

# CEREALS

## OATS and NAKED OATS (*Avena sativa* L. et *Avens nuda* L )

Stage of examination	UPOV Character number *	Character description
<b><u>PRIMARY</u></b>		
At earing	4	time of spikelet emergence (first spikelet visible on 50% of panicles)
	5	flag leaf: attitude
	8	panicle: orientation of branches
	9	panicle: attitude of branches
	10	panicle: attitude of spikelets
	11	glume: length
	12	glume: glaucosity
	15	plant: height (stem and panicle)
<b><u>SECONDARY</u></b>		
At flowering	1	plant: habit of growth
	2	lower leaves: hairiness of sheaths
At earing	3	margins of leaf below flag leaf: hairiness
	6	stem: hairiness of uppermost node
	7	stem: intensity of hairiness of uppermost node
	26	seasonal type
At maturity	13	primary grain: glaucosity of lemma
	14	primary grain: intensity of glaucosity of lemma
	17	primary grain: tendency to be awned

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**OATS and NAKED OATS**  
(continued)  
(*Avena sativa* L. and *Avena nuda* L.)

Stage of examination	UPOV Character number *	Character description
	18	primary grain: length of lemma
	19	grain: colour of lemma
	20	primary grain: hairiness of back of lemma (except for white and yellow oats)
	21	primary grain: hairiness of base
	22	primary grain: length of basal hairs
	23	primary grain: length of rachilla
	24	primary grain: width of rachilla
	25	primary grain: groove of rachilla
	16	grain: husk

\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/20/7 (26.10.1981)

Also comprises *Avena byzantina*

**BARLEY**  
(*Hordeum vulgare* L. *sensu lato*)

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

At earing	3	flag leaf: attitude
	4	flag leaf: anthocyanin colour of auricles
	5	flag leaf: intensity of auricle pigment
	6	flag leaf: glaucosity of sheath
	7	time of ear emergence (first spikelet visible on 50% of ears)
	8	awns: anthocyanin colour of tips
	9	awns: intensity of anthocyanin colour of tips
	10	ear: glaucosity
	11	ear: attitude
	12	plant: height (stem and ear)
	13	ear: number of rows
	15	ear: density
	16	awn: length compared to ear

**SECONDARY**

At tillering	1	plant: growth habit
	2	lower leaves: hairiness of leaf sheaths
At earing	14	ear: shape
	17	awn: spiculation of margins
	18	rachis: length of first segment

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**BARLEY**  
(continued)  
(*Hordeum vulgare* L. *sensu lato*)

Stage of examination	UPOV Character Number *	Character description
	19	rachis: curvature of first segment
#		20 rachis: humping of segments (Mid third of ear)
##	21	rachis: alignment of segments (as for 20)
	22	sterile spikelet: attitude (as for 20)
	23	sterile spikelet: length of lemma (as for 20)
	24	sterile spikelet: shape of tip (as for 20)
	25	median spikelet: length of glume and awn relative to grain
	26	grain: rachilla hair type
	27	grain: husk
	28	grain: anthocyanin colour of lemma nerves
	29	grain: spiculation of inner lateral lemma nerves
	30	grain: hairiness of ventral furrow
	31	grain: disposition of lodicules
	32	kernel: colour of aleurone layer
	33	seasonal type

# Two-rowed barley only.

## Barley with more than two rows.

\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/19/7 (26.11.1981)

**RICE**  
(*Oryza sativa* L.)

Stage of examination	UPOV character number *	Character description
<b><u>PRIMARY</u></b>		
Vegetative	4	penultimate leaf: anthocyanin colour of auricles
At flowering	6	time of heading (50% of plants with heads)
	10	spikelet: colour of stigma
	12	stem: length excluding panicle
<b><u>SECONDARY</u></b>		
Vegetative	1	leaf: colour
	2	leaf: distribution of anthocyanin colouration
	3	penultimate leaf: pubescence of blade
	5	flag leaf: curvature of blade
At flowering	7	lemma: anthocyanin colouration of keel
	8	lemma: anthocyanin colouration of area below apex
	9	lemma: anthocyanin colouration of apex
	11	stem: thickness
	13	stem: anthocyanin colouration of nodes
	14	panicle: length
	15	panicle: curvature of main axis
	16	spikelet: hairs on lemma
	17	spikelet: length of hairs on lemma
18	spikelet: colour of tip of lemma	

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**RICE**  
(continued)  
(*Oryza sativa* L.)

Stage of examination	UPOV Character number *	Character description
	19	panicle: length of longest awns
	20	panicle: distribution of awns
At maturity	21	time of maturity
	22	grain: 1000 seed weight
	23	grain: length
	24	grain: width
	25	decorticated grain: length
	26	decorticated grain: width
	27	decorticated grain: shape
	28	decorticated grain: colour
	29	polished grain: size of white core
	30	endosperm: type

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/16/4 (13.11.1985)

**CANARY GRASS**  
(*Phalaris canariensis* L.)

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

At full flowering	-	plant: height
	-	plant: number of tillers per plant
	-	time of inflorescence emergence
	-	inflorescence: shape
	-	inflorescence: size

