Get to know potassium nitrate in potato nutrient management

Potassium nitrate in potato

Higher yields & better quality

Through research, KNO_3 has been shown to boost yield by producing more tubers and increasing sizing. Applications of potassium nitrate will also minimize bruising, decrease tuber damage and improve chip color.

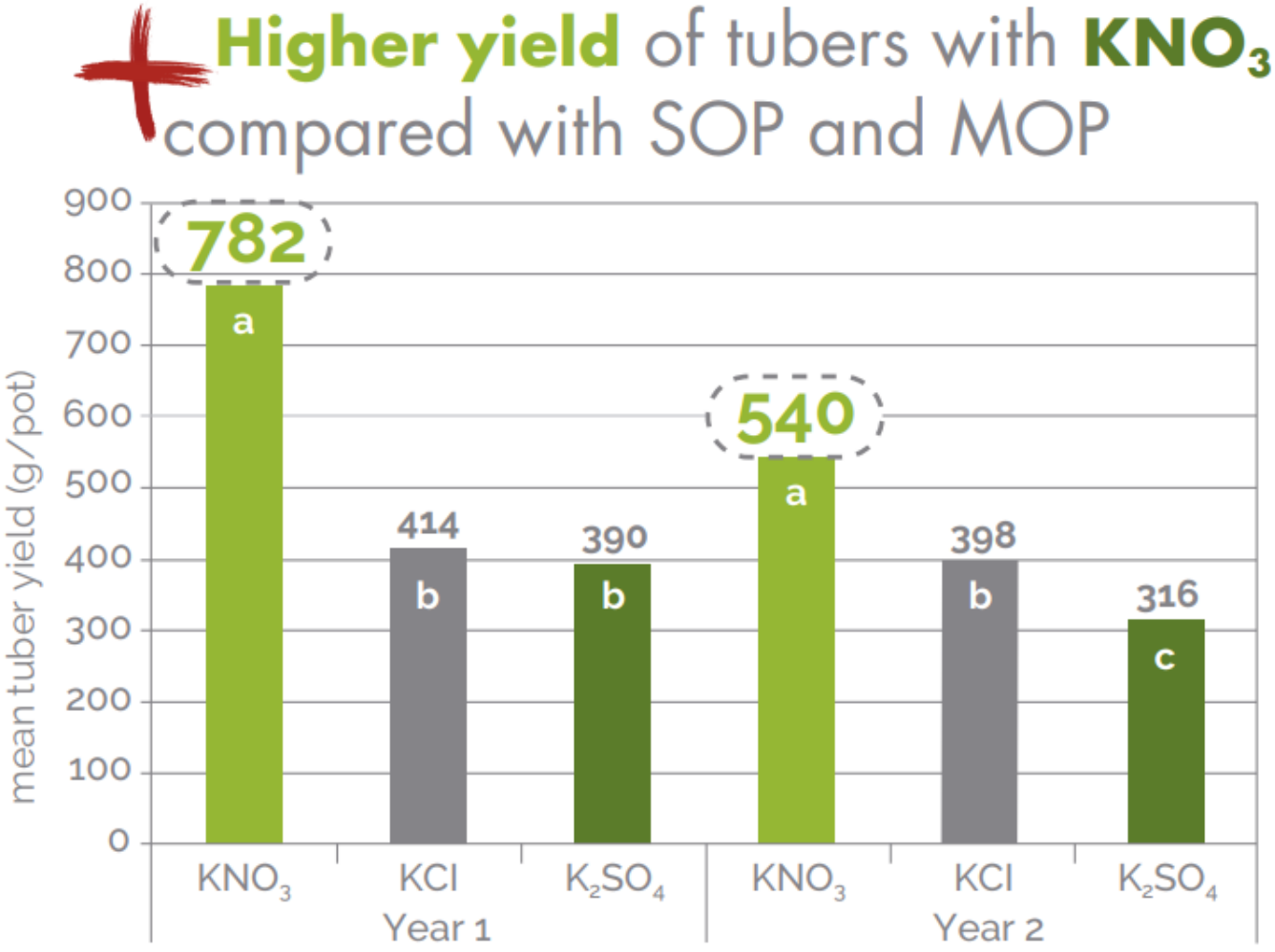
Stronger plants & tubers

It has been proven that KNO_3 increases plant's natural resistance to diseases and assist with environmental factors such as frost and drought. A fertility program containing potassium nitrate will result in reduced storage losses, enhancement of shipping quality and improved shelf life.

Faster Uptake

Nitrate nitrogen and potassium in KNO_3 are immediately available for direct root uptake by the plant.

