

International Union for the Protection of New Varieties of Plants

**Working Group on Biochemical and Molecular Techniques** and DNA-Profiling in Particular

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**ADDENDUM TO** A SIMPLE SSR BASED IDENTIFICATION SYSTEM FOR SWEET POTATO

Document prepared by an expert from the United Kingdom

Disclaimer: this document does not represent UPOV policies or guidance

The annex to this document contains a copy of a presentation on "A simple SSR based identification system for sweet potato", made at the eighteenth session of the BMT.

[Annex follows]

#### **ANNEX**



# Sweetpotato or sweet potato?

Over 100m tonnes grown worldwide each year. 6<sup>th</sup> most important crop after rice, wheat, potatoes, maize and cassava.

Originated in Latin America but China is currently the largest sweetpotato producing country in the world (over half of global production is in China). Importance of sweetpotato as a food crop is growing rapidly in some parts of the world. In Sub-Saharan Africa, it is outpacing the growth rate of other staples.

Not a member of the potato family. Also not a yam.

### Source of material



United Kingdom supermarkets fresh (18). United Kingdom supermarkets processed (14). DUS station in Ireland (28 reference varieties and candidates).

Other breeders (3 varieties).

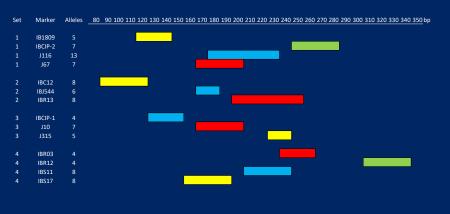
Origins of supermarket samples (where known) Egypt, Guatemala, Senegal, South Africa, Spain, United States of America

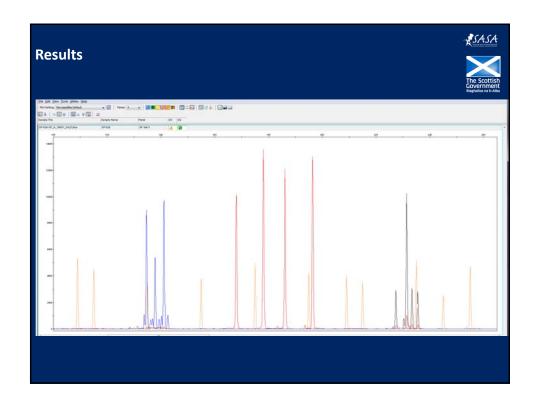
One processed product was potato and sweetpotato mash...

Happy to say we did manage to identify both!

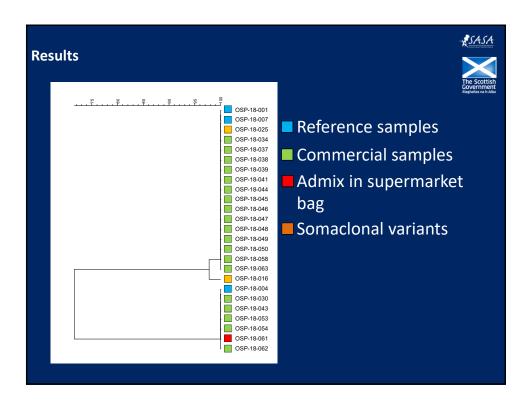
# The assay

After screening a number of markers and optimising the reaction conditions we have a set of 14 markers used in 4 multiplex reactions which yield a total of 94 alleles.









# **Conclusions**



Simple variety identification.

14 SSR markers used in 4 multiplex reactions.

Works with processed products (fries, wedges etc.).

Potential mis-labelled products in supermarkets detected.

Could aid in DUS testing in a similar way we use the potato database.



[End of Annex and of document]