

BASIC INFORMATION

TARGET	Effect on potato quality in different varieties
CROP	Potato, Memphis, Messi, Red Lady, Evolution variety
RATE	10 l/ha (single application)
LOCATION	Montijo • Portugal
TRIAL DATE	March to June 2015
RESEARCHER(S)	H. Carrasco, Oro Agri International Ltd.

FIELD SITUATION

- The objective was to demonstrate the full potential of **TRANSFORMER** in all quality parameters over different varieties (Memphis, Messi, Red Lady, Evolution) 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 4,5 m² plots for each treatment and variety, with or without **TRANSFORMER**.
- Application was done in a single stand alone application 30 days After Seeding with boom sprayer with volume of 380 l/ha.
- The seeding frame was 0,3 x 0,9 m resulting in a plant density of 37000 plants per hectare. All varieties were seeded at the same time over the same center pivot area.

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 mainly explained by the increase of the average weight per potato and higher homogeneity of the production in the commercial sizes, 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 within the commercial size range (40 mm ≤ Ø ≤ 65 mm) and the general quality of the potatoes was higher with less sample rejections for green, rotten or cracked potatoes for all varieties. It was also notable that the potatoes grow deeper, the potatoes on average being 1 cm deeper than the UTC.
- The increase in marketable yield per hectare with **TRANSFORMER** treatment vs UTC was 17 % more commercial production than UTC in the varieties Red Lady and Memphis, 16 % more in the variety Evolution and 8 % in the variety Messi. The resulting Return on Investment (ROI) was 8:1, 9:1 and 5:1 respectively.

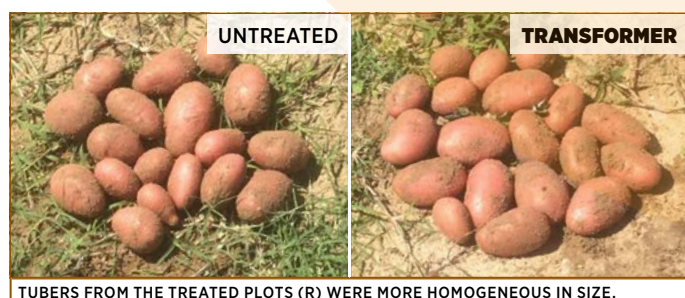


FIGURE 1

Average weight per potato (g)

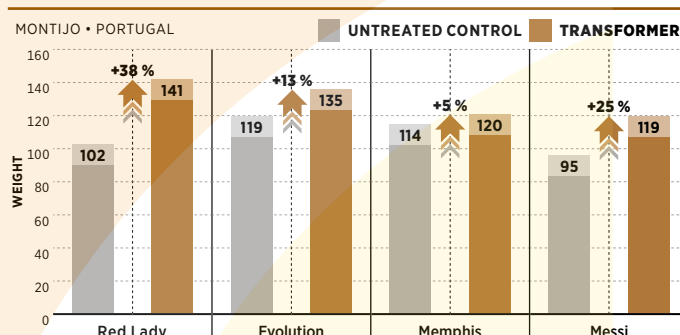


FIGURE 2

Commercial yield (%)

40 mm ≤ Ø ≤ 65 mm

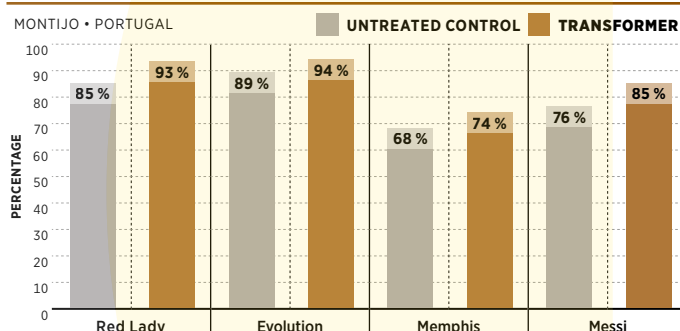
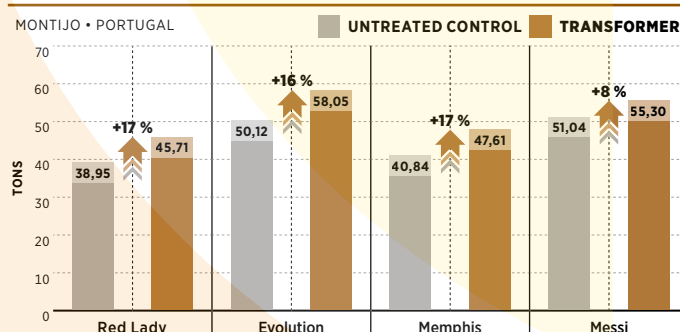


FIGURE 3

Commercial yield (tons)

40 mm ≤ Ø ≤ 65 mm



ROI COMMERCIAL PRODUCTION DIFFERENCES

	RED LADY	EVOLUTION	MEMPHIS	MESSI
ROI (€)	€1216,00	€1427,00	€1219,00	€766,00
ROI (RATIO)	8:1	9:1	8:1	5:1

Return on Investment calculations based on an average market price of €0,18/kg