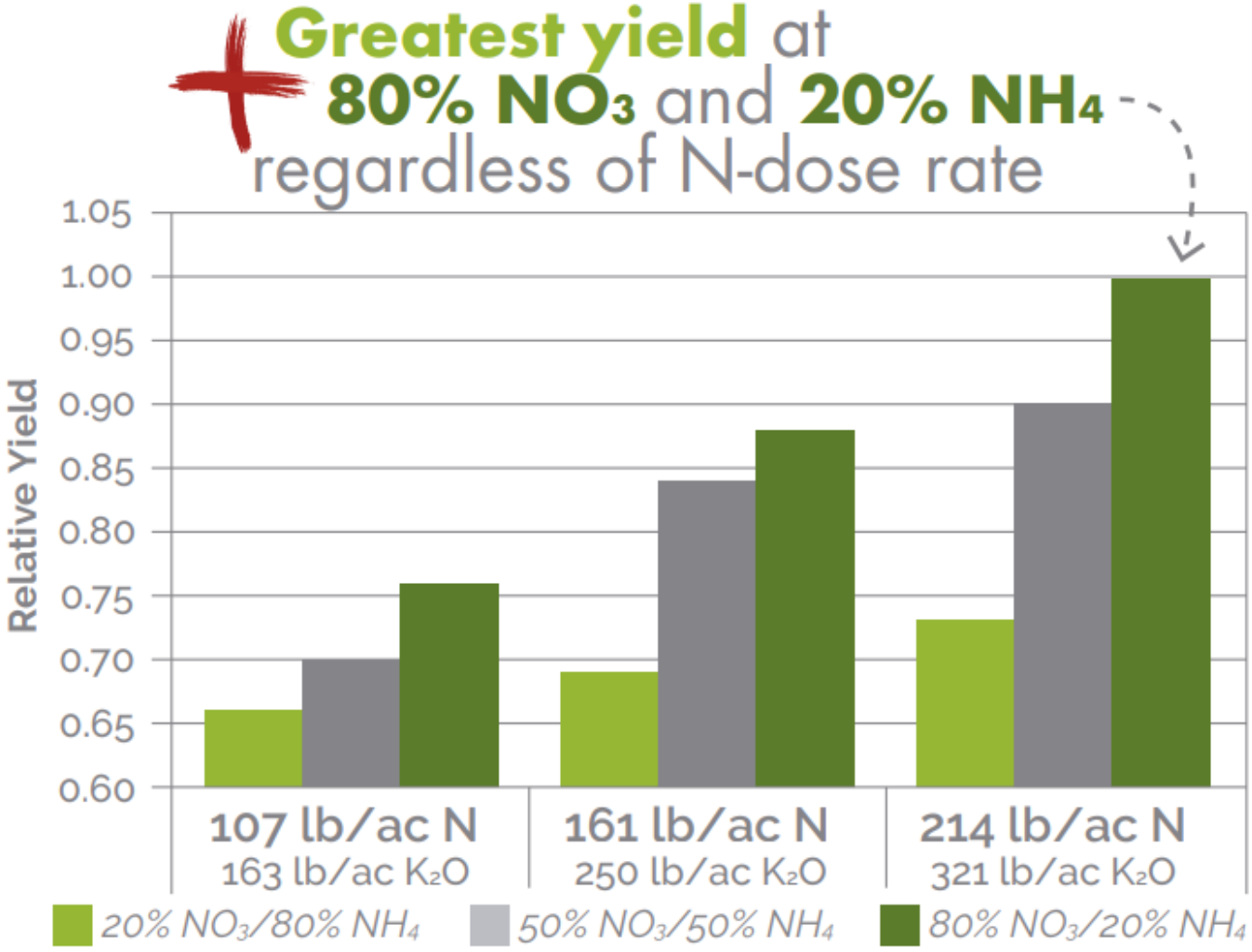
Through research, potassium nitrate has been shown to results in higher average weight of harvested tubers over KCl and K_2SO_4.



Bester, G.G. y P.C.J Marre, 1990

* Results represent the average level of 4 potato varieties.

Crop yields can fluctuate each year. Trials consistently show higher yields with the use of potassium nitrate vs other sources such as SOP and MOP even in a low production year. Each cropping year more tubers were produced per plant.



Through research trials it has been shown that no matter what rate of total N is applied, the 80% ratio of nitrate to 20% ammonium produces greater yields.

KNO_3 is the preferred source of potassium for potatoes, helping the plant to produce a greater number of tubers.

