### AC BARRIE

**Origin**
Neepawa/Columbus//BW90

**Breeder**
Dr R.M. DePauw, AAFC, Box 1030, Swift Current, SK., CANADA S9H 3x2

#### CHARACTERS IN DETAIL

**Ear**
- **Colour**: white
- **Length**: short to medium
- **Density**: lax to medium
- **Shape-side profile**: parallel sided
- **Awns or scurs - presence**: scurs present
- **Awns of scurs - distribution**: upper 1/2
- **Apical rachis segment - convex face hairiness**: weak to medium
- **Anthers - anthocyanin colouration**: absent

**Lower glume**
- **External surface**: smooth
- **Extent of internal hairs**: weak to medium - Group 1+
- **Beak length**: short
- **Beak curvature**: v.slightly curved
- **Shoulder width**: narrow to medium
- **Shoulder shape**: straight to elevated

**Lower lemma**
- **Beak curvature**: straight to slightly curved

**Grain**
- **Colour**: red
- **Colouration with phenol**: very light to light

**Straw**
- **Length**: long to very long
- **Wall thickness @20cms below ear**: thin

**Glaucosity**
- **Flag leaf - sheath**: medium
- **Flag leaf- blade (lower side)**: weak to medium
- **Culm - neck**: medium
- **Ear**: medium

**Plant growth characters**
- **Coleoptile - anthocyanin colouration**: medium to strong
- **Plant - growth habit**: erect to semi-erect
- **Time of ear emergence**: very early to early
- **Flag leaf - anthocyanin of auricles**
Variety Name: **Amaretto**  
Crop: Spring Wheat

**Breeder's** STRG 110-98

**Breeder:** Saatzuchtgesellschaft Streng's

**AFP No:**

**Translated from:** German

**Date:** 19 March 2003

**Code:** AMTO

**Coleoptile-anthocyanin colouration:** absent or very weak

*Plant - growth habit:* intermediate

*Time ear emergence:* medium

**Flag leaf - Anthocyanin colouration of auricles:** absent or very weak

**Frequency of plants with recurved flag leaves:** low to medium

**Flag leaf - Glaucosity of sheath:** strong

**Flag leaf - Glaucosity of leaf blade:** strong

**Anthers - anthocyanin colouration:**

**Glaucosity of neck:**

**Hairiness of uppermost node:**

*Plant - height:*

**Straw - wall thickness @ 20cms below ear:** medium to thick

**Ear - Glaucosity:**

**Ear - Supernumerary spikelets - frequency:**

*Ear - Colour:*

**Ear - Shape (side profile):** tapering

**Ear - Length:** medium to long

**Ear - Density:**

**Awns or scurs - presence:**

**Awns or scurs - distribution:**

*Seurs at tip of ear - length:* short to medium

*Seurs at tip of ear - length:

**Lower glume - Beak length:**

**Lower glume - Beak shape (curvature):**

**Lower glume - Beak tip:**

**Lower glume - Shoulder width:**

**Lower glume - Shoulder type:**

**Lower glume - External surface roughness:**

**Lower glume - Extent of internal hairs:**

**Lower glume - Internal imprint:**

**Lower lemma - Beak shape:**

**Lower lemma - Beak length-:**

**Lower lemma - Beak swelling:**

**Apical rachis segment - convex face hairiness:**

*Grain - colour:* red

**Grain - Shape:**

**Grain - Brush hair length in dorsal view:**

**Grain - Colouration with phenol:**

*Seasonal type:*

**Extra characters:**

* = Characteristics which should always be included in the description of the variety.

27 April 2006
**ASHBY**

**Origin**  
(Chablis x Cadenza) x Cadanza

**Breeder**  
CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts

**LEADING CHARACTERS**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straw:</td>
<td>thick walled</td>
</tr>
<tr>
<td>Ear:</td>
<td>white</td>
</tr>
<tr>
<td>Awns scurs:</td>
<td>scurs present</td>
</tr>
<tr>
<td>Lower glume-</td>
<td>smooth</td>
</tr>
<tr>
<td>external surface:</td>
<td></td>
</tr>
<tr>
<td>internal hairs:</td>
<td>strong - group 3</td>
</tr>
<tr>
<td>Grain:</td>
<td>red</td>
</tr>
</tbody>
</table>

**CHARACTERS IN DETAIL**

**Ear**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Length</td>
<td>medium</td>
</tr>
<tr>
<td>Density</td>
<td>lax to medium</td>
</tr>
<tr>
<td>Shape-side profile</td>
<td>tapering</td>
</tr>
<tr>
<td>Awns or scurs – presence</td>
<td>scurs present</td>
</tr>
<tr>
<td>Awns or scurs – distribution</td>
<td>upper 1/2</td>
</tr>
<tr>
<td>Awns or scurs at tip of ear - length</td>
<td>short to medium</td>
</tr>
<tr>
<td>Supernumerary spikelet - frequency</td>
<td>frequent to abundant</td>
</tr>
<tr>
<td>Apical rachis segment - convex face hairiness</td>
<td>medium to strong</td>
</tr>
<tr>
<td>Anthers – anthocyanin colouration</td>
<td>absent</td>
</tr>
</tbody>
</table>

