



## Grupo Azucareo Pantaleon

### Evaluation of Harvest Harmonics' Crop Booster™ in sugarcane cultivation

- August 2024
- Analysis and comments by Harvest Harmonics Science Team, Dec. 2024
- Sugarcane yield boost 29.3%
- Evidence of OMG – Organically Managed Genetics

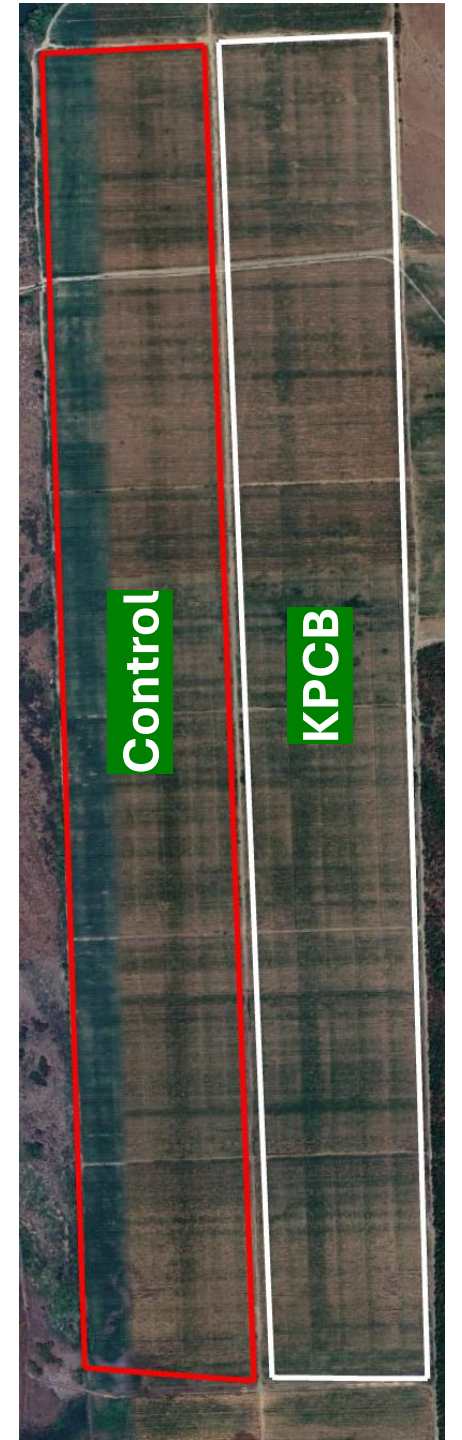
# Aim

- Evaluation of the use of Harvest Harmonics' Crop Booster™\*