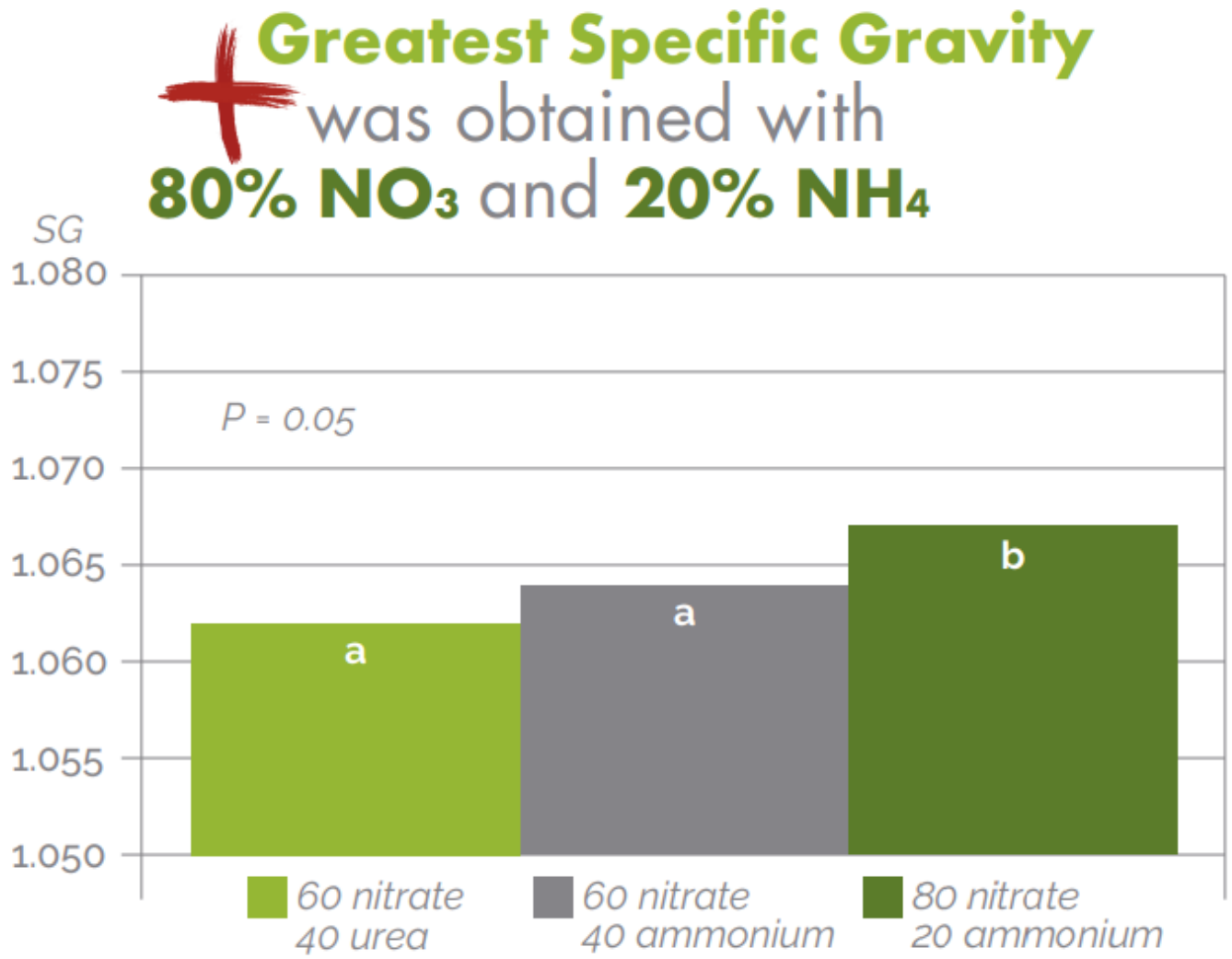
Higher average weight and number of tubers per plant with KNO_3 compared with SOP and MOP

TREATMENT	AVERAGE WEIGHT OF TUBER (g)		MEAN NUMBER OF TUBERS PER PLANT	
	Year 1	Year 2	Year 1	Year 2
KNO_3	93 a	97 a	9.4 a	5.9 a
KCl	74 b	91 a	5.8 b	4.5 b
K_2SO_4	73 b	71 b	5.9 b	5.0 ab

Bester, G.G. y P.C.J Marre, 1990

* Results represent the average level of 4 potato varieties.

Increased weight per tuber combined with increased tuber counts equals substantial increases to the yield at time of harvest.



Knight, F.H., P.P. Brink, N.J.J Combrink and C.J. van der Walt 2000. Effect of nitrogen source on potato yield and quality in the Western Cape. FSSA Journal 2000

Measurement of Specific Gravity (SG) is an expression of density. SG is the most widely accepted measurement of quality. Especially in processing potatoes. There is a very high correlation between the SG of a tuber and starch content and also percentage of dry matter or total solids.