



CROP: POTATO, VARIETY: MEMPHIS

Solanum tuberosum

BASIC INFORMATION

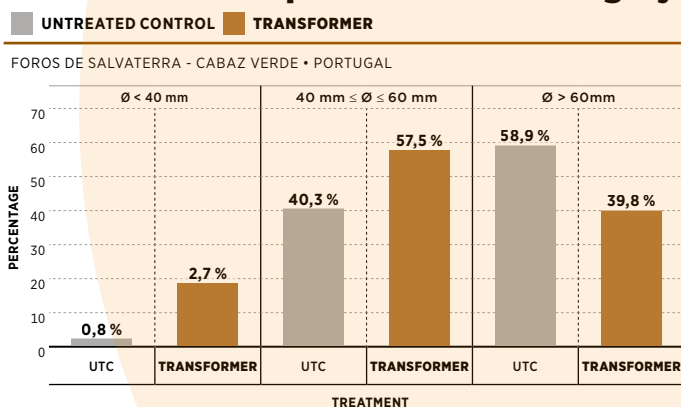
TARGET	Effect on yield, demonstrate performance ability
CROP	Potato, Memphis variety
RATE	10 l/ha (two applications)
LOCATION	Foros de Salvaterra - Cabaz Verde • Portugal
TRIAL DATE	March to June 2017
RESEARCHER(S)	H. Carrasco, Oro Agri International Ltd.

FIELD SITUATION

- The objective was to demonstrate the full potential of **TRANSFORMER** in a variety (Memphis) that easily achieves big calibers in a sandy soil.
- Assessments were done in the field throughout the season with the final assessments for yield calculation being done by hand harvest in four 2,5 m² plots for each treatment, with or without **TRANSFORMER**.
- Application was done in two key moments: 5 l/ha (15 - 20 days AP with pre-emergence herbicide) + 5 l/ha (35 days AP) with boom sprayer with volume of 420 l/ha.
- The seeding frame was 0,3 x 0,8 m resulting in a plant density of 41600 plants per hectare.

FIGURE 1

Yield distribution per treatment & category



RESULTS

- ROI calculations based on average market price of €0,18/kg:
- Total Production differences:**
TRANSFORMER - UTC = 7390x0,18 = €1330/ha => ROI = 8:1
- Commercial Production differences:**
TRANSFORMER - UTC = 13550x0,18 = €2439/ha => ROI = 16:1

CONCLUSIONS

- The soil on the **TRANSFORMER** side always showed more moisture compared to UTC during the entire crop cycle, which is an important factor for potato quality.
- The increase of production on the **TRANSFORMER** side is explained by the increase of potatoes per plant due to better usage of the soil space capacity, more moisture in the soil and better balanced plants with a bigger root system and better nutrient uptake.
- The potatoes from plants treated with **TRANSFORMER** were more homogeneous in size with 57,5 % of the production in the commercial size range (40 mm ≤ Ø ≤ 60 mm) and 39,8 % in higher size range (Ø > 60 mm). By contrast, the UTC yielded only 40,3 % of the production in the commercial calibers (40 mm ≤ Ø ≤ 60 mm) and 58,9 % in higher calibers (Ø > 60 mm).
- In this particular situation the payment was based on total yield independently of potato size and the farmer was rewarded with a total yield increase of 14 %. If production was sorted by size with only potatoes between 40 mm and 60 mm being accepted, then the increase of production per hectare was massive since **TRANSFORMER** gave 63 % more commercial production than UTC.

FIGURE 2

Total yield & commercial yield per treatment