\* *In this document, **KPCB** stands for Kyminasi Plants – Crop Booster™*

# Trial Information

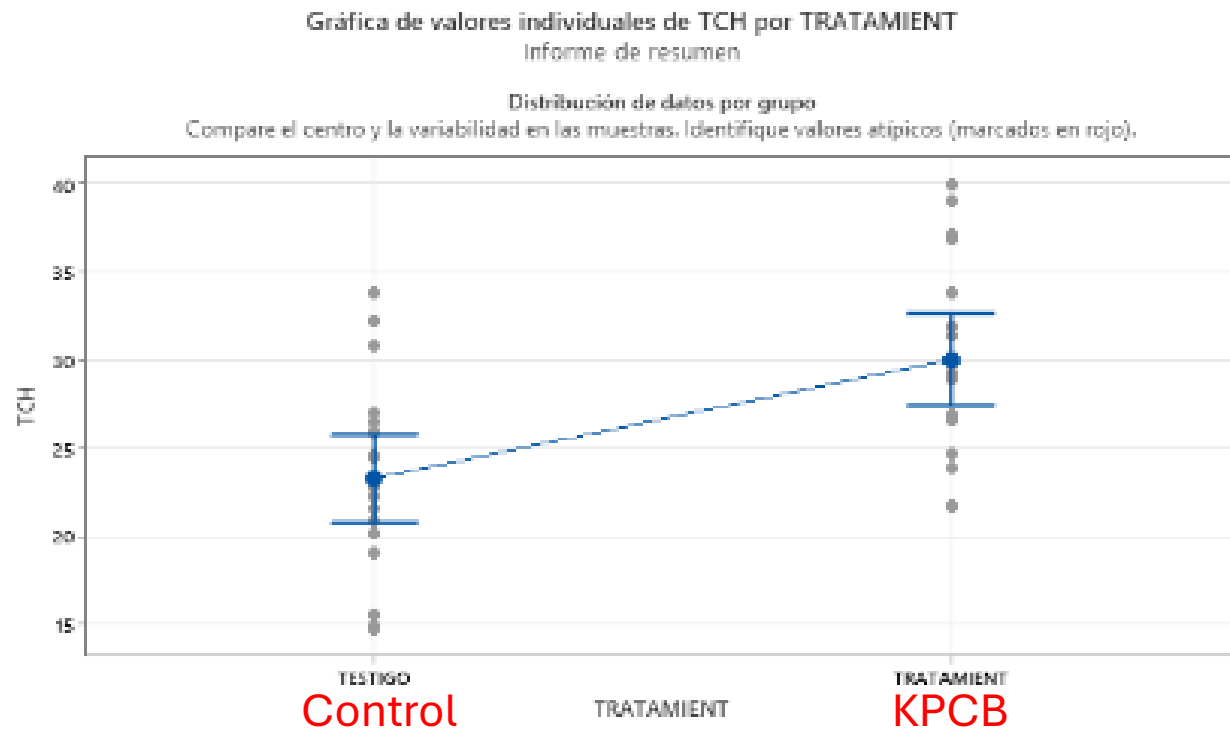
- Date of planting: 10-03-24
- Location: Veracruz, Mexico
- Area of each plot:
  - ❑ KPCB: ~65 ha
  - ❑ Control ~65 ha
- Soil: clay loam/clayey
- Cycle: Perennial
- Variety: CP72-2086
- Irrigation type: Frontal Advance (parallel displacement)