**Lower glume**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>External surface</td>
<td>smooth</td>
</tr>
<tr>
<td>Extent of internal hairs</td>
<td>strong - group 3</td>
</tr>
<tr>
<td>Beak length</td>
<td>medium</td>
</tr>
<tr>
<td>Beak curvature</td>
<td>moderately curved</td>
</tr>
<tr>
<td>Beak tip</td>
<td>medium to blunt</td>
</tr>
<tr>
<td>Shoulder width</td>
<td>narrow to medium</td>
</tr>
<tr>
<td>Shoulder shape</td>
<td>straight</td>
</tr>
</tbody>
</table>

**Lower lemma**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beak length</td>
<td>short to medium</td>
</tr>
<tr>
<td>Beak curvature</td>
<td>slightly to moderately curved</td>
</tr>
<tr>
<td>Beak swelling</td>
<td>medium</td>
</tr>
</tbody>
</table>

**Grain**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>red</td>
</tr>
<tr>
<td>Colouration with phenol</td>
<td>medium</td>
</tr>
</tbody>
</table>

**Straw**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>short to medium</td>
</tr>
<tr>
<td>Wall thickness @20cms below ear</td>
<td>thick</td>
</tr>
</tbody>
</table>

**Glaucosity**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flag leaf – sheath</td>
<td>very strong</td>
</tr>
<tr>
<td>Culm – neck</td>
<td>strong to very strong</td>
</tr>
<tr>
<td>Ear</td>
<td>strong to very strong</td>
</tr>
</tbody>
</table>

**Plant growth characters**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coleoptile – anthocyanin colouration</td>
<td>weak</td>
</tr>
<tr>
<td>Plant - growth habit</td>
<td>intermediate</td>
</tr>
<tr>
<td>Time of ear emergence</td>
<td>late</td>
</tr>
<tr>
<td>Flag leaf – anthocyanin colouration of auricles</td>
<td>very weak</td>
</tr>
</tbody>
</table>
# AZURITE

**Origin** 95-3 xW62

**Breeder** CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts, SG8 7RE

## CHARACTERS IN DETAIL

### Ear
- **Colour**: white
- **Length**: short to medium
- **Density**: medium
- **Shape-side profile**: parallel sided
- **Awns or scurs - presence**: scurs present
- **Awns of scurs - distribution**: upper 1/4
- **Apical rachis segment - convex face hairiness**: medium to strong
- **Anthers - anthocyanin colouration**: absent

### Lower glume
- **External surface**: smooth to very slightly rough
- **Extent of internal hairs**: strong - Group 3
- **Beak length**: short
- **Beak curvature**: v.slightly curved
- **Shoulder width**: narrow
- **Shoulder shape**: straight

### Lower lemma
- **Beak length**: 
- **Beak curvature**: slightly curved

### Grain
- **Colour**: red
- **Colouration with phenol**: light to medium

### Straw
- **Length**: 
- **Wall thickness @20cms below ear**: medium (intermediate)

### Glaucosity
- **Flag leaf - sheath**: medium to strong
- **Flag leaf- blade (lower side)**: medium to strong
- **Culm - neck**: strong
- **Ear**: strong

### Plant growth characters
- **Coleoptile - anthocyanin colouration**: weak
- **Plant - growth habit**: semi-erect
- **Time of ear emergence**: medium
- **Flag leaf - anthocyanin of auricles**: 
SPRING WHEAT

BELVOIR

Origin  
95-A3 x Ebony

Breeder  
CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts

Ear
- Colour: white
- Length: medium
- Density: lax
- Shape-side profile: tapering
- Awns or scurs – presence: scurs present
- Awns or scurs – distribution: upper 1/4
- Awns or scurs at tip of ear - length: long to very long
- Supernumerary spikelet - frequency: absent or rare <5% ears
- Apical rachis segment - convex face hairiness: medium
- Anthers – anthocyanin colouration: absent

Lower glume
- External surface: smooth
- Extent of internal hairs: strong - group 3
- Beak length: short to medium
- Beak curvature: slightly curved
- Beak tip: blunt
- Shoulder width: narrow
- Shoulder shape: straight

Lower lemma
- Beak length: short
- Beak curvature: slightly to moderately curved
- Beak swelling: medium

Grain
- Colour: red
- Colouration with phenol: very dark

Straw
- Length: medium
- Wall thickness @20cms below ear: thin

Glaucosity
- Flag leaf – sheath: strong to very strong
- Culm – neck: strong to very strong
- Ear: strong to very strong

