



Animal &
Plant Health
Agency

United Kingdom Variety List Trials: Trial Procedures for Official Examination of Value for Cultivation and Use (VCU)

Harvest 2024 Appendices

Potato

June 2024

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Scope

This document contains the appendices for the main guidance document:

United Kingdom Variety List Trials:

Trial Procedures for Official Examination of Value for Cultivation and Use (VCU)
Harvest 2024 – Potato.

Appendix 1 – Approved Trial Organiser/Operators for potato

Activity	Organisers/Operators Responsible
Trials Organiser	SASA
Data Handling Operator	BioSS
Growing Trial Operator	SASA
Pathology Trial Operators	SASA and NIAB
Quality Testing Operator	SASA
Data Review and Standards Calculation	SASA and BioSS

Approved Trials Operators for VCU Assessments

Characteristic	Organisers/Operators Responsible
Foliage blight	SASA
Tuber blight	SASA
Blackleg	SASA
PCN Ro1	SASA
Pa 2/3	SASA, NIAB
Pa 1	SASA, NIAB
Powdery scab	SASA
Common scab	SASA
PVY ^{N-Wilga} , Leafroll PVA, PVY ⁿ	NIAB
External damage	SASA
Internal damage	SASA
Dry rot	
a) <i>F.coeruleum</i>	SASA
b) <i>F.sulphureum</i>	SASA
Yield, internal and external defects	SASA
Cooking quality	SASA
Crisping quality	SASA
French fry quality	SASA
Baking quality	SASA

Appendix 2 – Control varieties for VCU assessments

1. Yield, tuber and consumer quality

1st Early: Premiere, Maris Bard
2nd Early: Maris Peer, Estima
Maincrop: Desiree, Maris Piper

2. Crisping test

All: Lady Rosetta

3. French Fry Test

1st Early: Premiere
Maincrop: Pentland Dell, Maris Piper

4. Baking

Estima

5. Late blight

a. Foliar

Home Guard [1E,4]
Bintje [EM,3], Cara [M, 6], Valor [M,6], Sarpo Mira [M,8], Russet Burbank [M,3]

b. Tuber

Home Guard [1E, 2]
Bintje [EM, 2], Cara [M6], Valor [M,6], Sarpo Mira [M,3]

6. Dry rot

a. *Fusarium coeruleum*

Catriona [2E, 2], Estima [2E, 5], Nadine [2E, 7]
Pentland Squire [M, 3], Sante [M, 8]

b. *Fusarium sulphureum*

Nadine [2E, 2], Nectar [EM, 2], Saxon [2E, 7], Sylvana [EM, 8]
Atlantic [EM, 5], Maris Piper [M, 3], Sante [M, 8]

7. Common scab

Home Guard [1E, 3], Maris Bard [1E, 4]
Estima [2E, 6], Maris Peer [2E, 4]
Maris Piper [M, 2], Desiree [M, 2], Pentland Crown [M, 7]

8. Blackleg

Concurrent [1E, 3], Estima [2E, 4]
Cultra [EM, 7], Morene [M, 4], Ailsa [EM, 8]

9. Viruses

a) Potato leafroll virus

Colleen [1E, 3], Wilja [2E, 6]
King Edward [M, 4], Pentland Crown [M, 7]

b) Potato virus YNWilga

Colleen [1E 7], Wilja [2E ,2]
King Edward [M, 2], Pentland Crown [M, 7], Fontane [M, 9], Melody [M,
8], Mozart [M, 8]

c) Potato virus A

Lady Rosetta [2E, 9], Estima [2E, 2]
Desiree [M, 2], Sante [M, 9]

d) Potato virus Yⁿ

Lady Rosetta [2E, 5], Estima [2E, 2]
Maris Piper [M, 3], Desiree [M ,2], Record [M, 2], Sante [M, 9], Blue
Belle [M,5]

10. Powdery scab

Estima [2E, 3], Accent [1E, 6]
Pentland Crown [M, 7], Cara [M, 7], Sante [M ,8]

11. Potato cyst nematode

a) Ro1: Desiree [M, 2], Estima [2E, 2], Maris Piper [M, 9]

b) Pa: Desiree [M, 2], Maris Piper [M, 2], Vales Everest [M, 6],
Innovator [2E, 9]

12. Damage

a) External (splitting)

Home Guard [1E, 7], Ulster Sceptre [1E, 3]
Maris Peer [2E, 7], Red Craigs Royal [2E, 3]

Maris Piper [M, 7], Russet Burbank [M, 3], Record [M, 6]

b) Internal (bruising)

Home Guard [1E, 5], Ulster Sceptre [1E, 2]