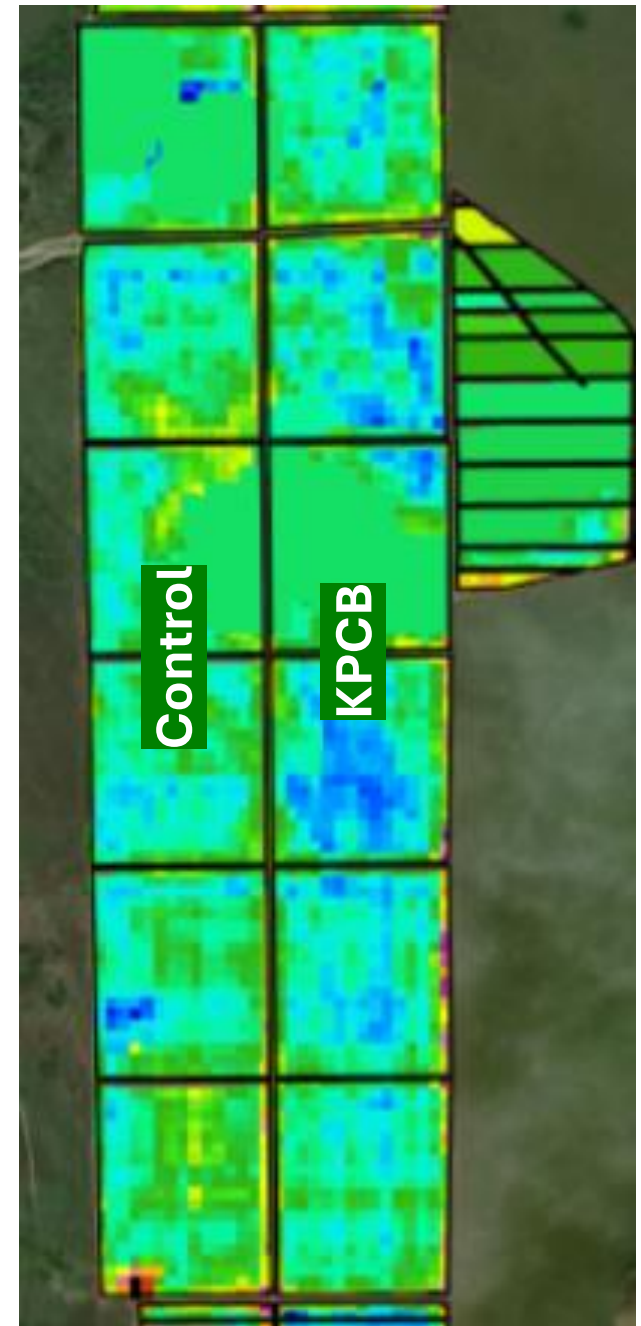
# TCH\* estimate at 5th month

Sampling was carried out at month five of development to measure the estimated TCH\* at that time, obtaining an average of 23 tons for the control vs. an average of 30 tons for the harmonics treatment. **+29.3% tons/ha**

\* TCH : Tons of (sugar) Cane per Hectare

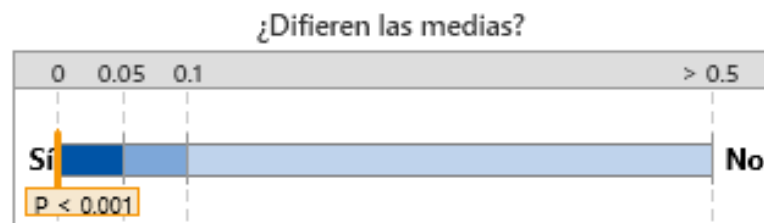


← +29.3% higher average with KPCB

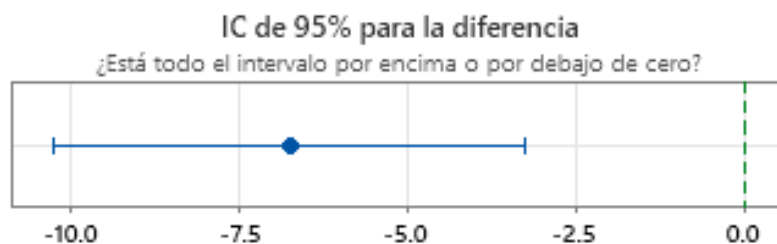


# TCH Testing Parameters

## Prueba t de 2 muestras para TCH por TRATAMIENTO Informe de resumen



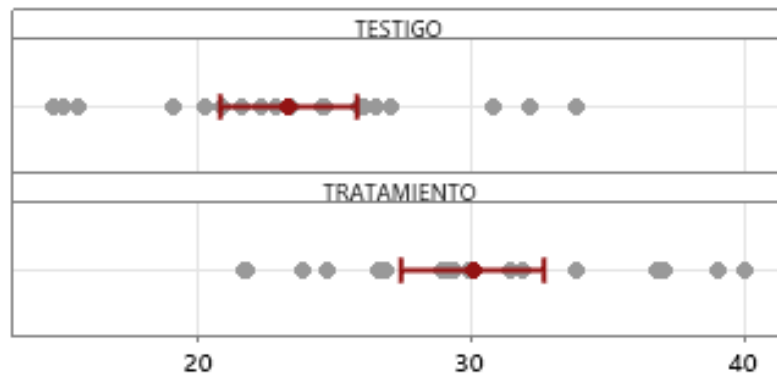
La media de TESTIGO es significativamente diferente de la media de TRATAMIENTO ( $p < 0.05$ ).



### Data Distribution

#### Distribución de los datos

Compare los datos y las medias de las muestras.