Plant growth characters
- Coleoptile – anthocyanin colouration: weak
- Plant - growth habit: semi-erect to intermediate
- Time of ear emergence: medium
- Flag leaf – anthocyanin colouration of auricles: weak
BONZER

Origin: (See confidential TQ)
Breeder: Blackman Agriculture Ltd, 10 High Street, West Wickham, CB21 4RY

CHARACTERS IN DETAIL

Ear
- Colour: white
- Length: short to medium
- Density: medium
- Shape-side profile: parallel sided
- Awns or scurs - presence: scurs present
- Awns of scurs - distribution: upper 1/4
- Apical rachis segment - convex face hairiness: medium to strong

Lower glume
- External surface: smooth
- Extent of internal hairs: strong - Group 3
- Beak length: medium
- Beak curvature: slightly curved
- Shoulder width: narrow
- Shoulder shape: straight

Lower lemma
- Beak curvature: slightly curved

Grain
- Colour: red
- Colouration with phenol: medium to dark

Straw
- Length: short to medium
- Wall thickness @20cms below ear: very thick or filled

Glaucosity
- Flag leaf - sheath: very weak to weak
- Flag leaf- blade (lower side): very weak to weak
- Culm - neck: medium
- Ear: medium

Plant growth characters
- Coleoptile - anthocyanin colouration: medium
- Plant - growth habit: semi-erect to intermediate
- Time of ear emergence: medium to late
SPRING WHEAT

AFP 1/1452

BYRON

Origin
Raffles x Imp

Breeder
CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts, SG8 7RE

CHARACTERS IN DETAIL

Ear
- Colour: white
- Length: medium to long
- Density: lax to medium
- Shape-side profile: tapering
- Awns or scurs - presence: scurs present
- Awns or scurs - distribution: upper 1/2
- Apical rachis segment - convex face hairiness: medium to strong
- Anthers - anthocyanin colouration: absent

Lower glume
- External surface: smooth
- Extent of internal hairs: strong - Group 3 (Jonard 3)
- Beak length: long
- Beak curvature: slight to moderately curved
- Shoulder width: narrow
- Shoulder shape: straight to elevated

Lower lemma
- Beak length: long
- Beak curvature: moderately to strongly curved

Grain
- Colour: red
- Colouration with phenol: medium

Straw
- Length: medium
- Wall thickness @20cms below ear: thin

Glaucosity
- Flag leaf - sheath: strong to very strong
- Flag leaf - blade (lower side): strong to very strong
- Culm - neck: strong to very strong
- Ear: strong to very strong

Plant growth characters
- Coleoptile - anthocyanin colouration: weak to medium
- Plant - growth habit: erect to semi-erect
- Time of ear emergence: early
- Flag leaf - anthocyanin of auricles: very weak
SPRING WHEAT

Origin: Jerico x Tonic
Breeder: CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts

LEADING CHARACTERS

Straw: thin walled
Ear: white
Awns or scurs: scurs present
Ear density: lax to medium
Lower glume-

- external surface: smooth
- internal hairs: strong - group 3
Grain: red

CHARACTERS IN DETAIL

Ear

- Colour: white
- Length: medium
- Density: lax to medium
- Shape-side profile: tapering
- Awns or scurs – presence: scurs present
- Awns or scurs – distribution: upper 1/2
- Awns or scurs at tip of ear - length: short to medium
- Supernumerary spikelet - frequency: occasional 5-25% ears
- Apical rachis segment - convex face hairiness: medium to strong
- Anthers – anthocyanin colouration: absent

Lower glume

- External surface: smooth
- Extent of internal hairs: strong - group 3
- Beak length: short
- Beak curvature: slightly curved
- Beak tip: sharp
- Shoulder width: narrow to medium
- Shoulder shape: slightly sloping

Lower lemma

- Beak length: short
- Beak curvature: moderately curved
- Beak swelling: weak

Grain

- Colour: red
- Colouration with phenol: dark

Straw

- Length: medium
- Wall thickness @20cms below ear: thin

Glaucosity

- Flag leaf – sheath: medium
- Culm – neck: medium
- Ear: weak

Plant growth characters

- Coleoptile – anthocyanin colouration: strong
- Plant - growth habit: semi-erect to intermediate
- Time of ear emergence: medium
- Flag leaf – anthocyanin colouration of auricles: absent or very weak
### SPRING WHEAT

**COBBER**

**Origin**
(See confidential part of TQ)

**Breeder**
Blackman Agriculture Ltd, 10 High Street, West Wickham, CB21 4RY

### CHARACTERS IN DETAIL

**Ear**
- **Colour**: white
- **Length**: short to medium
- **Density**: lax to medium
- **Shape-side profile**: parallel sided
- **Awns or scurs - presence**: scurs present
- **Awns of scurs - distribution**: upper 1/4
- **Apical rachis segment - convex face hairiness**: strong

