

# CRUCIFER AND OTHER OIL OR FIBRE SPECIES

## -- Cruciferae --

### BROWN MUSTARD

(*Brassica juncea* L. Czernj. et Cosson)

Stage of examination	UPOV character number #	Character description
<b><u>PRIMARY</u></b>		
Vegetative	-	seed cotyledons: length
	-	seed cotyledons: width
	-	leaf: colour
	-	leaf: number of lobes
	-	leaf: length
	-	leaf: width
	-	leaf: glaucosity
	-	leaf: pubescence
	-	petiole: length
At the time of bud emergence	-	plant: height
At flowering	-	time of flowering (50% of plants with open flowers)
	-	flower: petal colour
At maturity	-	plant: length of stem
	-	plant: thickness of stem
	-	plant: number of internodes
	-	siliqua: length (between stalk and beak)
	-	siliqua: length of beak
	-	siliqua: width
	-	siliqua: length of stalk
Seed	-	seed: testa colour
	-	seed: reticulation
	-	seed: 1000 seed weight
Seedling	-	ploidy: number

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**BROWN MUSTARD**  
(continued)  
(*Brassica juncea* L. Czernj. et Cosson)

Stage of examination	UPOV Character Number #	Character description
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**SECONDARY**

Vegetative	-	leaf: number of leaves on fully developed plant
	-	leaf: undulation of margins
	-	leaf: indentation of margins
At flowering	-	flower: petal length
	-	flower: petal width
	-	pod: pubescence

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# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species.

Sources: CAN, DEU

This species is also known as Oriental Mustard.

**SWEDE**  
(*Brassica napus* L. var *napobrassica* (L.) Rchb.)

Stage of examination	UPOV Character number *	Character description
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**PRIMARY**

Vegetative	1	leaf: attitude
	2	leaf: colour
	3	leaf: glaucosity
	4	leaf: lobes
	12	root: anthocyanin colour of skin above soil level
	13	root: intensity of anthocyanin colour of skin above soil level
	15	root: shape
	18	root: length of neck

**SECONDARY**

Vegetative	5	leaf: number of major lobes
	6	leaf: size of terminal lobe
	7	leaf: total length of longest green leaf (including petiole)
	8	leaf: width of widest point
	9	leaf: number of minor lobes between major lobes
	10	leaf: number of minor lobes on petiole
	11	leaf: thickness of petiole
	14	root: colour of skin below soil level
	16	root: length
	17	root: width
	19	root: colour of neck surface between leaf scars
	20	root: colour of flesh
	21	root: intensity of yellow colour of flesh

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/89/3 (7.11.1984)

**RAPE, FODDER RAPE**  
(*Brassica napus* L. var *oleifera* delile)

Stage of examination	UPOV Character number *	Character description
<b><u>PRIMARY</u></b>		
Vegetative	3	leaf: indentation of margin
	4	leaf: development of lobes (on a fully developed leaf of rosette; if no rosette is formed, on a fully developed leaf)
	5	leaf blade: colour
At flowering	7	time of flowering: first flower open on 50% of plants (from autumn sowing)
	8	petal: colour
At maturity	6	stem: length of mains stem (from autumn sowings)
<b><u>SECONDARY</u></b>		
Vegetative	2	seed cotyledons: maximum width (fully developed)
At flowering	9	anther: dotting (at opening of flower)
At maturity	10	silique: length of beak
	1	seed: erucic acid

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/36/3 Corr. (1.9.1978)  
Formerly classified as *Brassica napus* (var. *oleifera* Subvar. *annua* and Subvar. *biennis*) L.

**FODDER KALE**  
(*Brassica oleracea* L. *convar acephala*)

Stage of examination	UPOV Character Number #	Character description
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**PRIMARY AND SECONDARY**

Vegetative	-	leaf: length
	-	leaf: width
	-	leaf: shape
	-	leaf: growth habit
	-	leaf: colour
	-	leaf: anthocyanin colouration
	-	leaf: attitude
	-	leaf: glaucosity
	-	leaf: lobing
	-	leaf: undulation of margin
	-	leaf: blistering
	-	leaf: pubescence
	At harvest maturity	-
-		stem: thickness
-		stem: hardness
-		stem: leaf scar
-		stem: anthocyanin colouration
-		stem: branching
At flowering in second year	-	time of flowering
	-	flower: petal colour
At maturity	-	siliqua: length between peduncle and beak
	-	siliqua: length of beak
Seed	-	seed: 1000 seed weight
Seedling	-	ploidy: number

# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species.