### Individual Samples

#### Muestras individuales

Estadísticas	TESTIGO	TRATAMIENTO
Tamaño de la muestra	20	19
Media	23.295	30.044
IC de 95%	(20.79, 25.80)	(27.430, 32.657)
Desviación estándar	5.3601	5.4229

#### Diferencia entre muestras

Estadísticas	*Diferencia
Diferencia	-6.7489
IC de 95%	(-10.252, -3.2454)

\*Diferencia = TESTIGO - TRATAMIENTO

#### Comentarios

- Prueba: Usted puede concluir que las medias difieren en el nivel de significancia de 0.05.
- IC: Cuantifica la incertidumbre asociada a la estimación de la diferencia en las medias a partir de los datos de las muestras. Usted puede tener una seguridad de 95% de que la diferencia verdadera se encuentra entre -10.252 y -3.2454.
- Distribución de datos: Compare la ubicación y las medias de las muestras. Busque datos poco comunes antes de interpretar los resultados de la prueba.

# Growth Parameters

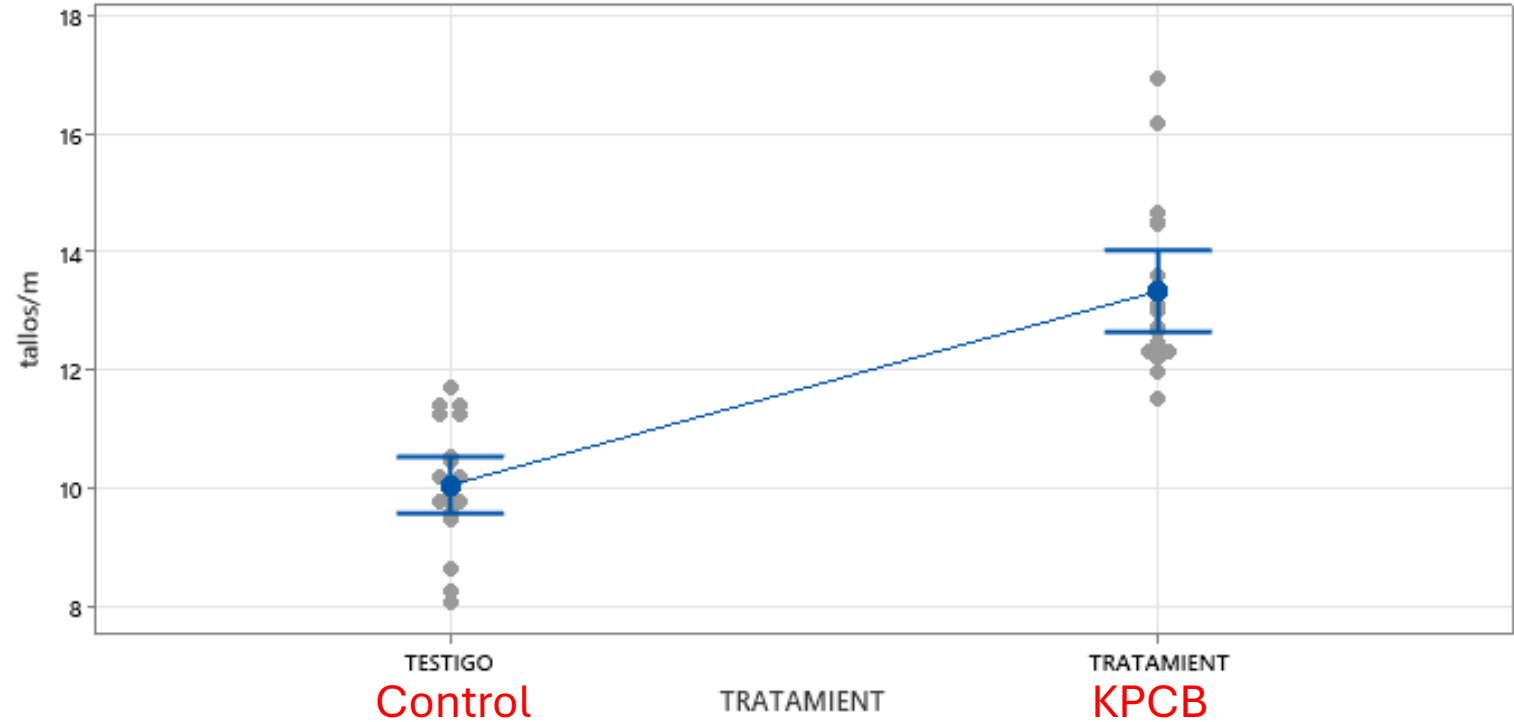
The components of the estimate were compared, and differences were found in the population. The weights and heights are similar.

