this is the small coefficient of variation for liquid fertilisation of an average of just 3.4%.

For liquid fertilisation with nitrogen, a large proportion of the nutrients – 80 to 95 % – will be absorbed via the soil. Only 5 to 20 % of the N-uptake occurs via the leaf.



# Brand quality makes the difference!

A high level of plant compatibility is only guaranteed with liquid fertilisers in brand quality. That in turn is the pre-requisite for high yields and good harvest quality. Liquid fertilisers of unknown origin and low surface tension can lead to leaf necrosis, thereby reducing the potential yield. PIASAN® 28 has a very high surface tension of 60 – 80 mN/m. The pH value of PIASAN® 28 is in the neutral range between 6 – 7. Storage life is guaranteed even at freezing temperatures – crystallisation only starts at -17 °C.

- ✓ Brand quality for optimal plant compatibility
- ✓ Fertilisation effect via soil and leaf
- ✓ Enables exact work right up to the edge, thus guaranteeing even N-supply

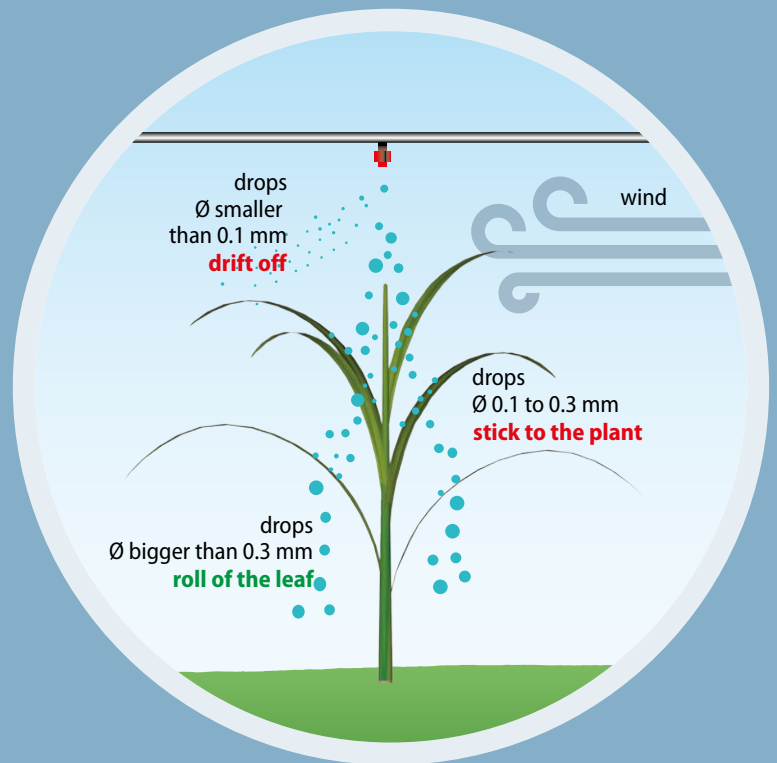


# It depends on the drop size.

## Coarse drops are the aim

The creation of coarse drops succeeds thanks to the use of anti-drift nozzles (ADN) with a low spray pressure (approx. 2 bar). A coarse drop spectrum is thus achieved.

Special liquid fertiliser- (LF) or multi-hole nozzles should preferably be used under critical conditions in order to apply the liquid fertiliser in a "rain" formation even in large quantities.



## The surface tension is the decisive factor



High surface tension



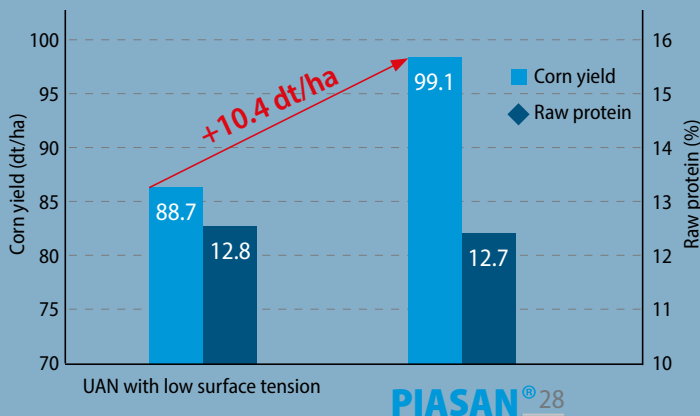
Average surface tension



Low surface tension



## Brand quality with high surface tension secures yields and raw protein contents



The yield can be increased considerably by using the high-quality liquid fertiliser PIASAN® 28. This is a decisive criterion for liquid fertilisers with low surface tension.

A high level of surface tension ensures a high level of plant compatibility.

Fertilisation with PIASAN® 28 leads to considerably higher yields with the same raw protein content.