Sources: NZL, SWE, DEU, FRA

**TURNIP RAPE**  
(*Brassica rapa* L.)

Stage of examination	UPOV Character Number *	Character description
<b><u>PRIMARY</u></b>		
Vegetative	9	leaf: lobes
At flowering	37	plant: height (at appearance of flowering bud)
	39	time of flowering in year of sowing for spring sown trials (50% of plants with at least one open
	42	flower: petal colour
<b><u>SECONDARY</u></b>		
Vegetative	3	cotyledon: length
	4	cotyledon: width
	8	leaf: green colour
	10	leaf: number of lobes on fully developed leaf
	12	leaf: undulation of margin
At flowering	13	leaf: dentation of margin
	43	flower: length of petal
At maturity	44	flower: width of petal
	51	seed: colour (of ripe seed)
	52	seed: 1000 seed weight
	1	erucic acid

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.

Doc No. TG/37/7 (21.10.1988)

Also known as *Brassica campestris* L., *Brassica chinensis* and *Brassica pekinensis* L.

**FODDER RADISH**  
(*Raphanus sativus* L.)

Stage of examination	UPOV Character Number *	Character description
<b><u>PRIMARY</u></b>		
Vegetative [All characteristics of the leaf should be recorded on the fully developed 4th leaf at harvest maturity.]	5	leaf: attitude
	6	leaf: length
	9	leaf blade: colour
	11	leaf blade: lobes (division to midrib)
	12	leaf blade: number of lobes (division to midrib)
	17	petiole: anthocyanin colouration
	[All characteristics of the radish should be recorded at harvest maturity.]	19
21		radish: shape
24		radish: colouration of skin
25		radish: colour of upper part
At maturity	32	time of harvest maturity
Seedling	1	ploidy: number

\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/64/3 (12.11.1980)

Also classified as *Raphanus sativus* L. var *oleiferus*,  
*Raphanus sativus* L. var *oleiformis* Pers.

**WHITE MUSTARD**  
(*Sinapis alba* L.)

Stage of examination	UPOV character number #	Character description
<b><u>PRIMARY</u></b>		
Vegetative	-	seed cotyledons: length
	-	seed cotyledons: width
	-	leaf: colour
	-	leaf: size
	-	leaf: shape
	-	leaf: number of lobes
	-	leaf: length
	-	leaf: width
	-	leaf: glaucosity
	-	leaf: pubescence
	-	petiole: length
At time of bud emergence	-	plant: height
At flowering	-	time of flowering (50% of plants with open flowers)
	-	flower: petal colour
At maturity	-	plant: length of stem
	-	plant: thickness of stem
	-	plant: number of internodes
	-	siliqua: length (between stalk and beak)
	-	siliqua: length of beak
	-	siliqua: width
	-	siliqua: length of stalk
Seed	-	seed: testa colour
	-	seed: reticulation
	-	seed: 1000 seed weight

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## WHITE MUSTARD

(continued)

(*Sinapis alba* L.)

Stage of examination	UPOV character number #	Character description
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### **SECONDARY**

Vegetative	-	leaf: number of leaves on developed plants
	-	leaf: margin undulation
	-	leaf: margin indentation
At flowering	-	flower: petal length
	-	flower: petal width
	-	pod: pubescence

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# There is no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species.