## Stem Density per Meter

Gráfica de valores individuales de tallos/m por TRATAMIENTO  
Informe de resumen

Distribución de datos por grupo

Compare el centro y la variabilidad en las muestras. Identifique valores atípicos (marcados en rojo).

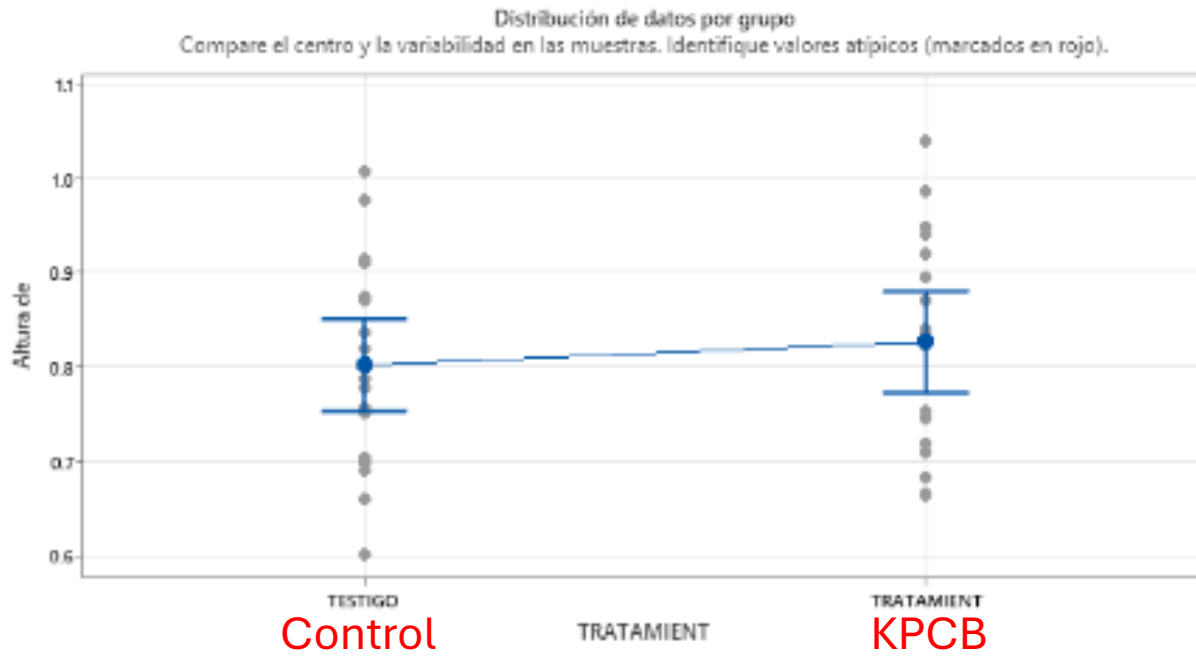


Estadísticas	Control TESTIGO	KPCB TRATAMIENTO
N	20	19
Media	10.067	13.347
Desv.Est.	1.0251	1.4279
Mínimo	8.0667	11.533
Máximo	11.733	16.933