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

Sources: HUN, USA

**RYE**  
(*Secale cereale* L.)

Stage of examination	UPOV Character number *	Character description
<b><u>PRIMARY</u></b>		
Vegetative	4	plant: growth habit
	5	flag leaf: glaucosity of sheath
Ear emergence	6	time of ear emergence
After ear emergence	8	ear: glaucosity
	10	ear: attitude
	12	ear: length
	13	ear: density
	11	plant: height (stem and ear)
<b><u>SECONDARY</u></b>		
Vegetative	3	coleoptile: anthocyanin colour
	15	seasonal type
Ear emergence	7	leaf next to flag leaf: length
After ear emergence	9	stem: hairiness below the ear
At maturity	2	grain: colour of aleurone layer
	14	grain: 1000 seed weight
Seedling	1	ploidy: number

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/58/3 (15.11.1978)

**WHEAT**  
(*Triticum aestivum* L. emend Fiori et Paol.)

Stage of examination	UPOV Character Number *	Character description	
<b><u>PRIMARY</u></b>			
At earing	3	flag leaf: attitude	
	5	time of ear emergence (first spikelet visible on 50% of ears)	
	6	flag leaf: glaucosity of sheath	
	7	flag leaf: glaucosity of leaf blade (lower side)	
	8	ear: glaucosity	
	9	culm: glaucosity of neck	
	12	plant: height (stem and ear)	
	15	ear: shape	
	16	ear: density	
	17	awns or scurs: present or absent	
	19	scurs at tip of ear: length	
	At maturity	14	ear: colour
	<b><u>SECONDARY</u></b>		
Before tillering	1	coleoptile: anthocyanin colour	
At tillering	2	plant: growth habit	
At earing	4	flag leaf: anthocyanin colour of auricles	
	11	culm: hairiness of uppermost node	
	13	straw: section (halfway between base of ear and stem node below)	
	10	anther: anthocyanin colour	

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**WHEAT**  
(continued)  
(*Triticum aestivum* L. emend Fiori et Paol.)

Stage of examination	UPOV character number *	Character description
	18	awns or scurs: description
	20	awns at tip of ear: length
	21	apical rachis segment: hairiness of convex surface
	22	lower glume: shoulder width (spikelet in mid- third of ear)
	23	lower glume: shoulder shape (as for 22)
	24	lower glume: beak length (as for 22)
	25	lower glume: beak shape (as for 22)
	26	lower glume: extent of internal hairs (as for 22)
	27	lower glume: internal imprint (as for 22)
	28	lowest lemma: beak shape (as for 22)
	33	seasonal type
At maturity	29	grain: shape
	30	grain: colour
	31	grain: brush hair length in dorsal view
	32	grain: colouration with phenol

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/3/8 (26.10.1981)

**DURUM WHEAT**  
(*Triticum durum* Desf.)

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

At earing	5	time of ear emergence (first spikelet visible on ears of 50% of plants)
	12	plant: length (stem, ear and awns)
	14	awns at tip of ear: length in relation to ear
	8	awn: anthocyanin colouration
	4	plants: frequency of plants with recurved flag leaves
	6	flag leaf: glaucosity of sheath
	7	flag leaf: glaucosity of blade
	23	ear: length excluding awns
	11	ear: glaucosity
	26	ear: shape in profile
	27	ear: density

**SECONDARY**

At earing	16	lower glume: shape at shoulder
	17	lower glume: shoulder width
	18	lower glume: length of beak
	19	lower glume: shape of beak
	24	ear: hairiness of margin of first rachis segment
	9	culm: hairiness of uppermost node

\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/120/3 (21.10.1988)

**SPELT WHEAT**  
(*Triticum spelta* L.)

Stage of examination	UPOV character number #	Character description
<b><u>PRIMARY</u></b>		
From earing to anthesis	-	flag leaf: attitude
	-	time of ear emergence
	-	flag leaf: glaucosity of sheath
	-	flag leaf: glaucosity of leaf blade (lower side)
	-	ear: glaucosity
	-	culm: glaucosity of neck
	-	anthers: anthocyanin colouration
	-	plant: height of stem including ear
	-	ear: shape
	-	ear: density
	-	awns or scurs: presence
	-	awns or scurs: distribution
	-	scurs at tip of ear: length
	-	seasonal type
At maturity	-	straw: section (half way between base of ear and stem node below)
	-	ear: colour
<b><u>SECONDARY</u></b>		
At seedling growth	-	coleoptile: anthocyanin colouration
Seed	-	seed: colour
	-	seed: colouration with phenol

# There are no UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability for this species. However, all the characters listed above are similar to those for *Triticum aestivum* TG 3/8.

Source: CHE

**TRITICALE**  
(*x Triticosecale* Wittm.)

Stage of examination	UPOV Character Number *	Character description
<b><u>PRIMARY</u></b>		
At earing	14	plant: length (stem, ear and awns)
	6	time of ear emergence (first spikelet visible on 50% of plants)
	12	ear: glaucosity
	22	ear: density
	23	ear: length excluding awns
	24	ear: width in profile
	16	awns above the tip of ear: length
	8	awns: anthocyanin colouration
	7	flag leaf: glaucosity of sheath
	10	flag leaf: length of blade
	11	flag leaf: width of blade
	4	plant: frequency of plants with recurved flag leaves
	9	anthers: anthocyanin colouration
	<b><u>SECONDARY</u></b>	
At earing	13	stem: density of hairiness of neck
	5	flag leaf: anthocyanin colour of auricles
	17	lower glume: length of first beak
	19	lower glume: hairiness on external surface

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\* Reference :UPOV Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability.  
Doc No. TG/121/3 (6.10.1989)