

ENHANCEMENT OF TOBACCO LEAF QUALITY WITH FOLIAR SPRAYS OF POTASSIUM SULPHATE

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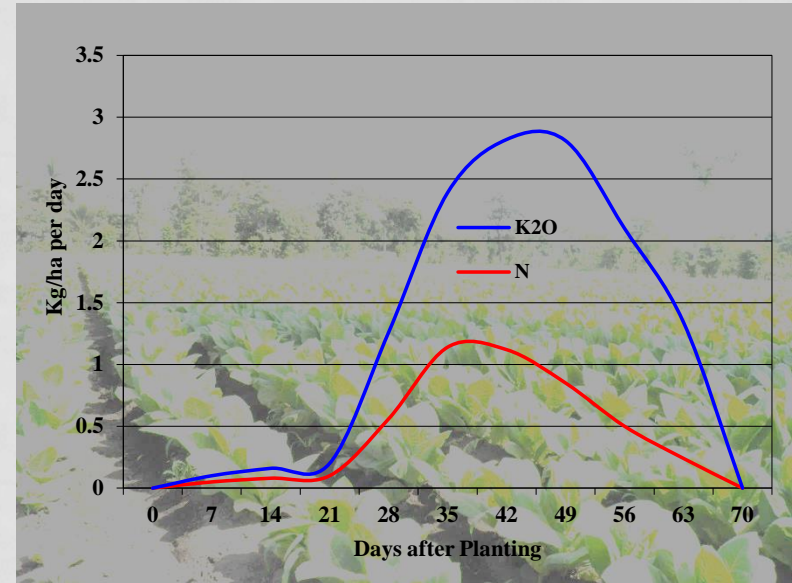
FRAMEWORK

- Introduction
- Objective
- Materials & Methods
- Results
- Conclusions



INTRODUCTION

- K is the most important element in tobacco cropping
- K plays a key role in sugar and alkaloids production and transport
- Importance of K on combustibility
- Highest requirements from 2 to 6 weeks after transplanting



OBJECTIVE

- To evaluate the effect of foliar sprays with a special foliar grade of soluble potassium sulphate: K-Leaf®
- To focus on the commercial yield and quality of flue cured Virginia tobacco
- Previous experiments were carried out in France, China and Cuba showing positive effects



MATERIALS & METHODS

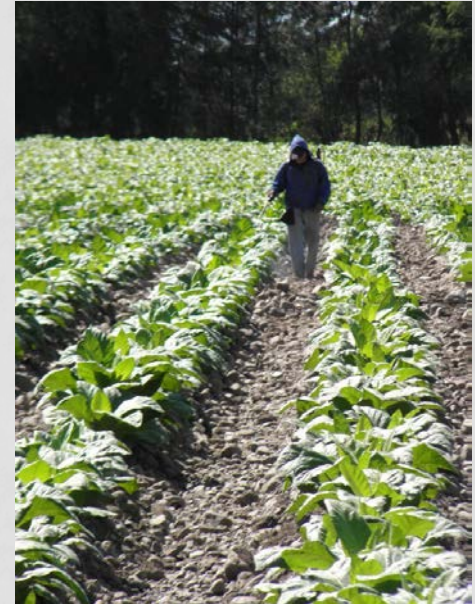
- Location: Perico, province of Jujuy, Argentina
- Sandy clay loam soil, satisfactory K content
- Transplanting on August 27, 2014
- Plant density: 20,800 ha⁻¹



MATERIALS & METHODS

Treatments

	N	P ₂ O ₅	K ₂ O	K ₂ O foliar
	Kg.ha ⁻¹			
Control	104	88	291	0
T1 (3 kg SOP)	104	88	272	4.78 (3 x 1.56)
T2 (6 kg SOP)	104	88	272	9.36 (3 x 3.12)
T3 (9 kg SOP)	104	88	272	14.04 (3 x 4.68)

