



To evaluate its effectiveness in production on lettuce crop (Lactuca sativa)



field trial conducted by FS Trials for ARTAL Agronutrientes www.artal.net



Introduction

Objectives

Material and Methods

Results and discussion

Conclusions







The Product

+PROD is a water soluble liquid bioestimulant

It contains natural organic compounds, microelements and metabolic fuels that favour the generation and transport of photoassimilates needed for production.





The Product

+PROD has been developed by the R+D+i department of ARTAL **Agrinutrients**

Together with various Universities and Research Centers in order to:

- Increase production
- Improve the crops quality





F.S.TRIALS



Objectives

To evaluate and measure the effect of +PROD on

Production in growing lettuce from transplant to harvest





Material and methods

Location: Almería

Crop: Lettuce – Type: Iceberg

Planting framework: 0,9m X 0,32m (double) (69.444 plants/Ha)

Soil texture: loam

Transplant: 6th November

Harvest: 21st February





Material and methods

+PROD plot area: 466 m2

Test plot area: 466 m2

Type of application: irrigation by dripping

+PROD dosage: 4 applications at a rate of 5 L/Ha

(total 20 Lts / Ha and crop cycle)

1st Application: 15 days after transplanting

(21st November).

Next Applications: every 21 – 25 days

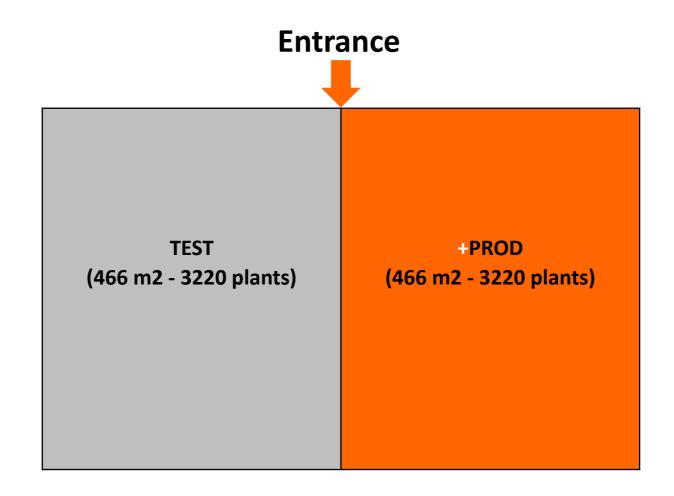
(12th December, 2nd January, 27th January)







Field sketches





Assessments

- **Precocity**
- ✓ Calibre
- Weight
- **Production**





Visual evaluations on the field showed more precocity on the plot treated with +PROD



Table 1 **Evaluation results of discards (%)**

	+PROD FIELD TRIAL CROP						
	HARVESTED BOXES	UNITS/BOX	UNITS/PLOT	HARVESTED UNITS	DISCARDS %		
with +PROD	101	21	3.220	2.121	34,1		
TEST	85	23	3.220	1.955	39,3		





Applying +PROD in lettuce we get:

-5,2%

Less discards





Table 2 **Evaluation results of calibre 2 days before harvest over 22 lettuces**

	PREHARVEST +PROD FIELD TRIAL					
	wit	h +PROD	Test			
Parameter	Nr. of	Average Weight	Nr. of	Average Weight		
	plants	(g)	plants	(g)		
Calibre nr. 9	2	615	0	0		
Calibre nr. 10	9	553	5	588		
Calibre nr. 12	3	510	7	473		
Calibre nr. 14	5	482	7	407		
Calibre nr. 16	3	283	3	370		





Applying +PROD in lettuce we get:

More caliber





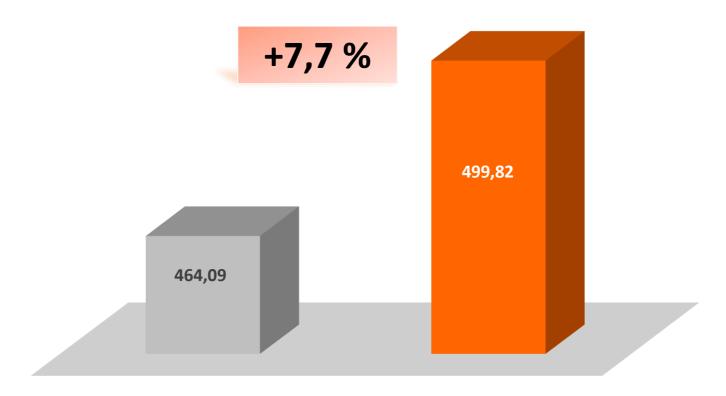
Table 3

Evaluation results of weight 2 days before harvest over 22 lettuces (unit average weight/plot).

PREHARVEST +PROD FIELD TRIAL						
Test		wit				
Nr. of plants	Average Weight (g)	Nr. of plants	Average Weight (g)	% DIF.		
22	464,09	22	499,82	7,7		







Graph 1 +PROD field trial (average weight/lettuce)





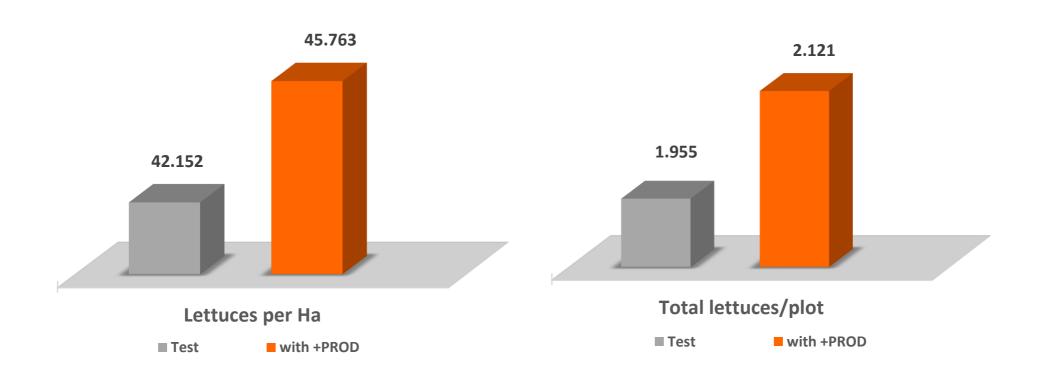
Applying +PROD in lettuce we get:

+7,7%

More weight







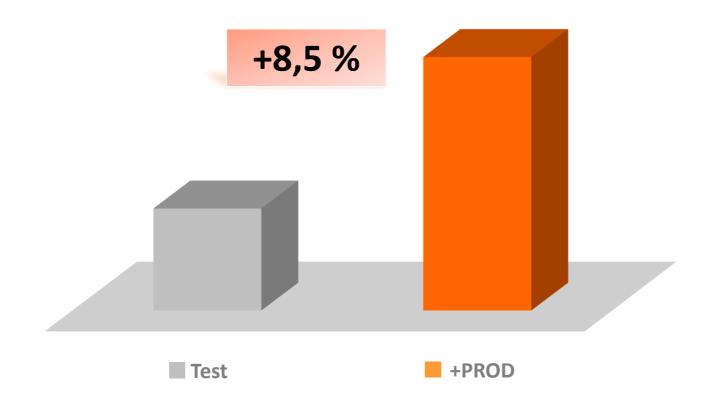
Graph 2 +PROD field trial (harvested lettuces)







Conclusion



Graph 3 Increased production with **+PROD** (harvested lettuces %)





Conclusion

Applying +PROD on lettuce we get:

+8,5%

More production