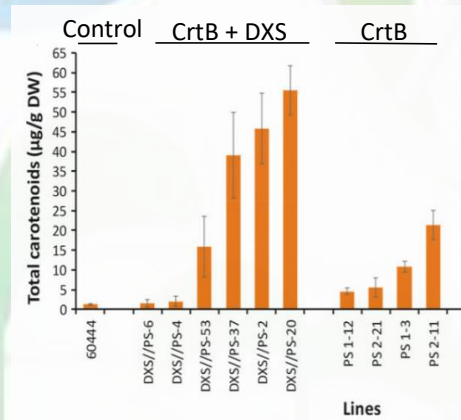
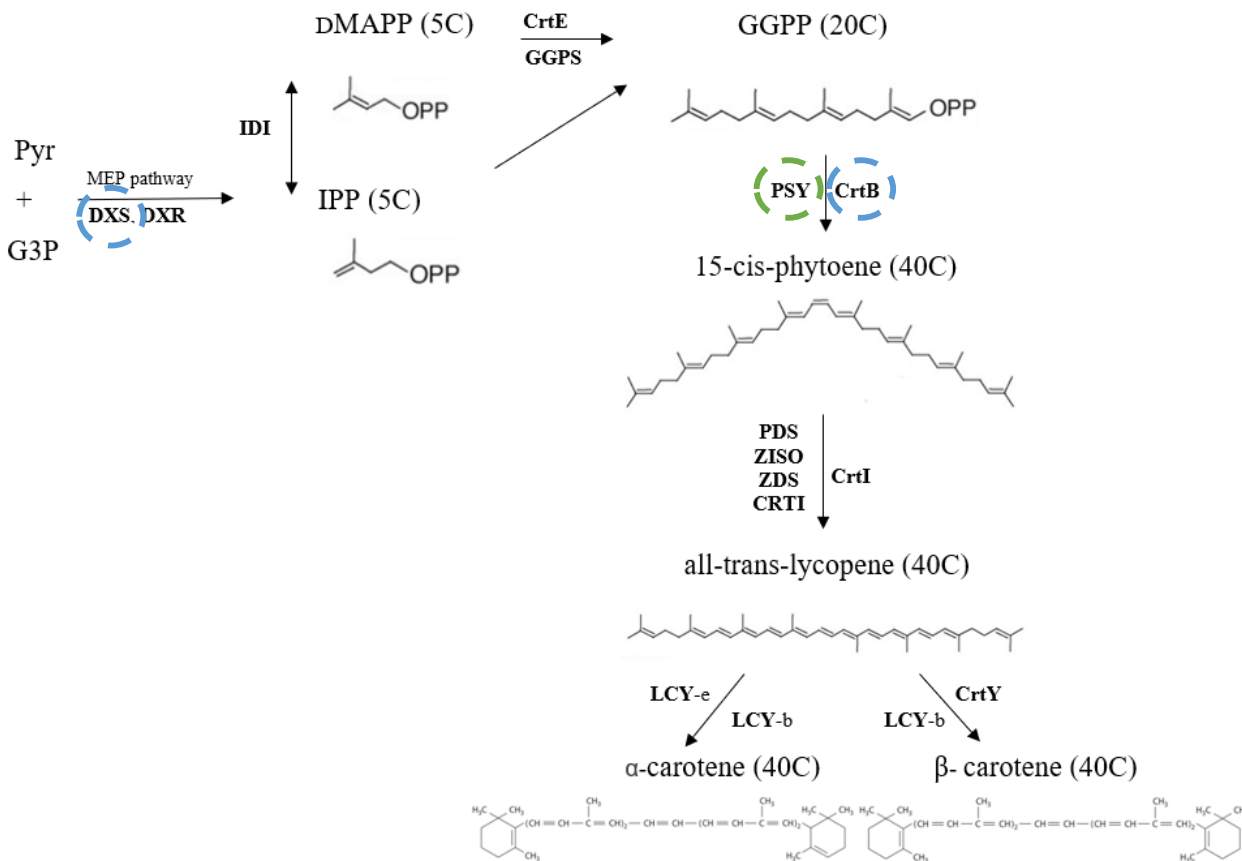


BIOFORTIFICATION OF CASSAVA: INCREASE IN PROVITAMIN A

- OBJECTIVES**
- To know the importance of cassava in some regions and the problems of a diet based solely on this root
 - To learn how a cassava biofortification study is analyzed and carried out
 - To find out if biofortified provitamin A cassava has been successfully achieved

Cassava (*Manihot esculenta* Crantz) is a staple crop for more than 800 million people worldwide, but it has low content in some micronutrients such as **Vitamin A** is essential for the human body and its deficiency is a global **public health problem**



STRATEGY 1 ✓

Welsch et al., 2010 → Overexpression

1. **PROMOTOR:** CP1 **GENE:** gen TP-CrtB

STRATEGY 2 ✓

Beyene et al., 2018 → Overexpression

1. **PROMOTOR:** Patatin **GENE:** CrtB
2. **PROMOTOR:** Patatin **GENE:** CrtB + DXS

CONCLUSIONS

- Cassava is a highly consumed root in the tropics that, if consumed as the only food source, can cause deficiencies
- Most biofortification studies opt for the same techniques
- Studies have managed to obtain cassava varieties with a higher provitamin A content, but have been linked to unintended metabolic consequences
- Due to the severity of vitamin A deficiency and the strong prevalence that still exists today, further study is necessary