**Lower glume**
- **External surface**: smooth
- **Extent of internal hairs**: strong - Group 3
- **Beak length**: short
- **Beak curvature**: straight
- **Shoulder width**: narrow
- **Shoulder shape**: straight

**Lower lemma**
- **Beak curvature**: slightly curved

**Grain**
- **Colour**: red
- **Colouration with phenol**: medium to dark

**Straw**
- **Length**: short to medium
- **Wall thickness @20cms below ear**: very thick or filled

**Glauosity**
- **Flag leaf - sheath**: strong
- **Flag leaf- blade (lower side)**: strong
- **Culm - neck**: medium to strong
- **Ear**: medium to strong

**Plant growth characters**
- **Coleoptile - anthocyanin colouration**: medium
- **Plant - growth habit**: intermediate
- **Time of ear emergence**: medium to late
CHARACTERS IN DETAIL

Ear
- Colour: white
- Length: medium
- Density: lax to medium
- Shape-side profile: parallel sided
- Awns or scurs - presence: scurs present
- Awns of scurs - distribution: upper 1/4
- Apical rachis segment - convex face hairiness: medium
- Anthers - anthocyanin colouration: absent

Lower glume
- External surface: smooth
- Extent of internal hairs: strong - Group 3
- Beak length: medium
- Beak curvature: moderate to strongly curved
- Shoulder width: narrow
- Shoulder shape: elevated

Lower lemma
- Beak curvature: slightly curved

Grain
- Colour: red
- Colournisation with phenol: dark

Straw
- Length: medium to long
- Wall thickness @20cms below ear: very thick

Glaucosity
- Flag leaf - sheath: very weak to weak
- Flag leaf-blade (lower side): very weak to weak
- Culm - neck: very weak to weak
- Ear: weak

Plant growth characters
- Coleoptile - anthocyanin colouration: medium
- Plant - growth habit: semi-erect
- Time of ear emergence: medium
- Flag leaf - anthocyanin of auricles:
Origin
Breeder CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts, SG8 7RE

CHARACTERS IN DETAIL

Ear
- Colour: white
- Length: medium
- Density: medium
- Shape-side profile: parallel sided
- Awns or scurs - presence: scurs present
- Awns of scurs - distribution: upper 1/4
- Apical rachis segment - convex face hairiness: medium
- Anthers - anthocyanin colouration

Lower glume
- External surface: smooth
- Extent of internal hairs: strong - Group 3
- Beak length: short to medium
- Beak curvature: slightly curved
- Shoulder width: narrow to medium
- Shoulder shape: sl. sloping to straight

Lower lemma
- Beak curvature: slightly curved

Grain
- Colour: red
- Colouration with phenol: dark

Straw
- Length: short to medium
- Wall thickness @20cms below ear: thick

Glaucosity
- Flag leaf - sheath: weak to medium
- Flag leaf- blade (lower side): weak to medium
- Culm - neck: medium
- Ear: medium

Plant growth characters
- Coleoptile - anthocyanin colouration: weak to medium
- Plant - growth habit: semi-erect
- Time of ear emergence: medium
- Flag leaf - anthocyanin of auricles
CHARACTERS IN DETAIL

Ear

- Colour: white
- Length: medium
- Density: lax to medium
- Shape-side profile: parallel sided
- Awns or scurs - presence: scurs present
- Awns of scurs - distribution: upper 1/4
- Apical rachis segment - convex face hairiness: medium
- Anthers - anthocyanin colouration: absent

Lower glume

- External surface: slightly rough
- Extent of internal hairs: strong - Group 3
- Beak length: short
- Beak curvature: slightly curved
- Shoulder width: medium
- Shoulder shape: straight

Lower lemma

- Beak curvature: slightly to moderately curved

Grain

- Colour: red
- Colouration with phenol: light

Straw

- Length: medium to long
- Wall thickness @20cms below ear: thin

Glaucosity

- Flag leaf - sheath: strong
- Flag leaf- blade (lower side): medium
- Culm - neck: medium
- Ear: medium

Plant growth characters

- Coleoptile - anthocyanin colouration: absent or very weak
- Plant - growth habit: semi-erect
- Time of ear emergence: early to medium
- Flag leaf - anthocyanin of auricles
SPRING WHEAT