← +32.6% density  
in # of stems/meter

## Stem Height

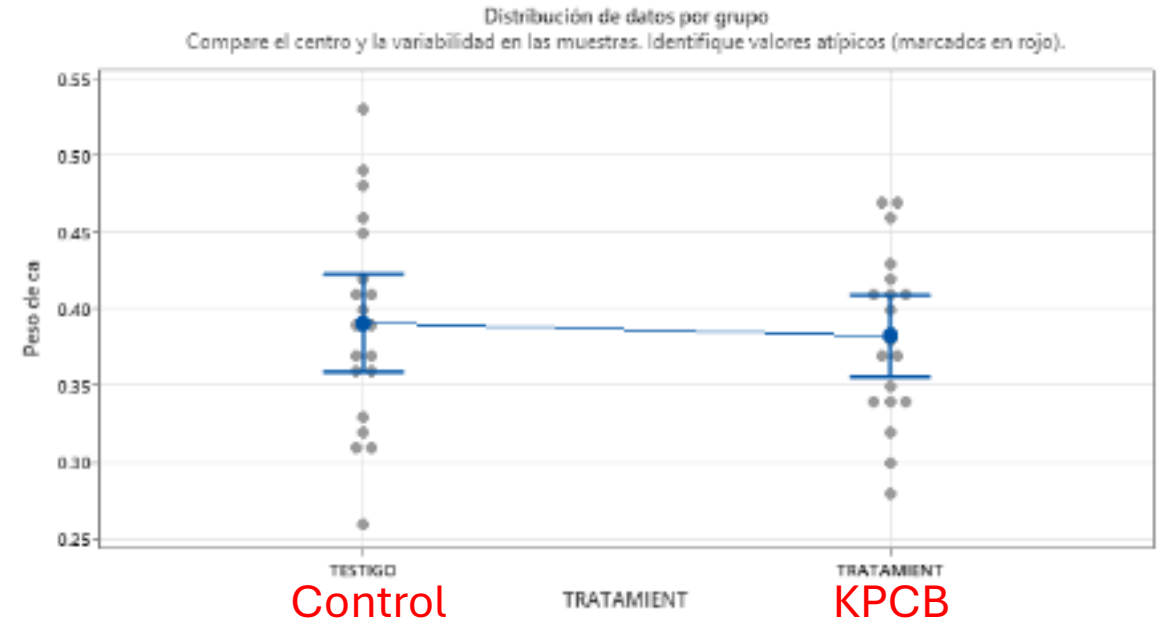
Gráfica de valores individuales de Altura de por TRATAMIENT  
Informe de resumen



Estadísticas	TESTIGO	TRATAMIENT
N	20	10
Media	0.8021	0.82642
Dev.Est.	0.10031	0.11170
Mínimo	0.602	0.664
Máximo	1.008	1.04

## Stem Weight

Gráfica de valores individuales de Peso de ca por TRATAMIENT  
Informe de resumen



Estadísticas	TESTIGO	TRATAMIENT
N	20	10
Media	0.391	0.38263
Dev.Est.	0.088357	0.055582
Mínimo	0.26	0.28
Máximo	0.53	0.47

These results are *not* low – see conclusions on next page



# Conclusions

[ Harvest Harmonics' comments in red ]

*29.3% more yield  
came from 32.6%  
denser population*

- Data at 5 months shows a **larger population** on the Harmonics treatment.
- The height and weight per stem show no difference in the 5th month of development. *[ This shows a smart move by the sugarcane's genetics. The natural judgment of the sugarcane was to enlarge stem DENSITY by 32.6% rather than each stem's SIZE. The 29.3% jump in yield shows that the plant's genetic strategy was right. This is exactly how Crop Booster technology is supposed to work – it works WITH the genetics of the plant (Organically **Managed** Genetics – OMG) rather than GMO (Genetically **Modified** Organisms) in which ARTIFICIAL genetics is enforced on the plant – with unpredictable results that are unnatural **by definition**. ]*
- No final harvest data were obtained.
- It is suggested to continue the trial for one more cycle to obtain real TCH data. *[ Good idea, please continue! ]*