Animal &
Plant Health
Agency

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

Winter oilseed rape

Appendices

July 2023

Changes

1. Contents

Scope

This document contains the appendices for the main guidance document:

Trial Procedures for Official Examination of Value for Cultivation and Use (VCU) Harvest 2024 – Winter oilseed rape

Appendix 1 – Approved Trial Organisers/ Operators for winter oilseed rape

Activity	Organisers / Operators Responsible
Trials Organiser	BSPB
Seed Handling Operator	NIAB
Data Handling Operator	NIAB
Pathology Trials Operator	NIAB
Trial Inspection	AHDB Cereals and Oilseeds
Technical Validation Operator	AHDB Cereals and Oilseeds
Quality Testing Operator	NIAB
Data Review and Standard Setting Operator	NIAB

Appendix 2 – Seed treatment products for use on VL trials

To be advised

Appendix 3 – Seed despatch deadline dates

VCU seed must be delivered to NIAB Seed Handling Unit by 10 August

Appendix 4 – Growing Trial Operators and trial locations

1. Growing Trial Operators/Seed Handling Operators

Growing Trial Operator	Seed Handling Operator (If not Trial Operator)	Location of trial
Scottish Agronomy	NIAB, SHU	Kirton, Fife
NIAB		Thorne, Yorkshire
Elsoms Seeds Ltd	NIAB. SHU	Harlaxton, Nottinghamshire
Limagrain UK Ltd	NIAB, SHU	Croxby, Lincolnshire
Elsoms Seeds Ltd	NIAB, SHU	Swineshead, Lincolnshire
John Innes Centre (VL 2 Only Reserve)		Bawburgh, Norfolk
NIAB		Bridgend, Mid-Glamorgan
NIAB		Callow, Herefordshire
NIAB (VL1 Only)		Hinxton, Cambridgeshire
NIAB (VL2 only)		Easton Royal, Wiltshire
NIAB (VL2 only)		Birchington, Kent
NIAB		Broughton, Hampshire
KWS UK Ltd	NIAB, SHU	Orford, Suffolk
KWS UK Ltd (VL2 Only)		Duxford, Cambridgeshire
LS Plant Breeding	NIAB, SHU	Wisbech, Cambridgeshire
SRUC (VL2 only)	NIAB, SHU	Mid-Lothian
SRUC (VL2 only)	NIAB, SHU	Angus, Aberdeenshire

Growing Trial Operator	Seed Handling Operator (If not Trial Operator)	Location of trial
NIAB (VL2 only)		Croft, North Yorkshire
NIAB (VL2 only)		Berwick, Northumberland
Scottish Agronomy (VL2 Only)	NIAB, SHU	Scottish Borders

2. Pathology Trials Operator

Pathology Trials Operator	Location of trial
NIAB	Cambridgeshire

Appendix 5 – Control varieties for VCU assessments

Variety	Yield controls
Aurelia	Yield control (Hybrid)
Ambassador	Yield Control (Restored Hybrid)
Aspire	Yield control (Conventional)
Turing	Yield control (Restored Hybrid)
PT303	Yield control (Restored Hybrid) and RH buffer
PX131	Semi-dwarf comparitor and SD buffer
Resort	High erucic control required only if candidates entered
Matrix CL	Clearfield comparator
V316OL	Holl Comparator
Variety	**Disease controls**
DK Exsteel	light leaf spot resistance
PT279CL	light leaf spot susceptible
Aurelia	RL Agronomy index link
Aspire	RL Agronomy index link
Resort	light leaf spot susceptible

Appendix 6 – Dates for submission of data

To Trials Organiser

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

Plot Records to Data Handling Operator

Record	Date
Plot records	Non-yield field data: Within 10 days of record being taken or by date of harvest. Yield and moisture data: Within 3 days of harvest date. Quality data: Within 3 days of receipt of samples.

Plot samples to Quality Testing Operator

Samples	Date
Plot samples for quality testing	Within 2 days of harvest.

Appendix 7 – Growth stages of oilseed rape

Main Growth Stage	Growth stage	Description of 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
Flower bud 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

Main Growth Stage	Growth stage	Description of Growth Stage
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 oilseed rape diseases

Use for assessing light leaf spot, Alternaria, downy mildew,

Phoma and white leaf spot on leaves and pods

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
5	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

Other disease assessments:

Club root
Any suspected club root in trials should be confirmed by sampling 30 plants within the suspected area, and its presence notified to the co-ordinators.

Sclerotinia %
Should be assessed as the % of stems with complete girdling leading to 'whiteheads' within a plot.

Botrytis%
Should be assessed as the % of stems infected within a plot.

Stem canker
Stem canker may be assessed by pulling up 30 stems per plot before harvest. Stems should be pulled at random throughout the plot, but since access is likely to be very difficult, aim to take 15 stems from the second drill row on each side of the plot, using the first 3-5m of the plot length. Appropriate sampling times are usually from the middle of June onwards. If sampling is not carried out prior to swathing, it must be done **as soon as possible afterwards, within a maximum of 2 days.**

Verticilium %
Should be assessed as the % of stems infected within a plot when the symptoms are clearly visible. Its presence should be notified to the co-ordinators.

