



## TRIAL ON APPLES

### CD. CUAUHEMOC, CHIHUAHUA, MEXICO

KTS® is a clear, chloride-free solution that features the highest liquid potassium and sulfur content available on the market.

CaTs® is a clear liquid fertilizer containing calcium and sulfur that reduces the harmful effects of salt, such as sodium, in the soil, and it can work as a soil amendment.

Thio-Sul® is a clear liquid ammonium thiosulfate solution that helps to increase yields by satisfying the essential need of crops for nitrogen and sulfur.

MagThio® is a clear, neutral to slightly acidic, chloride free solution containing 4% magnesium and 10% thiosulfate sulfur that can be applied straight, as a foliar treatment, or blended with other fertilizers.

Year: 2019

Cooperation with: DYDYSA (grower) and Fertilizantes

Tepeyac Suc. Cd. Cuauhtemoc (distributor)

Type of application: sprinkler irrigation

Parameters measured: soil parameters, quality and yield

Variety: Golden Glory

Goal:

**Yield, quality and cost benefit using Thio-Sul, KTS, CaTs and MagThio as a complement to reduce pH, CE and conditions in soil.**

## METHODOLOGY

Trial was done to support the union of apple technicians that represent one third of the total apple cultivation area (around 15,000 Ha). Strategy was to incorporate the use of thiosulfates to the existing fertilization program. Doses were calculated according to growth stage, fertilization program from the technician and soil-water-foliar parameters using the concept of *Steiner Nutrient Solutions*.

## TREATMENT

Thiosulfates applied each 12 days per ha:

- Sprouting: April: Thio-Sul 20 l/ha
- Flowering and Fruiting: May: CaTs 140 l/ha, MagThio 60 l/ha and KTS 40 l/ha
- Fruit growth: Jun: CaTs 140 l/ha, MagThio 60 l/ha and KTS 40 l/ha

## RESULTS

- Better soil conditioning and better plant root and foliage development were achieved vs control
- A better size and color was achieved in the fruits where Tessengerlo Kerley products were applied than the control
- The use of Thio-Sul, CaTs, MagThio and KTS increases crop yield by 8.81% more than the control
- The amount of profit increases by 7.7% with 2.58 tons more than the control
- The benefit:cost ratio was 7:1 times its recovery

**Yield + 8.81 % more than the control, additional fertilization cost was \$191.00 USD, but it delivered \$1,357.00 USD of additional income.**

## CONCLUSION

Thiosulfates helped to reduce sodium, chlorides and therefore pH. Implementing *Steiner Nutrient Solution* based recommendations for a more balanced nutrition could also improve yields in other crops since many fertilization protocols are empirical or adapted from sources that do not always deliver the best result.



**Our experts are familiar with your region and crops.  
Their support includes:**

- Agronomic advice
- Providing technical information
- Carrying out field studies that are specific to your issues
- Providing application and storage tips

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