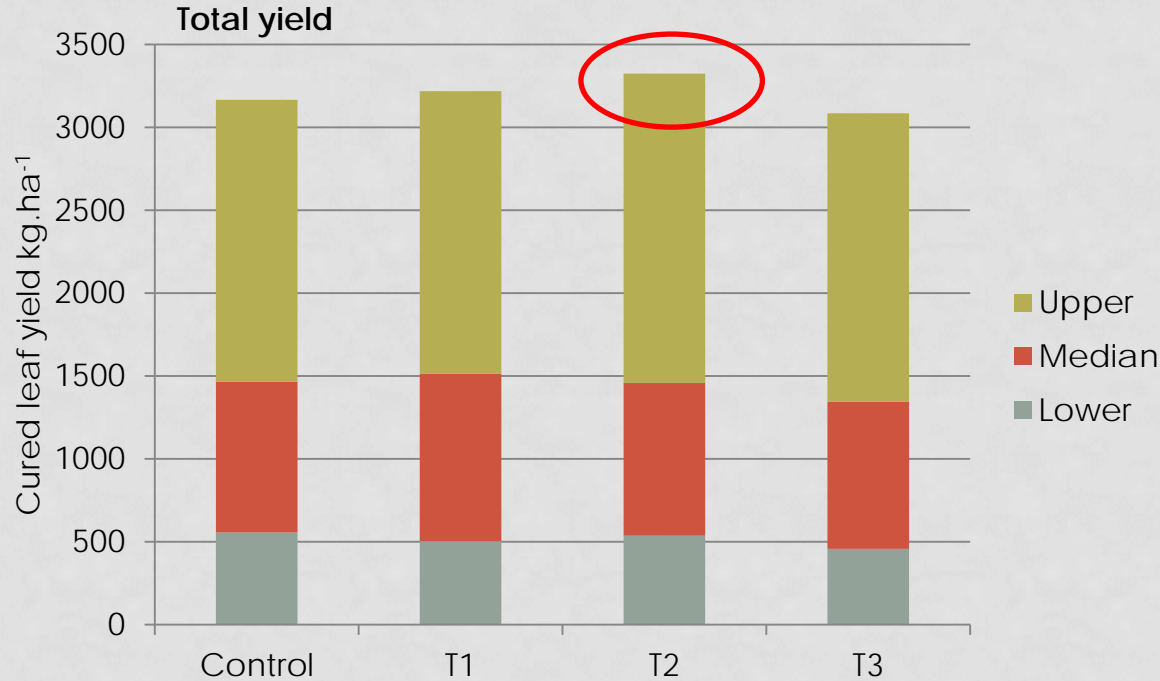


MATERIALS & METHODS

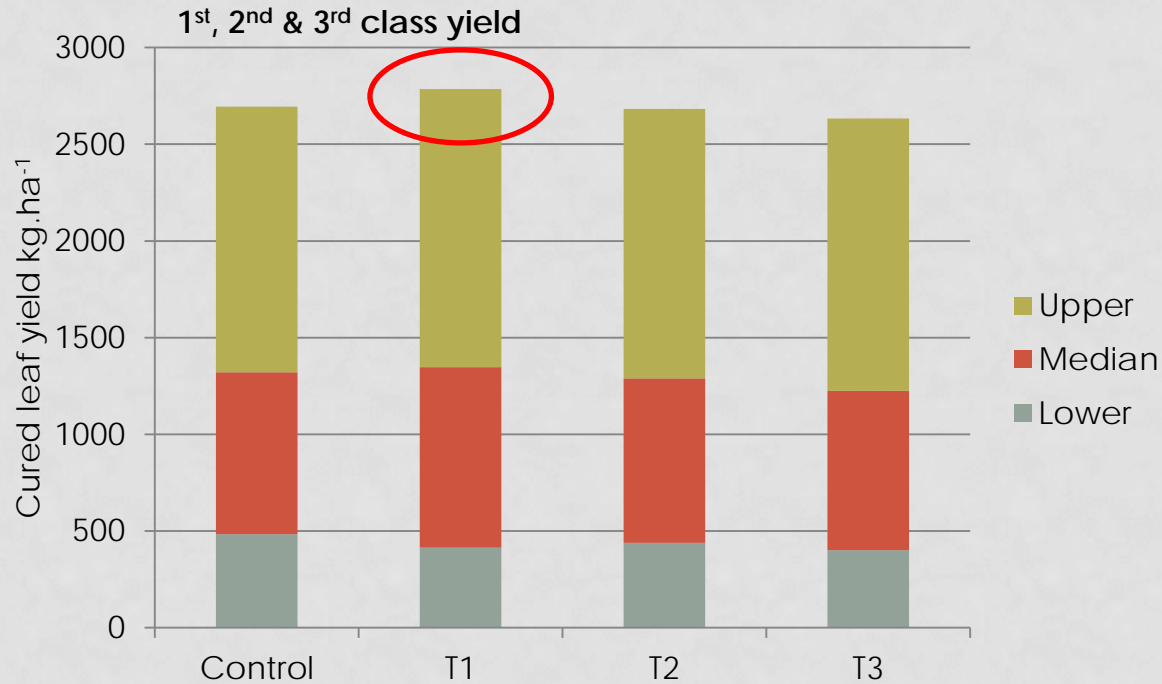
- Foliar sprays at 36, 61 and 72 days after transplanting
- 6 harvests from November 27, 2014 to February 12, 2015
- Parameters: yield, grade, blade/vein ratio, incomes