SPRING WHEAT 2011

KWS ALDERON

Origin
Breeder

KWS UK Ltd, 56 Church Street, Thriplow, Nr Royston, Hertfordshire SG8 7RE

CHARACTERS IN DETAIL

<table>
<thead>
<tr>
<th>Character</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ear</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Length</td>
<td>short</td>
</tr>
<tr>
<td>Density</td>
<td>lax</td>
</tr>
<tr>
<td>Shape-side profile</td>
<td>parallel sided</td>
</tr>
<tr>
<td>Awns or scurs - presence</td>
<td>scurs present</td>
</tr>
<tr>
<td>Awns of scurs - distribution</td>
<td>upper 1/2</td>
</tr>
<tr>
<td>Apical rachis segment - convex face hairiness</td>
<td>strong</td>
</tr>
<tr>
<td>Anthers - anthocyanin colouration</td>
<td></td>
</tr>
<tr>
<td>Lower glume</td>
<td></td>
</tr>
<tr>
<td>External surface</td>
<td>smooth</td>
</tr>
<tr>
<td>Extent of internal hairs</td>
<td>strong - Group 3</td>
</tr>
<tr>
<td>Beak length</td>
<td>short</td>
</tr>
<tr>
<td>Beak curvature</td>
<td>slight to moderately curved</td>
</tr>
<tr>
<td>Shoulder width</td>
<td>narrow</td>
</tr>
<tr>
<td>Shoulder shape</td>
<td>straight</td>
</tr>
<tr>
<td>Lower lemma</td>
<td></td>
</tr>
<tr>
<td>Beak curvature</td>
<td>slightly curved</td>
</tr>
<tr>
<td>Grain</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>red</td>
</tr>
<tr>
<td>Colouration with phenol</td>
<td>dark to very dark</td>
</tr>
<tr>
<td>Straw</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>short</td>
</tr>
<tr>
<td>Wall thickness @20cms below ear</td>
<td>medium</td>
</tr>
<tr>
<td>Glaucoisty</td>
<td></td>
</tr>
<tr>
<td>Flag leaf - sheath</td>
<td>strong</td>
</tr>
<tr>
<td>Flag leaf- blade (lower side)</td>
<td>strong</td>
</tr>
<tr>
<td>Culm - neck</td>
<td>strong</td>
</tr>
<tr>
<td>Ear</td>
<td>strong to very strong</td>
</tr>
<tr>
<td>Plant growth characters</td>
<td></td>
</tr>
<tr>
<td>Coleoptile - anthocyanin colouration</td>
<td>absent or very weak</td>
</tr>
<tr>
<td>Plant - growth habit</td>
<td>semi-erect</td>
</tr>
<tr>
<td>Time of ear emergence</td>
<td>medium</td>
</tr>
</tbody>
</table>
CHARACTERS IN DETAIL

Ear
- Colour: white
- Length: medium
- Density: lax to medium
- Shape-side profile: parallel sided
- Awns or scurs - presence: scurs present
- Awns of scurs - distribution: upper 1/2
- Apical rachis segment - convex face hairiness: medium to strong
- Anthers - anthocyanin colouration:

Lower glume
- External surface: smooth
- Extent of internal hairs: strong - Group 3
- Beak length: medium to long
- Beak curvature: slight to moderately curved
- Shoulder width: narrow
- Shoulder shape: sl. sloping to straight

Lower lemma
- Beak curvature: slightly curved

Grain
- Colour: red
- Colouration with phenol: medium

Straw
- Length: medium to long
- Wall thickness @20cms below ear: absent or very thin

Glaucosity
- Flag leaf - sheath: strong
- Flag leaf- blade (lower side): strong
- Culm - neck: strong
- Ear: medium to strong

Plant growth characters
- Coleoptile - anthocyanin colouration: strong
- Plant - growth habit: semi-erect to intermediate
- Time of ear emergence: late
SPRING WHEAT

KWS FLINT

Origin W109 x TYBALT
Breeder KWS UK Ltd, 56 Church Street, Thriplow, Nr Royston, Hertfordshire SG8 7RE

CHARACTERS IN DETAIL

Ear
Colour white
Length medium
Density medium
Shape-side profile parallel sided
Awns or scurs - presence scurs present
Awns of scurs - distribution upper 1/4
Apical rachis segment - convex face hairiness strong

Lower glume
External surface smooth
Extent of internal hairs strong - Group 3
Beak length short to medium
Beak curvature v.slightly curved
Shoulder width narrow
Shoulder shape elevated

Lower lemma
Beak curvature moderately curved

Grain
Colour red
Colouration with phenol dark to very dark

Straw
Length short
Wall thickness @20cms below ear medium

Glaucosity
Flag leaf - sheath strong
Flag leaf- blade (lower side) strong
Culm - neck strong
Ear strong

Plant growth characters
Coleoptile - anthocyanin colouration medium
Plant - growth habit intermediate
Time of ear emergence medium
SPRING WHEAT

AFP 1/2093

KWS RECOLETA

Origin PARAGON X BELVIOR
Breeder KWS UK Ltd, 56 Church Street, Thriplow, Nr Royston, Hertfordshire SG8 7RE

CHARACTERS IN DETAIL

Ear
Colour white
Length short to medium
Density lax
Shape-side profile tapering
Awns or scurs - presence scurs present
Awns of scurs - distribution upper 1/2
Apical rachis segment - convex face hairiness strong

Lower glume
External surface smooth
Extent of internal hairs strong - Group 3
Beak length short
Beak curvature v.slightly curved
Shoulder width narrow to medium
Shoulder shape straight