Maris Peer [2E, 3], Red Craigs Royal [2E, 5]

Maris Piper [M, 6], Russet Burbank [M, 3], Record [M, 4]

Appendix 3 – Dates by which records must be sent to Trials Organiser

Record	Latest Date of Receipt by Trials Organiser
Foliage late blight Tuber late blight Blackleg Powdery scab Common scab Yield Internal and external defects Cooking quality Crisp quality	15 November
French fry quality PCN PVY^{N-Wilga} PVYⁿ PVA Leafroll External damage Internal damage Dry rot a) <i>F.coeruleum</i> b) <i>F.sulphureum</i>	15 April

Appendix 4 – Potato VCU trial - tuber records

Recording Sheet Example:

Year:	Centre:	Maturity:	Maincrop
		<i>Second early</i>	
		<i>First early</i>	
Variety Code/Name:			
MARKETABLE (Kg):	> 35mm		
MARKETABLE (Kg):	< 35mm		
UNMARKETABLE (Kg): GROWTH CRACKS			
GREENS			
MISSHAPES			
MECH. DAMAGE			
SLUGS			
CUTWORMS			
WIREWORMS			
C. SCAB > 25% COVER			
BLIGHT			
WET ROTS			
OTHER			
TUBER CHARACTERISTICS: <i>SPECIFIC GRAVITY</i>			
<i>SHAPE UNIFORMITY (1 = poor, 9 = excellent)</i>			
<i>SIZE (1 = < 35mm, 9 = > 85mm)</i>			
<i>SIZE UNIFORMITY (1 = poor, 9 = excellent)</i>			

No of tubers with internal defects (Ref B.7.4.3)	
HOLLOW HEART	
INTERNAL BLEMISH	
OTHER DEFECTS	
NO BLEMISH	

Appendix 5 – Late blight assessment key

(Cruickshank, Stewart & Wastie, 1982. *Potato Research* 25, 213-214)

