



Breeding for potato late blight resistance in Ecuador: Historical review

Introduction

- Potato is one of the most important food crops in Ecuador.
- Late blight is the main disease that affects potatoes in the country.
- Breeding efforts for obtaining improved potato varieties with resistance to late blight has been conducted mainly by the Instituto Nacional de Investigaciones Agropecuarias (INIAP) soon after its creation in 1961 with the support of Central University of Ecuador (UCE).

Material and Methods

Breeding for late blight resistance in Ecuador were developed by private breeders, Central University and National Agriculture Research Institute (INIAP)

The main breeding methods were:
 1) Crosses between native and introduced cultivars
 2) Selection of advanced introduced germplasm, mainly from CIP.



Results

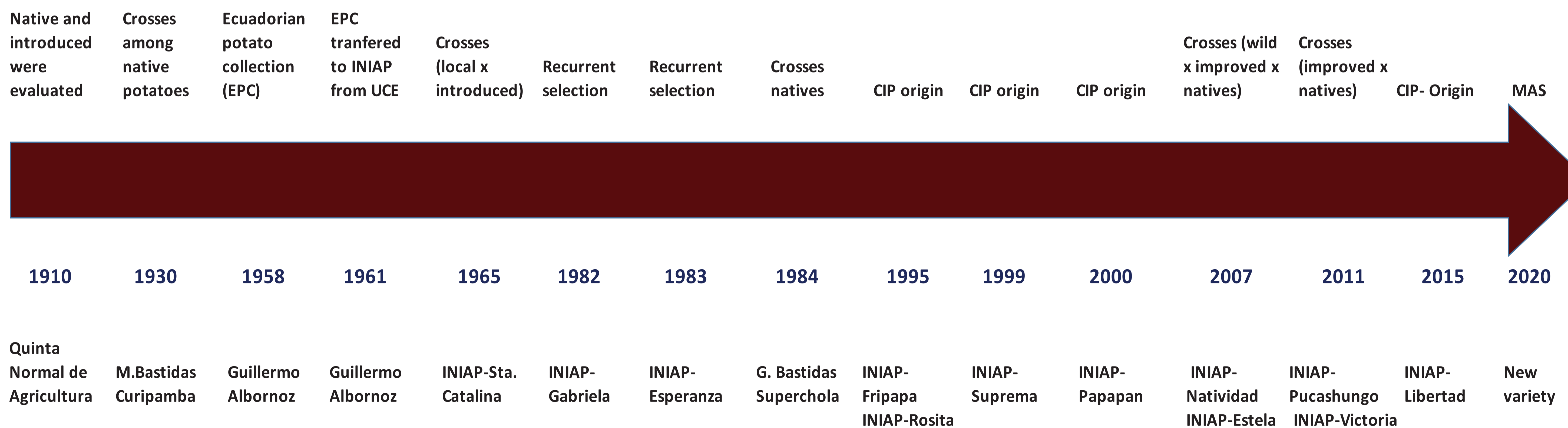
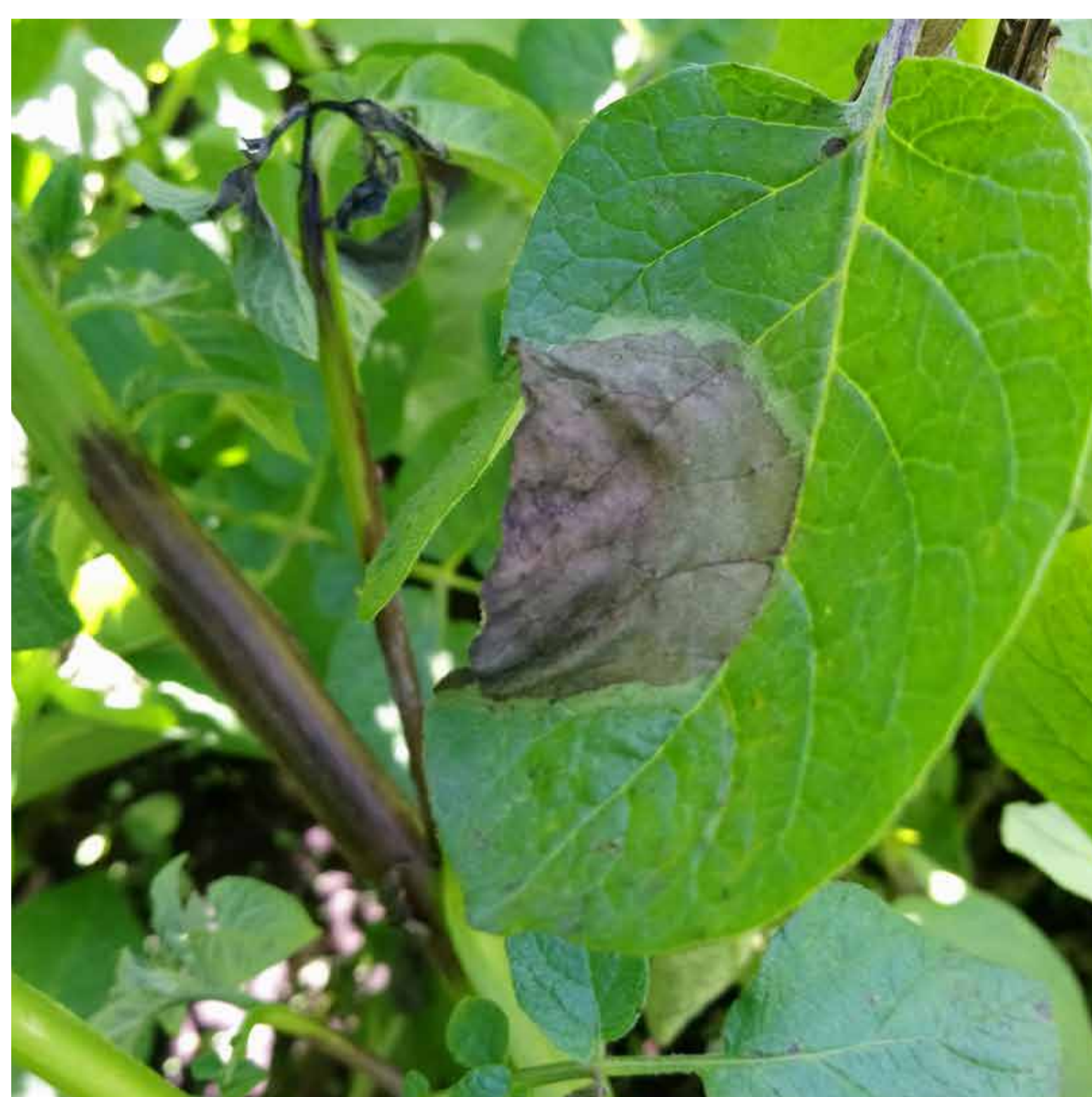


Figure 1. Highlight events of breeding for late blight resistance in Ecuador



Discussions

Traditional breeding has been the main method used by INIAP to get new improved varieties with resistance to diseases (late blight), high yield, earliness and quality. But, due to the large number of traits required to get the ideal potato and the polygenic nature of most of these characters, the probability of success is low. However, the large genotypic variation that exists in the EPC it is an invaluable source of genes for breeding.

Molecular marker technology might support the development of new potato varieties with required characteristics.

The inclusion of other potato genotypes with better characteristics is necessary to get the "ideotype" required. Advanced progenitors from CIP may be alternatives to include in the breeding scheme for late blight resistance

References

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