Lower lemma
Beak curvature slightly curved

Grain
Colour red
Colouration with phenol dark to very dark

Straw
Length short to medium
Wall thickness @20cms below ear very thick or filled

Glaucosity
Flag leaf - sheath strong
Flag leaf- blade (lower side) medium to strong
Culm - neck strong
Ear medium to strong

Plant growth characters
Coleoptile - anthocyanin colouration medium
Plant - growth habit semi-erect to intermediate
Time of ear emergence medium
## SPRING WHEAT 2011

**Origin**  
(W100 x Belvoir) x Tybalt

**Breeder**  
KWS UK Ltd, Church Street, Thriplow, Nr Royston, Herts, SG8 7RE

### CHARACTERS IN DETAIL

#### Ear

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Length</td>
<td>medium</td>
</tr>
<tr>
<td>Density</td>
<td>medium</td>
</tr>
<tr>
<td>Shape-side profile</td>
<td>parallel sided</td>
</tr>
<tr>
<td>Awns or scurs - presence</td>
<td>scurs present</td>
</tr>
<tr>
<td>Awns of scurs - distribution</td>
<td>upper 1/4</td>
</tr>
<tr>
<td>Apical rachis segment - convex face hairiness</td>
<td>medium to strong</td>
</tr>
<tr>
<td>Anthers - anthocyanin colouration</td>
<td>absent</td>
</tr>
</tbody>
</table>

#### Lower glume

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>External surface</td>
<td>smooth</td>
</tr>
<tr>
<td>Extent of internal hairs</td>
<td>strong - Group 3</td>
</tr>
<tr>
<td>Beak length</td>
<td>short to medium</td>
</tr>
<tr>
<td>Beak curvature</td>
<td>slight to moderately curved</td>
</tr>
<tr>
<td>Shoulder width</td>
<td>narrow to medium</td>
</tr>
<tr>
<td>Shoulder shape</td>
<td>elevated</td>
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</tbody>
</table>

#### Lower lemma

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beak curvature</td>
<td>moderately curved</td>
</tr>
</tbody>
</table>

#### Grain

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>red</td>
</tr>
<tr>
<td>Colouration with phenol</td>
<td>dark</td>
</tr>
</tbody>
</table>

#### Straw

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>short</td>
</tr>
<tr>
<td>Wall thickness @20cms below ear</td>
<td>absent or very thin</td>
</tr>
<tr>
<td>Wall thickness @20cms below ear</td>
<td>thin</td>
</tr>
</tbody>
</table>

#### Glaucosity

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flag leaf - sheath</td>
<td>strong to very strong</td>
</tr>
<tr>
<td>Flag leaf- blade (lower side)</td>
<td>medium to strong</td>
</tr>
<tr>
<td>Culm - neck</td>
<td>strong</td>
</tr>
<tr>
<td>Ear</td>
<td>medium to strong</td>
</tr>
</tbody>
</table>

#### Plant growth characters

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coleoptile - anthocyanin colouration</td>
<td>medium</td>
</tr>
<tr>
<td>Plant - growth habit</td>
<td>semi-erect</td>
</tr>
<tr>
<td>Time of ear emergence</td>
<td>early</td>
</tr>
</tbody>
</table>
Origin: (00-703S x Tybalt) x Belvoir
Breeder: KWS UK Ltd, Church Street, Thriplow, Nr Royston, Herts, SG8 7RE

CHARACTERS IN DETAIL

Ear
- Colour: white
- Length: medium
- Density: lax to medium
- Shape-side profile: tapering
- Awns or scurs - presence: scurs present
- Awns of scurs - distribution: upper 1/4
- Apical rachis segment - convex face hairiness: medium to strong
- Anthers - anthocyanin colouration

Lower glume
- External surface: smooth
- Extent of internal hairs: strong - Group 3
- Beak length: short
- Beak curvature: slight to moderately curved
- Shoulder width: narrow
- Shoulder shape: sl. sloping to straight

Lower lemma
- Beak curvature: strongly curved

Grain
- Colour: red
- Colouration with phenol: medium

Straw
- Length: medium
- Wall thickness @20cms below ear: absent or very thin
- Wall thickness @20cms below ear: very thin

Glaucosity
- Flag leaf - sheath: strong
- Flag leaf- blade (lower side): weak to medium
- Culm - neck: medium to strong
- Ear: medium to strong

Plant growth characters
- Coleoptile - anthocyanin colouration: medium
- Plant - growth habit: intermed. to semi-prostrate
- Time of ear emergence: medium
MULIKA

Origin
Breeder Blackman Agriculture Ltd, 10 High Street, West Wickham, CB1 6RY

CHARACTERS IN DETAIL

Ear
Colour white
Length medium
Density medium
Shape-side profile parallel sided
Awns or scurs - presence scurs present
Awns of scurs - distribution upper 1/4
Apical rachis segment - convex face hairiness strong
Anthers - anthocyanin colouration