Appendix 9 – Winter hardiness assessment key

This is scored on a 1-9 scale. A high figure shows good winter hardiness

1. Total loss of plant
2. Very severe leaf damage, up to 75% loss of plants
3. Very severe leaf damage, up to 50% loss of plants
4. Severe leaf damage, severe leaf loss, up to 25% loss of plants estimated
5. Severe leaf damage, loss of lower leaves and slight loss of plants
6. Severe leaf scorch, loss of lower leaves
7. Moderate leaf scorch
8. Slight to very slight leaf scorch
9. No damage

Appendix 10 – Fungicide and early insecticide protocol for winter oilseed rape variety trials 2023

Last updated: August 2022

Recommendations by Paul Gosling, BASIS Registration number R/E/8107/IFM.

RL Trials Co-ordinator: Mark Bollebakker 01480 482989
NL Co-ordinator: Jeremy Widdowson 01353 653846

This programme is for use on AHDB Recommended List and National List winter oilseed rape trials in 2023:

- For spring and summer applications to trials for harvest 2023.
- For autumn applications to trials to be harvested in 2023.

It is an experimental protocol and is designed to meet the protocol aim of keeping disease levels in treated plots as low as is possible in all varieties and in all trials. It is not intended to follow commercial practice.

Please note that most treatments are compulsory, and the rates and timings specified should be adhered to as closely as possible. The protocol is robust and, if applied correctly, should be effective. **If, however, disease levels rise above 5% (e.g., if weather conditions do not allow optimal application), please contact Mark Bollebakker (RL) or Jeremy Widdowson (NL) to discuss an appropriate course of action.**

Fungicides should be applied at the stated dose rates unless agreed otherwise with the regional advisors via the RL Trials Co-ordinator. Changes to dose rates will only be sanctioned in exceptional circumstances.

Please contact the RL Trials Co-ordinator or NL Co-ordinator if you have any difficulty in sourcing a particular product.

In some cases, two or more products may be available from a company with the same active substances and formulation; if you wish to use such a product and it is not listed in this protocol, contact the RL Trials Co-ordinator or NL Co-ordinator. Generic products should be avoided as they may contain the same active substances but in a different formulation.

Important: Every care has been taken to ensure that all mixtures, rates and timings are approved, meeting COSSH regulations and manufacturer's guidelines. However, it is the responsibility of the Trial Manager to ensure that they meet all current regulations at the time of application. The Trials Co-ordinators should be notified of any conflict between the protocol and current regulations.

Products, active substances and manufacturers

Product	Type	Active substance	Amount of active substance	Manufacturer
Filan	Fungicide	Boscalid	50% w/w	BASF
Hallmark Zeon	Insecticide	Lambda-cyhalothrin and 1,2-benzisothiazolin-3-one	100 g/l	Syngenta
Pictor	Fungicide	Boscalid + Dimoxystrobin	200:200 g/l	BASF
Proline 275	Fungicide	Prothioconazole	275 g/l	Bayer

WINTER OILSEED RAPE - SPRING 2023

Fungicide Protocol for the North and East/West regions

Target	Treatment timing	Product / active ingredient	Rate
Target Foliar diseases	Onset of spring growth prior to stem extension	Proline 275	0.63 l/ha
Target Alternaria, Botrytis and Scierotinia	Onset of spring growth prior to stem extension	Pictor	0.375 - 0.5 l/ha*
To target sclerotinia	Onset of spring growth prior to stem extension	Pictor	0.375 - 0.5 l/ha*

***Note:** If there is a strong likelihood that soil or weather conditions will prohibit the application of the second Pictor spray, then apply full rate Pictor at this timing (maximum of 0.5 l/he permitted).

Note: G.S.4.5 - 5.0 (up to 3 weeks later or just prior to 50% of pods at final size (G.S.75 BBCH)

Note: a fungicide application for Sclerotinia control should be applied to untreated trials especially where these trials are taken to yield.

WINTER OILSEED RAPE - Autumn 2023 (for the 2023/24 harvest year).

Insecticide Protocol – both North and East/West regions

IMPORTANT: FLEA BEETLE

If, during the establishment period, AHDB thresholds are exceeded or if the crop is growing more slowly than it is being destroyed, apply Hallmark Zeon (75 ml/ha) and repeat in 10-14 days if necessary. If, after using Hallmark, control is poor, a repeat spray should NOT be applied. Do not apply Hallmark if an insecticide with an alternative mode of action is authorised. Trial Managers must check with a BASIS qualified advisor before application.

APHIDS: Apply Teppeki (0.1 kg/ha) up to 8 true leaves unfolded at the first fungicide timing to control the peach-potato aphid vectors if populations are high as indicated in AHDB Aphid News (ahdb.org.uk/aphidnews).

This publication is available at www.gov.uk/government/publications

Any enquiries regarding this publication should be sent to us at

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www.gov.uk/apha

The Animal and Plant Health Agency (APHA) is an executive agency of the Department for Environment, Food & Rural Affairs, and also works on behalf of the Scottish Government and Welsh Government.