For coloured images please contact SASA

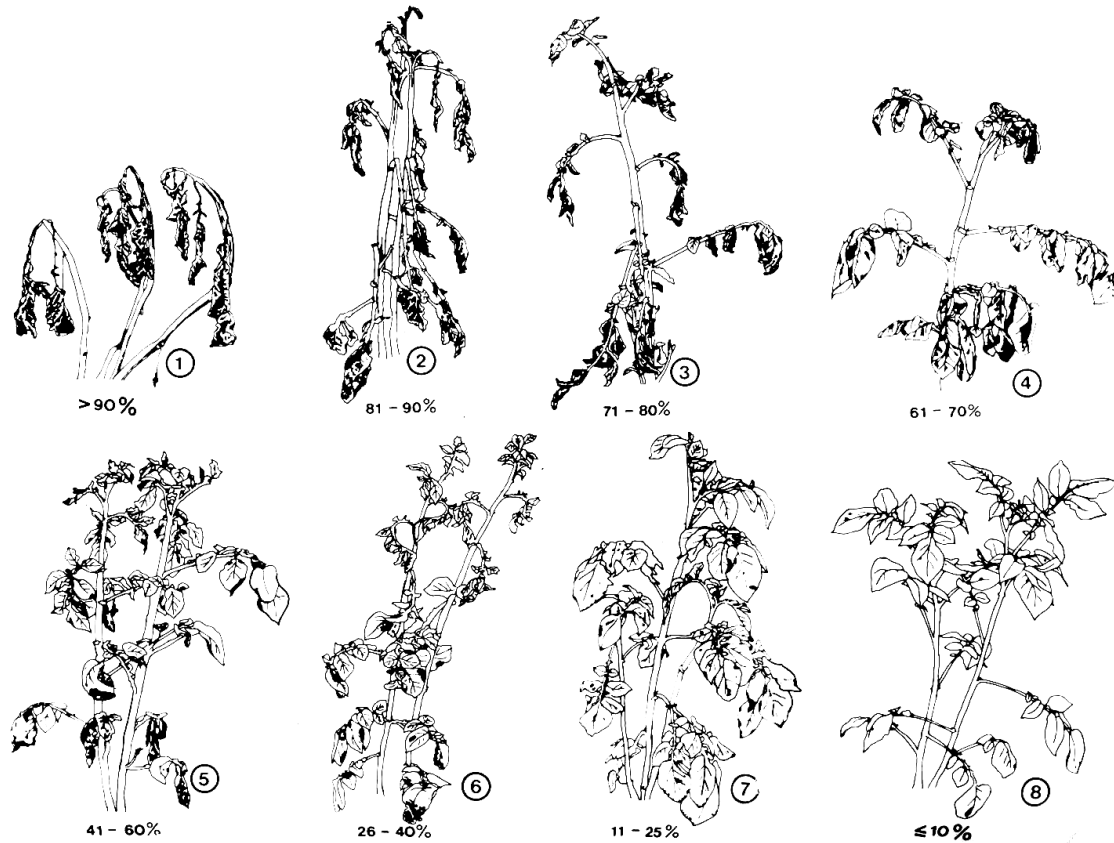


Figure 1. Illustrations to describe the Late Blight assessment key (1 to 8). 1) >90%; 2) 81-90%; 3) 71-80%; 4) 61-70%; 5) 41-60%; 6) 26-40%; 7) 11-25%; 8) ≤10%.

Appendix 6 – Scab assessment key

(Manual of plant growth stages and disease assessment keys, MAFF, ADAS, 1976)

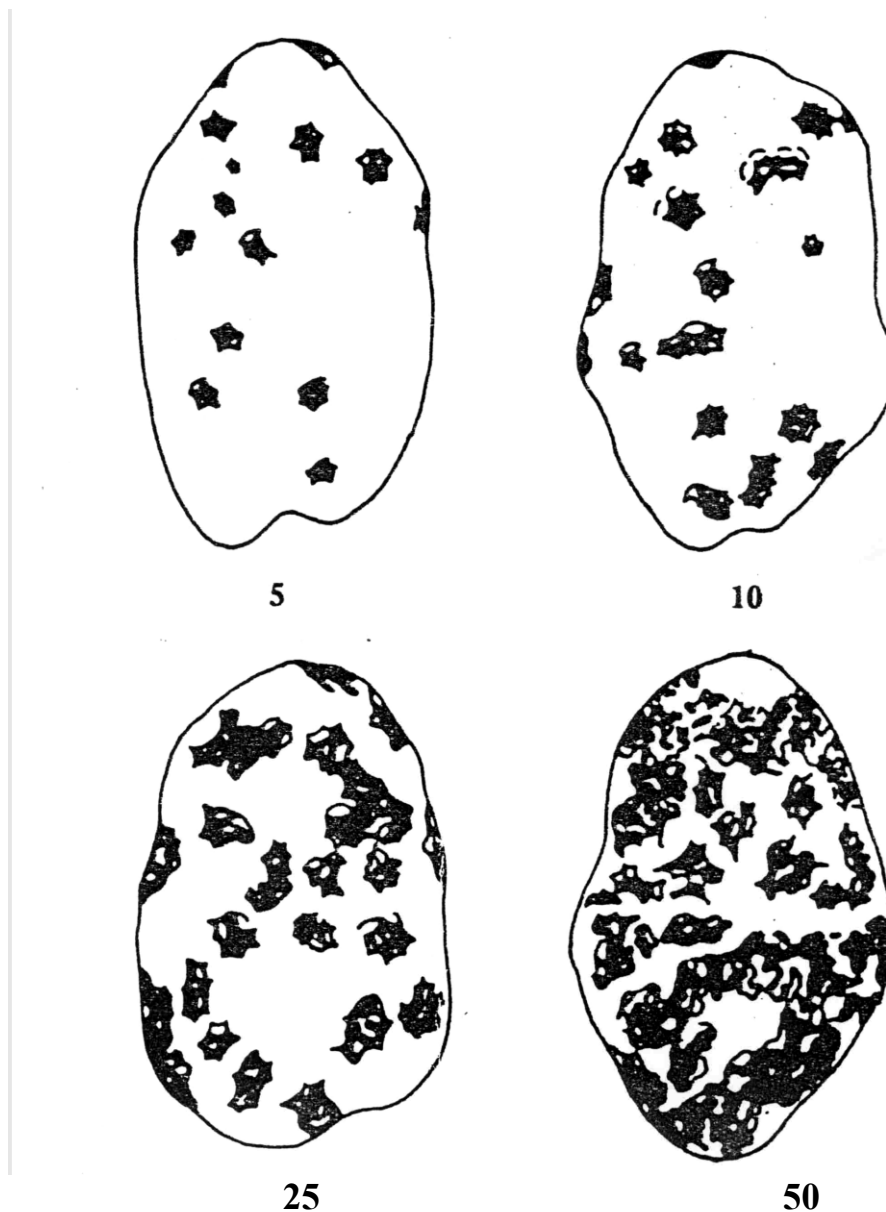


Figure 2. Illustrations to describe the Scab assessment key (5, 10, 25, 50). Black areas indicate the Scab infection. The diagrams should be used as a visual guide for determining the appropriate assessment key to describe the level of infection. This should be based on the distribution and surface area of infection.



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