Lower glume
External surface smooth
Extent of internal hairs strong - Group 3
Beak length medium
Beak curvature moderately curved
Shoulder width narrow to medium
Shoulder shape straight to elevated

Lower lemma
Beak curvature strongly curved

Grain
Colour red
Colouration with phenol dark

Straw
Length short to medium
Wall thickness @20cms below ear medium
Wall thickness @20cms below ear medium (intermediate)

Glaucosity
Flag leaf - sheath weak
Flag leaf- blade (lower side) weak
Culm - neck weak
Ear weak to medium

Plant growth characters
Coleoptile - anthocyanin colouration weak
Plant - growth habit semi-erect to intermediate
Time of ear emergence medium
PARAGON

Origin: CSW 1724/19/5/68 x (Axona x Tonic)
Breeder: Plant Breeding International Cambridge Ltd., Trumpington, Cambridge

LEADING CHARACTERS

Straw: thin walled
Ear: white
Awns scurs: scurs present
Lower glume-
  external surface: smooth
  internal hairs: group 2+ to 3
Grain: red

CHARACTERS IN DETAIL

Ear
  Colour: white
  Length: long
  Density: lax to medium
  Shape-side profile: parallel sided
  Awns or scurs – presence: scurs present
  Awns or scurs – distribution: upper 1/4
  Awns or scurs at tip of ear – length: short
  Supernumerary spikelet – frequency: rare to occasional
  Apical rachis segment - convex face hairiness: medium
  Anthers – anthocyanin colouration: absent

Lower glume
  External surface: smooth
  Extent of internal hairs: group 2+ to 3
  Beak length: short
  Beak curvature: slightly curved
  Beak tip: blunt
  Shoulder width: medium
  Shoulder shape: sl. sloping to straight

Lower lemma
  Beak length: short
  Beak curvature: straight to slightly curved
  Beak swelling: absent to weak

Grain
  Colour: red
  Colouration with phenol: medium to dark

Straw
  Length: medium
  Wall thickness @20cms below ear: thin

Glaucosity
  Flag leaf – sheath: medium to strong
  Culm – neck: medium to strong
  Ear: medium to strong

Plant growth characters
  Coleoptile – anthocyanin colouration: very strong
  Plant - growth habit: semi-erect
  Time of ear emergence: late to very late
  Flag leaf – anthocyanin colouration of auricles: absent or very weak
SPRING WHEAT

RAFFLES

Origin: Shiraz x Cadenza
Breeder: CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts

LEADING CHARACTERS

Straw: intermediate walled
Ear: white
Awns scurs: scurs present
Lower glume-
  external surface: smooth
  internal hairs: strong - group 3
Grain: red

CHARACTERS IN DETAIL

Ear
Colour: white
Length: short to medium
Density: lax to medium
Shape-side profile: parallel sided
Awns or scurs – presence: scurs present
Awns or scurs – distribution: upper 1/2
Awns or scurs at tip of ear - length: medium
Supernumerary spikelet – frequency: occasional 5-25% ears
Apical rachis segment – convex face hairiness: medium
Anthers – anthocyanin colouration: absent

Lower glume
External surface: smooth
Extent of internal hairs: strong - group 3
Beak length: short to medium
Beak curvature: moderately curved
Beak tip: blunt
Shoulder width: narrow
Shoulder shape: straight to elevated

Lower lemma
Beak length: medium to long
Beak curvature: slightly curved
Beak swelling: medium to strong

Grain
Colour: red
Colouration with phenol: dark

Straw
Length: short
Wall thickness @20cms below ear: intermediate

Glaucosity
Flag leaf – sheath: medium
Culm – neck: weak to medium
Ear: medium

Plant growth characters
Coleoptile – anthocyanin colouration: medium
Plant - growth habit: semi-erect
Time of ear emergence: medium to late
Flag leaf – anthocyanin colouration of auricles: very weak
**CHARACTERS IN DETAIL**

**Ear**
- **Colour**: white
- **Length**: medium
- **Density**: lax
- **Shape-side profile**: tapering
- **Awns or scurs - presence**: scurs present
- **Awns of scurs - distribution**: upper 1/2
- **Apical rachis segment - convex face hairiness**: medium
- **Anthers - anthocyanin colouration**: absent

**Lower glume**
- **External surface**: smooth
- **Extent of internal hairs**: strong - Group 3
- **Beak length**: medium
- **Beak curvature**: strongly curved
- **Shoulder width**: medium
- **Shoulder shape**: straight to elevated

**Lower lemma**
- **Beak curvature**: slightly curved

**Grain**
- **Colour**: red
- **Colouration with phenol**: dark to very dark

**Straw**
- **Length**: short
- **Wall thickness @20cms below ear**: thin

**Glaucosity**
- **Flag leaf - sheath**: strong
- **Flag leaf- blade (lower side)**: strong
- **Culm - neck**: medium
- **Ear**: medium

