CPVO
Community Plant Variety Office

Vegetable Variety Open Day

Latest Developments in DUS Testing Procedures in Vegetables

Edinburgh (UK), 12 September 2017

Introduction

a) Vegetable applications at the CPVO over time

b) CPVO technical protocols : the basis of DUS tests

c) Increasing emphasis on disease resistances

d) What role for biomolecular techniques?

e) Differentiaton shallot/onion discussions

f) Impact of patents and cooperation CPVO-EPO

g) CPVO/APHA cooperation for Brexit in vegetables

Vegetable applications at the CPVO over time

- Applications for vegetable varieties have continually increased during CPVO existence

- Doubling of figures over past decade.

➢ *In comparison, somewhat stable figures for national listing throughtout EU during same time period.*

- 2016 was record year with a 32% increase !

Number of applications in the vegetable sector (1995 – 7 September 2017)

Vegetable applications at the CPVO over time

- Greatest recent interest for protection has been for varieties of salad crops
- Seems to reflect consumer preferences
- Tomato and lettuce continually vying for first place of top CPVO vegetable species

Main recent applications in the vegetable sector per crop

Vegetable applications at the CPVO over time

- Increase of CPVO salad crop applications went hand in hand with hybrid variety applications
- **Reason:** circumventing use of hybrid seed for future crops by in-vitro/vegetative propagation of plants of the hybrid variety
- According to information provided to CPVO by breeders, it is a problem found particularly amongst plant raisers in southern Europe

Evolution of vegetable parent line v. hybrid applications (1995 – 7 September 2017)

CPVO technical protocols : the basis of DUS tests

- There are currently 54 CPVO vegetable protocols, covering >98% of CPVO vegetable applications
- Common format and principles based upon UPOV test guidelines enables harmonisation of vegetable DUS tests throughout EU
- Almost complete coverage of Vegetable Common Catalogue species with CPVO protocols
  - Ongoing review by EU working group

Increasing emphasis on disease and pest resistance characteristics

- Reflection of breeding trends amongst major vegetable seed companies
- As well as being beneficial for growers and consumers, can greatly assist conduct of DUS test
- 12 CPVO vegetable protocols contain a total of 127 disease resistance characteristics
  - 33 of these are compulsory (signalled by an *)

Increasing emphasis on disease and pest resistance characteristics

Not everything is good news though!

- Differing investment levels on the matter by breeding companies according to national market requirements
- Some examination offices more specialised than others → creates differences in DUS testing capability!
- **Phasing-in period** established in CPVO vegetable protocols for new asterisked disease and pest resistance characteristics

What role for biomolecular techniques?

IMPORTANT :variety protected according to expression of characteristics (phenotype) and NOT genotype

After discussions on the matter over several years, CPVO set up the **IMODDUS** working group to assist DUS testing by using such techniques

- IMODDUS R&D project on the table for tomato: to build up a genetic database of tomato varieties of common knowledge, thereby limiting comparison varieties in DUS test

Differentiation shallot/onion discussions

CPVO protocol TP/46/2 from 2009 outlines a "decision tree" on how to decide whether a candidate variety botanically is a shallot or onion
http://cpvo.europa.eu/sites/default/files/documents/TP/vegetales/TP_046-2_Onion-shallot.pdf

Over the last decade, some breeders focused attention on varieties falling in "grey zone"between both crops, rendering decisions difficult

Trilateral discussions CPVO-Naktuinbouw-GEVES to resolve issue from a technical/taxonomic level

Differentiation shallot/onion discussions

Ongoing duplicate scientific trials in GEVES (FR) and Naktuinbouw (NL) to design precise methodology

Close collaboration with Dutch breeders, French Shallot Association and European Commission

CPVO,Naktuinbouw, GEVES visit to the premises and selection trials of De Groot en Slot (NL)

- Studies concluded and resolve issue in early 2018

Impact of patents and cooperation CPVO-EPO

Europaisches Patentamt
European Patent Office
Office européen des brevets

- Following EPO Enlarged Board of Appeal decision in 2015 on Broccoli II and Tomato II case, CPVO and EPO established collaboration agreement

- **Aim**: Exchange information on plant related patents and PVR between both authorities

- 1st workshop held in Angers in September 2016, focusing on CPVO activities and practical DUS work

Impact of patents and cooperation CPVO-EPO

- **2nd workshop in Munich in March 2017 focused on EPO work, including dealing with plant patent claims, databases, etc.**

- Future collaborative work includes:
  - ✓ Development sophisticated databases for EPO consultation
  - ✓ EPO examiners invited to CPVO crop expert meetings
  - ✓ Collaboration in Pan-Europen Seal programme and possible participation of CPVO in EPO Academy events
  - ✓ Joint CPVO/EPO seminar in Brussels on 29 November 2017

CPVO/APHA cooperation for Brexit in vegetables

- In current uncertainty, some vegetable seed companies have started to apply for UK PVR
- Numerous recent UK vegetable applications also have a prior CPVR application → **priority**
- APHA and breeder inform CPVO on recent UK applications → possibility for "**sleeping rights**" in UK as long as CPVO does not grant first

Summary

- The Vegetable Variety Sector faces several interesting and economical important challenges
- Some of these addressed in greater detail during Open Day via multilateral discussions
- Willingness by stakeholders (CPVO, National authorities, ESA/breeders) to tackle these issues and reach equitable solutions for all

The more colourful the food the better. Just add colour to your diet, which means fruits & vegetables!

THANK YOU
FOR YOUR ATTENTION

Any questions?