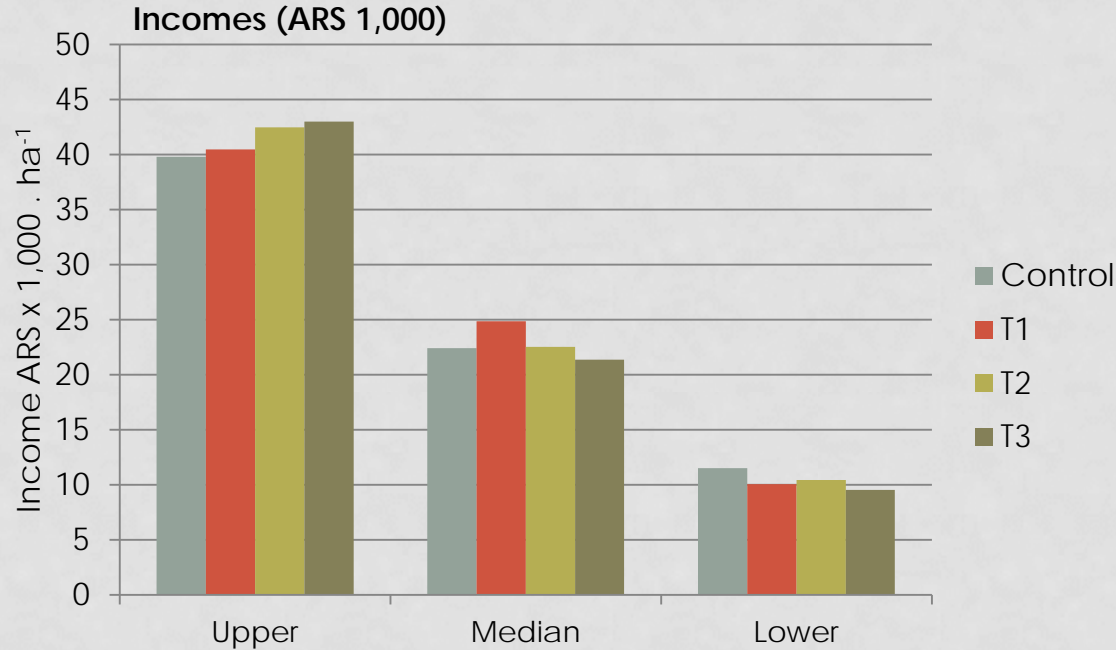
RESULTS



RESULTS



RESULTS



RESULTS

	2013	2014	2015	Total
	Gross Income US \$ x 1000 ha⁻¹			
Control	\$ 7,16	\$ 3,43	\$ 8,47	\$ 19,06
T1	\$ 7,72	\$ 3,67	\$ 8,67	\$ 20,06
T2	\$ 7,26	\$ 3,36	\$ 8,57	\$ 19,19
T3	\$ 7,74	\$ 4,06	\$ 8,55	\$ 20,35



