The Animal and Plant Health Agency
Scottish Government
Welsh Government
Department of Agriculture and Rural Development

Official Use Only				
Ref.	AFP	57	/	
GM	Yes		No	
Other Restrictions	Yes		No	

Technical Questionnaire (TURNIP)

Plant Varieties Act 1997 and
The Seeds (National Lists of Varieties) Regulations 2001 (as amended)

Please note:

- The completed TQ and the application will form part of the public record for this variety
- The seed submitted for DUS in the first year will be regarded as the definitive stock
- All relative sections of this form **must** be completed. An incomplete form may result in a delay in processing the application
- Completed forms should be e-mailed to NLPBR-Applications@apha.gsi.gov.uk
- Alternatively forms may be sent to:

The Animal and Plant Health Agency, Eastbrook, Shaftesbury Road, Cambridge, CB2 8DR
Telephone 0208 026 5993.

Section 1 - Application Details

(a) **National Listing (NL)** ☐ **Plant Breeders' Rights (PBR)** ☐ **Parental Line (PL)** ☐

(b) Species: Latin name ***Brassica rapa* L. var. *rapa* L.**

(c) Please give details of applications already made or to be made in any other countries

Country	Date	Application No.	NL	PBR	Variety name or Breeders' reference

(d) Has an application for European Community Plant Breeders' Rights (ECPBR) been made?.....Yes ☐ No ☐

If '**Yes**', Please state date of application

Section 2 – Applicant details

(a) Name and address of applicant for

- National Listing:
- Plant Breeders' Rights (if different)

Name and address of breeder:

Name and address for correspondence:
Is the address for:

- service ☐ or
- agent ☐

An agent is authorised to act for the applicant on all aspects of an application, including instructions to withdraw applications, delete from a National List or surrender Plant Breeders' Rights

Section 3 - Variety denomination

(a) Where appropriate proposal for a variety denomination

(b) Provisional designation (breeder's name/reference)

Section 4 - Information on origin, maintenance and reproduction of the variety

4.1 Do you wish the details and data relating to components of hybrid varieties including data related to their cultivation to be treated as confidential? Yes ☐ No ☐

If 'yes', please give this information on the separate form for confidential information.

If 'no', please give information on data relating to the components of hybrid varieties including data related to their cultivation.

Breeding scheme (indicate female component first)

4.2 Origin

(a) Seedling (indicate parent varieties). ☐

(b) Mutation (indicate parent variety) ☐

(c) Discovery (indicate where, when and how the variety has been developed) ☐

(d) Other (please specify) ☐

4.3 Method of propagation

(a) Cuttings ☐

(b) *In vitro* propagation ☐

(c) Seed ☐

(d) Other (please specify) ☐

4.4 Other information

In the case of seed propagated varieties: method of production:

(a) Self-pollinated ☐

(b) Open-pollinated ☐

(c) Single hybrid ☐

(d) Three-way hybrid ☐

(e) Other (please give details). ☐

4.5 Managing the risk of adventitious GM presence

(a) The region and the country in which the variety was bred or discovered and developed

(b) Country of origin of the seed of the candidate variety

(c) Are you currently a participant in the voluntary AGMP risk audit programme run by the GM Inspectorate for England on behalf of Defra? Yes ☐ No ☐

If **'No'** please provide an assessment of your company's quality assurance measures with respect to adventitious GM presence in conventional seed

Section 5 – Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in the UPOV Test Guideline; please mark the state of expression which best corresponds).
Please supply a photograph of a typical mature plant.

Characteristic	Example varieties	Note	
5.1 (1) Ploidy			
Diploid	Milan White	2	☐
Tetraploid	Taronda	4	☐
5.2 (4) Leaf: green colour			
Very light		1	☐
Light	Leielander	3	☐
Medium	Bency	5	☐
Dark	Frisia	7	☐
Very dark	Aberdeen Green Top Yellow	9	☐
5.3 (5) Leaf: type			
Entire	Polybra	1	☐
Lobed	Samson	2	☐
5.4 (10) Leaf: length			
Short	Milan White Forcing	3	☐
Medium	Tokyo Cross	5	☐
Long	Tyfon	7	☐