More yield due to liquid fertiliser with high surface tension; LAF Cunnersdorf: average from 14 tests with winter wheat (2004 to 2017)

# Principles for liquid fertiliser application.

PIASAN® 28 can be used in all agricultural crops. A few principles must be observed for the application of liquid fertilisers on cereal and rapeseed crop formations:

- Observe the crop specific recommendation for application
- No blazing sun and no temperatures above 25 °C
- Plants must be dry
- Wax layer must be formed
- PIASAN® 28 has a very high level of plant compatibility in pure form
- Thinning liquid fertiliser with water with at least a 1:4 ratio
- Should preferably be applied in the afternoon or evening
- Problem free application from shortly before sowing until three days afterwards
- Additional application possible after reaching the 3-leaf stage

Application during frost:

- The stock must be dry or covered with frost
- No application during freeze/thaw cycles

## The nozzle selection is decisive

PIASAN® 28 can be applied evenly, with precise dosage and right up to the edge with customary plant protection technology. All nozzles are well suited for the start of spring growth or at sowing. The following applies for fertilisation in crop formations: The drops should be proportionately greater for more sensitive plants and the spray pressure lower. The choice of nozzle can have a decisive effect on the plant compatibility. We recommend anti-drift or multi-hole nozzles from the second application in cereals or oilseed rape.

The use of drag hoses or pipes is recommended for later application and generally following ear emergence, for unfavorable weather conditions or in sensitive cultures. The choice of nozzle must ensure the effectiveness of the combination partners for the combined use of PIASAN® 28, with plant protection agents in particular. Anti-drift nozzles will preferably be considered here while taking heed of legal requirements.



## Application in combination

An application of PIASAN® 28 together with plant protection agents, growth regulators or micro nutrients is in principle possible. Manufacturer instructions should be followed carefully in this case.



# PIASAN® 28 – solid basis – in brand quality.

With PIASAN® 28 you are making use of the advantages of liquid fertilisation in brand quality. In addition to optimal product characteristics, the selection of the correct application technique in different fertilisation periods must also be given sufficient attention. The following fertilisation recommendation is based on the results of our applied research and practical experience.

You should adapt these to the local conditions and the plant requirement established in line with the Fertilisation Ordinance. If you have any questions concerning the appropriate use of PIASAN® 28 you can contact our specialist advisers at any time or consult [www.duengerfuchs.de](http://www.duengerfuchs.de).

## Recommendation for application:

Crops	Application	Application date	kg/ha N	PIASAN® 28	
				dt/ha	l/ha
<b>RAPESEED</b>					
1st application	ADN/LF	End of February, start of March	80 – 120	2.9 – 4.3	220 – 330
2nd application	LF/DH	Small bud stage (GS 39/51)	60 – 100	2.1 – 3.8	170 – 280
<b>WINTER CROPS</b>					
1st application	ADN/LF	Start of spring growth	60 – 80	2.1 – 2.8	170 – 220
2nd application	ADN/LF	GS 30 – 32	40 – 80	1.4 – 2.8	110 – 220
3rd application	LF/DH	GS 39 – 49	40 – 60	1.4 – 2.1	110 – 170
4th application (quality wheat)	LF/DH	GS 51 – 59	up to 60	up to 2.1	up to 170
<b>SUMMER GRAIN</b>					
1st application	ADN/LF	at sowing	40 – 100	1.4 – 3.8	110 – 280
2nd application	ADN/LF	GS 30 – 32	40 – 60	1.4 – 2.1	110 – 170
<b>BREWING BARLEY</b>					
1st application	ADN/LF	at sowing	20 – 100	0.7 – 3.6	60 – 280
<b>MAIZE</b>					
1st application	ADN/LF	at sowing	100 – 180	3.6 – 6.4	280 – 500
2nd application	DH	GS 16 – 17	30 – 60	1.0 – 2.1	80 – 170
<b>POTATO</b>					
1st application	ADN/LF	at planting	60 – 120	2.1 – 4.3	170 – 330
2nd application	DH	before row closure	40 – 60	1.4 – 2.1	110 – 170
<b>SUGAR BEET</b>					
1st application	ADN/LF	at sowing	60 – 120	2.1 – 4.3	170 – 330
2nd application	LF/DH	up to May 20	30 – 40	1.0 – 1.4	80 – 110
<b>GRASSLAND</b>					
1st application	LF	Start of spring growth	80 – 100	2.9 – 3.6	220 – 280
Re-fertilisation	LF	after every cut	40 – 60	1.4 – 2.1	110 – 170
<b>VEGETABLES (HIGHLY CONSUMPTIVE)</b>					
1st application	ADN/LF	at sowing/planting	up to 200	up to 7.1	up to 550
additional applications	DH	Re-fertilisations	up to 35	up to 1.3	up to 100

ADN = anti-drift nozzles, LF = liquid fertiliser- including multi-hole nozzle, DH = drag hose or pipe  
Direct plant contact must be avoided in the event of application by drag hose.

## PIASAN® 28 product characteristics

### Fertiliser type

Urea ammonium nitrate solution 28  
28 % N total nitrogen  
14 % N ureic nitrogen  
7 % N nitrate nitrogen  
7 % N ammonium nitrogen

### Characteristic values

Density (at 20 °C) \_\_\_\_\_ 1.28 g/cm<sup>3</sup>  
pH value \_\_\_\_\_ 6–7  
Start of crystallisation \_\_\_\_\_ -17 °C  
Biuret content \_\_\_\_\_ max. 0.5 %  
Colour \_\_\_\_\_ colorless  
Dynamic viscosity (at 20 °C) \_\_\_\_\_ 3.62 mPas



Further information is available  
on the Internet:  
[www.piasan28.de](http://www.piasan28.de)  
[www.skwp.de](http://www.skwp.de)

Do you have any questions?

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