RESULTS

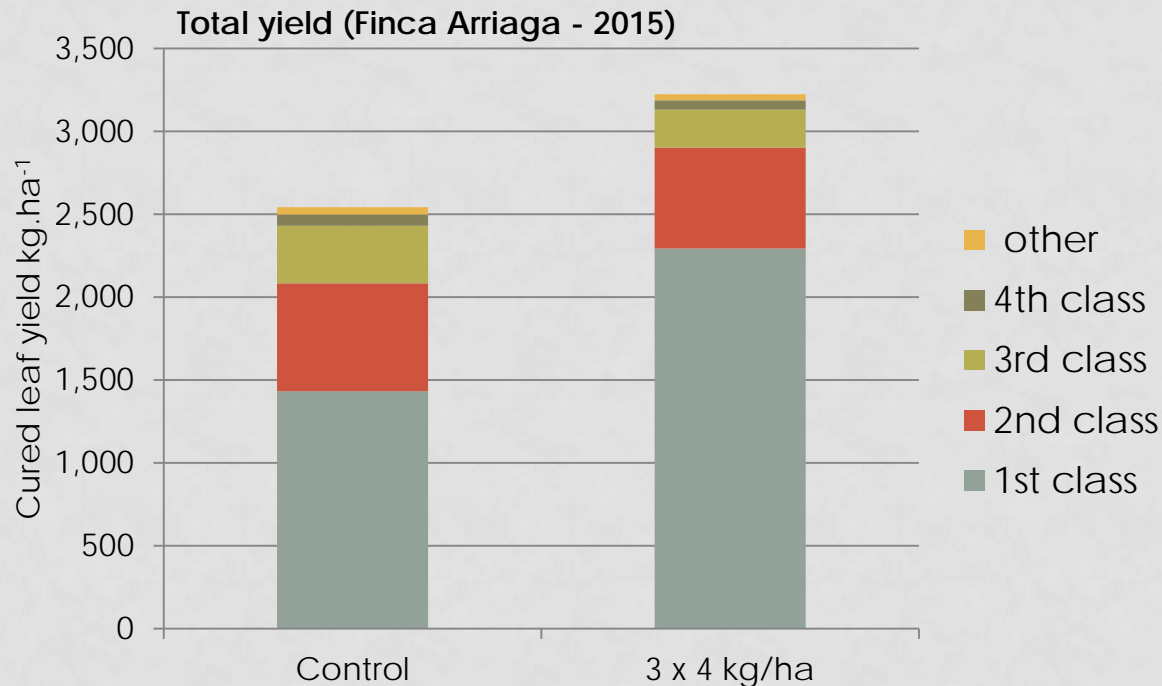
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Average additional income: 800 USD over 3 years
(270 USD per ha and per year, or 430 USD for T3)

430 USD/ha for T3 represents a cost benefit of $430 - 54 = 376$ USD/ha.
Or for every **1 USD invested in K-Leaf** (max. price is 2 USD/kg) **the return is approx. 8 USD** (430/54).



RESULTS / DEMONSTRATION FIELD



CONCLUSIONS

- Foliar sprays of Potassium Sulphate improve yield and quality of tobacco leaves
- As available K in soil is high, the limiting factor is the root absorption capacity
- Foliar sprays of Potassium Sulphate allow a better metabolic activity leading to a better absorption from the roots
- Finally, income for farmer is increased



THANK YOU