	Characteristic	Example varieties	Note	
5.5 (16)	**Root: position in soil**			
	Very shallow	Milan White Forcing	1	
	Shallow	Oasis	3	
	Medium	Agressa	5	
	Deep	Noir long	7	
	Very deep	Telltower Kleine	9	
5.6 (17)	**Root: thick cork layer around skin**			
	Absent	Bency	1	
	Present	Noir long	9	
5.7 (18)	**Root: colour of skin above soil**			
	White	Tokyo Cross	1	
	Green	Leielader	2	
	Yellow	Topaz	3	
	Orange	Golden Ball	4	
	Bronze	Grandessa	5	
	Scarlet	Scarlet Ball	6	
	Reddish purple	Bency	7	
	Bluish purple	The Bruce	8	
5.8 (21)	**Root: Colour of flesh**			
	White	Agressa	1	
	Yellow	Teutengold	2	
5.9 (24)	**Root: shape in longitudinal section**			
	Transverse narrow elliptic	Platte Witte Mei	1	
	Transverse elliptic	Milan White	2	
	Circular	Rondo	3	
	Obovate	Alwi	4	
	Square	Champion Green Top Yellow	5	
	Broad oblong	Rekord	6	
	Narrow oblong	Long d'Alsace	7	
	Obtriangular	Sirius	8	

Characteristic	Example varieties	Note
5.10 Root: length (25)		
Very short	Milan White	1 ☐
Short	The Wallace	3 ☐
Medium	Dynamo	5 ☐
Long	Taronda	7 ☐
Very long	Alander	9 ☐
5.11 Root: diameter (at widest point) (35)		
Small	Hakutaka	3 ☐
Medium	Rondo	5 ☐
Large	Massif	7 ☐
5.12 Root: position of widest point (27)		
Above middle	Marteau	3 ☐
Middle	Taronda	5 ☐
Bellow middle	Blanc dur d'hiver	7 ☐
5.13 Root: shape at top (29)		
Strongly indented		1 ☐
Indented	Milan White Forcing	3 ☐
Flat	Milan White	5 ☐
Raised	Taronda	7 ☐
Strongly raised	Agressa	9 ☐
5.14 Root: shape at base (30)		
Indented	Milan White Forcing	1 ☐
Truncate	Milan White	3 ☐
Rounded	Taronda	5 ☐
Obtuse	Sirius	7 ☐
Pointed	Noir long	9 ☐
5.15 Leaf: attitude (2)		
Erect	Samson	1 ☐
Semi-erect	Agressa	3 ☐
Horizontal	Teltower Kleine	5 ☐

Section 6 – Similar varieties and differences from these varieties:

Denomination of similar variety	Characteristic in which the similar variety is different[1]	State of expression of similar variety	State of expression of candidate variety

[1] In the case of identical states of expression of both varieties, please indicate the size of the difference.

Section 7 - Additional information which may help to distinguish the variety

7.1 Resistance to pests and diseases

7.2 Main use

Root vegetable ☐

Stubble or Forage Turnip ☐

7.3 Time of sowing

Spring sown ☐

Summer sown ☐

Autumn sown ☐

7.4 Special conditions for the examination of the variety

☐ Yes, please specify

☐ No

If it is agreed to carry out a special DUS test an appropriate charge will be levied

7.5 Other information

☐ Yes, please specify

☐ No

Section 8 - GMO and other Novel types

Does this application relate to a Genetically Modified Organism as defined in Section 106 of the Environmental Protection Act 1990? Yes ☐ No ☐

If "Yes" you must complete form PVS9/B Genetically Modified and other Novel Candidates.

Section 9 - Information on plant material to be examined

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides).

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a) Micro-organisms (eg virus, bacteria, phytoplasma)	Yes	☐	No	☐
(b) Chemical treatment (eg growth retardant or pesticide)	Yes	☐	No	☐
(c) Tissue culture	Yes	☐	No	☐
(d) Other factors	Yes	☐	No	☐

Please provide details of where you have indicated "Yes"

Declaration

I/We declare that to the best of my/our knowledge and belief the statements made in this Technical Questionnaire are correct

Signature of Applicant | Date

(original signature unless emailed)

Name in BLOCK letters | **Lock this form**

For and on behalf of