Sources: NLD, CAN, DEU

Also known as Yellow Mustard

## CRUCIFERS AND OTHER OIL OR FIBER SPECIES

### -- Other Species --

#### GROUNDNUT, PEANUT (*Arachis hypogaea* L.)

Stage of examination	UPOV character number *	Character description
<b><u>PRIMARY</u></b>		
At flowering	1	plant: growth habit
	8	flowering: general pattern
At pod development	10	pod: constrictions
	13	pod: prominence of beak
	14	pod: shape of beak
	15	kernal: colour of uncured mature testa
	19	kernal: weight per 1000 kernals at 7% moisture

\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/93/3 (13.11.1985)

**HEMP**  
(*Cannabis sativa* L.)

Stage of examination	UPOV character number #	Character description
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**PRIMARY AND SECONDARY**

At flowering	-	plant: height
	-	stem: colour
	-	leaflet: width
	-	plant: sex expression
	-	plant: % female plants
	-	plant: % male plants
	-	plant: % of plants with male and female flowers
	-	time of flowering
At maturity	-	plant: time of ripening

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# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species.

Sources: HUN, FRA

**SAFFLOWER**  
(*Carthamus tinctorius* L.)

Stage of examination	UPOV Character Number *	Character description
<b><u>PRIMARY</u></b>		
At beginning of flowering	8	time of flower (50% of plants with at least one open inflorescence)
At flowering	10	plant: height
	12	petal: colour
Sixth leaf	13	leaf: green colour
	17	leaf: shape
	18	leaf: number of spines
	20	capitulum: length of middle bract
At maturity	21	capitulum: width of middle bract
	26	grain: size
	27	grain: colour

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/134/3 (12.10.1990)

**CARAWAY**  
(*Carum carvi* L.)

Stage of examination	UPOV character number #	Character description
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**PRIMARY AND SECONDARY**

At flowering	-	plant: height
	-	flower: shape
	-	flower: colour of petals
	-	time of flowering
	-	abscission layer: absence or presence

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# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species.

Source: NLD

**WITLOOF CHICORY**  
(*Cichorium intybus* L. (partim))

Stage of examination	UPOV character number #	Character description
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**PRIMARY AND SECONDARY**

Vegetative	-	plant: height
	-	leaf: attitude
	-	leaf: length
	-	leaf: breadth
	-	leaf: shape
	-	leaf: green colour
	-	leaf: gloss
	-	leaf: upper surface
	-	leaf: blistering
	-	petiole: anthocyanin colouration
	-	leaf margin: incisions
	-	leaf margin: depth of incisions
	-	root: size
	-	root: diameter
	-	root: shape
	-	chicon: size
	-	chicon: length
	-	chicon: diameter
	-	chicon: shape
	-	chicon: top shape
	-	chicon: position of maximum diameter
	-	chicon: colour
	-	chicon: anthocyanin
-	chicon: apex closure	
-	chicon: density	
-	chicon: core	

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# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species

**COTTON**  
(*Gossypium* spp)

Stage of examination	UPOV character number *	Character description	
<b><u>PRIMARY</u></b>			
Vegetative	1	plant: shape	
	3	plant: height	
	7	leaf: shape	
	8	leaf: size	
At flowering	12	flower: colour of petal (at opening)	
At maturity	13	boll: size	
<b><u>SECONDARY</u></b>			
Vegetative	2	plant: density of foliage	
	4	plant: number of nodes to first fruiting branch	
	5	plant: length of longest vegetative branch	
	6	plant: length of first fruiting branch	
	9	leaf: pubescence of midrib (lower side)	
	10	leaf: gossypol glands	
	11	leaf: nectaries	
	At maturity	14	boll: shape (in longitudinal section)
		15	boll: pitting of surface
		16	boll: length of peduncle
		17	boll: prominence of tip
18		seed: density of fuzz	
19		boll: content of lint	
20		fibre: length	
21		fibre: strength	
22	fibre: fineness		
	23	seed: size	
	24	boll: opening	

\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/88/3 (13.11.1985)

**SUNFLOWER**  
(*Helianthus annuus* L.)

Stage of examination	UPOV Character Number *	Character description
<b><u>PRIMARY</u></b>		
Vegetative	3	leaf: shape
	4	leaf: colour
At flowering	17	time of flowering
	19	ray flower: shape
	20	ray flower: colour
	21	disk flower: colour
At maturity	27	head: attitude
	30	plant: natural height
<b><u>SECONDARY</u></b>		
Vegetative	1	hypocotyl: anthocyanin colour (at cotyledon stage)
	2	leaf: size
	5	leaf: anthocyanin colour (on margin of young leaves before flowering)
	6	leaf: glossiness
	7	leaf: blistering
	8	leaf: fineness of serration
	9	leaf: regularity of serration
	10	leaf: shape of cross section
	11	leaf: wings
	12	leaf: angle of lateral veins

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**SUNFLOWER**  
(continued)  
(*Helianthus annuus* L.)

