



Animal &
Plant Health
Agency

United Kingdom Variety List Trials: Trial Procedures for Official Examination of Value for Cultivation and Use (VCU) Harvest 2024

Mustard

Appendices

September 2023

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Appendix 1 – Approved Trial Organisers/ Operators for mustard

Activity	Organisers/Operators Responsible
Trials Organiser	BSPB
Seed Handling Operator	NIAB
Trial Design and Data Handling Operator	NIAB
Pathology Trials Operator	None
Trial Inspection and Technical Validation Operator	BSPB
Quality testing Operator	NIAB
Data Review and Standard Setting Operator	NIAB

Appendix 2 - Seed treatment products for use on NL trials

none

Appendix 3 – Seed despatch deadline dates

VCU seed must be delivered to NIAB by 20th January.

Appendix 4 - VCU Growing Trial Operators and trial locations

Growing Trial Operators/Seed Handling Operators

Growing Trial Operator	Seed Handling Operator (if not trial operator)	Location of trial
NIAB		Cambridge
NIAB		Headley Hall, Yorkshire

Pathology Trials Operator

Pathology Trial Operator	Location of trial
Not applicable	

Appendix 5 - Control varieties for VCU assessments

Brown mustard

Sutton

White mustard

Tilney

Lucida

Brisant

Appendix 6 - Dates by which records should be submitted

To Trials Organiser

Record	Latest date of receipt by Trials Organiser
Site data part 1 (including site sketch)	Within 1 month of drilling trial
Site data part 2	By the time trial is harvested
Plot records (in approved electronic format)	Growing Trial Operator should notify Trials Organiser that trial has been harvested within 2 days of harvest

To Data Handling Operator

Record	Date
Plot records should be sent to Data Handling Operator	Within 10 days of record being taken

Appendix 7 - Growth Stages of Mustard

Growth Stage		
Germination and emergence	0.0	Dry seed
Leaf production	1.0	Both cotyledons unfolded and green
	1.1	First true leaf emerged
	1.2	Second true leaf emerged
	1.3 etc	Third true leaf emerged
Stem extension	2.0	No internodes (rosette)
	2.5	About five internodes
Flowerbud development	3.0	Only leaf buds present
	3.1	Flower buds present but enclosed by leaves
	3.3	Flower buds visible from above ('green bud')
	3.5	Flower buds raised above leaves
	3.6	First flower stalks extending
	3.7	First flower buds yellow ('yellow bud')
Flowering	4.0	First flower opened
	4.1	10% all buds opened
	4.3	30% all buds opened
	4.5	50% all buds opened
Pod development	5.3	30% potential pods
	5.5	50% potential pods

Growth Stage		
	5.7	70% potential pods
	5.9	All potential pods
Seed development	6.1	Seeds expanding
	6.2	Most seeds translucent but full size
	6.3	Most seed green
	6.4	Most seed green-brown mottled
	6.5	Most seeds brown
	6.6	Most seed dark brown
	6.7	Most seed black but soft
	6.8	Most seed black and hard
	6.9	All seeds black and hard
Leaf senescence	7.0	
Stem senescence	8.1	Most stem green
	8.5	Half stem green
	8.9	Little stem green
Pod senescence	9.1	Most pods green
	9.5	Half pods green
	9.9	Few pods green

Appendix 8 – Assessment of Mustard diseases

Use for assessing light leaf spot and stem canker:

1. Examine all leaves and pods in 3 areas of each plot.
2. Ignore all naturally senescent tissue.
3. Include all necrosis and chlorosis attributable to disease.
4. Estimate % infection using the descriptions below. Record the average % infection from the 3 areas. Interpolate values if necessary.

% Infection	Leaves	Pods
0	No infection observable	No infection observable
0.1	Trace of infection	Trace of infection
1	Diseased leaves with 1 small lesion; plants with a few scattered lesions	Terminal raceme with a few scattered lesions
	Leaves appear 1/10 infected; diseased leaves with 2 lesions	Terminal raceme appears 1/10 infected; diseased pods with 1 or 2 lesions
10	Leaves appear ¼ infected; diseased leaves with few large or many small lesions	Terminal raceme appears ¼ infected; diseased pods with 2 or more lesions
25	Area appears ½ infected ½ green	Area appears ½ infected ½ green
50	Area appears more infected than green	Area appears more infected than green
75	Very little green tissue left	Very little green tissue left
100	Leaves/pods dead - no green tissue left	Leaves/pods dead - no green tissue left



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