Stage of examination	UPOV Character Number *	Character description
	13	leaf: height of the tip of the blade compared to insertion of petiole (at two-thirds height of plants)
	14	leaf: angle between lower part of petiole and stem
At flowering	15	stem: hairiness at the top
	16	stem: number of leaves on main stem
	18	ray flowers: number
	22	disk flower: anthocyanin colour of stigma
	23	head: number of bracts on the back
	24	bract: shape
	25	bract: anthocyanin colour
At end of flowering	26	plant: natural position of closest lateral head to the central head
	28	head: size
	29	head: shape of grain side
	31	plant: branching
	32	plant: type of branching
	33	seed: size
	34	seed: shape
	35	seed: thickness
	36	seed: main colour
	37	seed: mottling
	38	seed: stripes
	39	seed: colour of stripes
	40	seed: position of stripes

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/81/3 (4.10.1983)

**FLAX, LINSEED**  
(*Linum usitatissimum* L.)

Stage of examination	UPOV character number *	Character description
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**PRIMARY**

At time of flowering	1	plant: natural height including branches
	5	flower: petal colour
	7	flower: colour of stamen filament (at top)
	8	flower: anther colour (at opening of flower)
	9	flower: style colour (at base)
	15	time of beginning of flowering: (first flower open on 10% of plants)

**SECONDARY**

At time of flowering	3	flower: size of corolla (at beginning of flowering)
	4	flower: sepal dotting
	6	flower: petal longitudinal folding
At green maturity	2	stem: length
	10	boll: size
	11	boll: ciliation of false septa
At maturity	12	grain: 1000 seed weight
	13	grain: colour
	14	grain: intensity of brown colouration

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/57/3 (12.11.1980)

**POPPY**  
(*Papaver somniferum* L.)

Stage of examination	UPOV character number #	Character description
<b><u>PRIMARY</u></b>		
At flowering	-	leaf: size
	-	leaf: shape
	-	leaf: glaucosity
	-	time of full flowering (at least one open flower on 50% of plants)
	-	stem: anthocyanin colour
	-	flower: petal colour
	-	flower: petal margin
	-	flower: coloured spot
	-	flower: size
	At maturity	-
-		stem: length
-		time of maturity
-		capsule: size
-		capsule: shape
-		capsule: glaucosity
Seed	-	seed: size
	-	seed: shape
	-	seed: colour
	-	seed: undertone of blue colour
<b><u>SECONDARY</u></b>		
At clearly visible flower bud	-	stem: anthocyanin tint
	-	stem: pubescence under capsule
At maturity	-	capsule: base
Seed	-	seed: morphine content*

# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species.

Sources: POL, NLD, SWE, AUT

\* morphine content can also be analysed in small plants

**CALIFORNIA BLUEBELL**  
(*Phacelia tanacetifolia* Benth)

Stage of examination	UPOV character number #	Character description
<b><u>PRIMARY AND SECONDARY</u></b>		
At time of bud emergence	-	plant: natural height
	-	plant: growth habit
	-	leaf: colour
	-	leaf: anthocyanin colouration
	-	leaf: division of leaflet
At flowering	-	leaf: length of leaflet
	-	time of flowering (when 50% of plants begin to flower)
	-	plant: natural height
	-	stem: colour
At maturity	-	inflorescence: colour
	-	stem: length including inflorescence
	-	stem: pubescence
	-	stem: thickness
	-	stem: number of internodes
Seed	-	inflorescence: length
	-	seed: 1000 seed weight
Seedling	-	ploidy: number

# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species.

Sources: POL, CZE, DEU