**Plant growth characters**
- **Coleoptile - anthocyanin colouration**: medium
- **Plant - growth habit**: semi-erect to intermediate
- **Time of ear emergence**: medium
- **Flag leaf - anthocyanin of auricles**
SPRING WHEAT

SPRING WHEAT 2008

AFP 1/1818

SPARROW

Origin  (Chablis x Status) x Chablis
Breeder  CPB Twyford Ltd

CHARACTERS IN DETAIL

Ear
- Colour: white
- Length: medium
- Density: lax to medium
- Shape-side profile: parallel sided
- Awns or scurs - presence: scurs present
- Awns of scurs - distribution: upper 1/2
- Apical rachis segment - convex face hairiness: strong
- Anthers - anthocyanin colouration: absent

Lower glume
- External surface: slightly rough
- Extent of internal hairs: strong - Group 3
- Beak length: medium
- Beak curvature: slightly curved
- Shoulder width: narrow
- Shoulder shape: elevated

Lower lemma
- Beak curvature: straight

Grain
- Colour: red
- Colouration with phenol: medium to dark

Straw
- Length: long
- Wall thickness @20cms below ear: thin

Glaucosity
- Flag leaf - sheath: weak
- Flag leaf- blade (lower side): weak
- Culm - neck: medium
- Ear: medium

Plant growth characters
- Coleoptile - anthocyanin colouration: strong
- Plant - growth habit: semi-erect
- Time of ear emergence: medium
SPRING WHEAT

Variety Name: Specifik
Crop: Spring Wheat

Breeder's LD 93-95

Breeder: GEVES

Origin: 07 May 2010

Code: SPFK

Coleoptile-anthocyanin colouration: medium
*Plant - growth habit: semi-erect to intermediate
*Time ear emergence:
Flag leaf - Anthocyanin colouration of auricles: medium
Frequency of plants with recurved flag leaves:
*Flag leaf - Glaucosity of sheath: medium
Flag leaf - Glaucosity of leaf blade:
Anthers - anthocyanin colouration:
Glaucosity of neck: medium to strong
Hairiness of uppermost node:
*Plant - height: short to medium
*Straw - wall thickness @ 20cms below ear: thin
*Ear - Glaucosity: strong
Ear - Supernumerary spikelets - frequency:
*Ear - Colour: white
*Ear - Shape (side profile): parallel
Ear - Length:
*Ear - Density:
*Awns or scurs - presence: scurs present
Awns or scurs - distribution:
*Scurs at tip of ear - length:
*Awns at tip of ear - length:
Lower glume - Beak length:
Lower glume - Beak shape (curvature):
Lower glume - Beak tip:
Lower glume - Shoulder width:
Lower glume - Shoulder type:
Lower glume - External surface roughness:
Lower glume - Extent of internal hairs: weak to medium - group 1 to 2
Lower glume - Internal imprint:
Lower lemma - Beak shape:
Lower lemma - Beak length-:
Lower lemma - Beak swelling:
Apical rachis segement - convex face hairiness: weak
*Grain - colour: red
Grain - Shape:
Grain - Brush hair length in dorsal view:
Grain - Colouration with phenol: light to medium
*Seasonal type: spring
Extra characters:
**SPRING WHEAT**

**Variety Name:** SW Kungsjet

**Crop** Spring Wheat

**Breeder’s Reference:** SW 40239

**Breeder:** SW Seed Hadmersleben GmbH

**AFP No:**

**Translated from:** German

**Date:** 15 March 2006

**Code:** SWKU

**Coleoptile-anthocyanin colouration:** weak

**Plant - growth habit:** intermediate

**Time ear emergence:** medium

**Flag leaf - Anthocyanin colouration of auricles:** low to medium

**Flag leaf - Glaucosity of sheath:** strong

**Flag leaf - Glaucosity of leaf blade:** medium to strong

**Anthers - anthocyanin colouration:**

**Glaucosity of neck:** strong

**Hairiness of uppermost node:**

**Plant - height:** medium

**Straw - wall thickness @ 20cms below ear:** very thin

**Ear - Glaucosity:** medium to strong

**Ear - Supernumerary spikelets - frequency:**

**Ear - Colour:** white

**Ear - Shape (side profile):** tapering

**Ear - Length:** short to medium

**Ear - Density:** medium to dense

**Awns or scurs - presence:** scurs present

**Awns or scurs - distribution:**

**Seurs at tip of ear - length:** medium

**Seurs at tip of ear - length:**

**Lower glume - Beak length:** very short

**Lower glume - Beak shape (curvature):** slightly curved

**Lower glume - Beak tip:**

**Lower glume - Shoulder width:** medium

**Lower glume - Shoulder type:** slightly sloping

**Lower glume - External surface roughness:**

**Lower glume - Extent of internal hairs:** medium - group 2

**Lower glume - Internal imprint:**

**Lower lemma - Beak shape:**

**Lower lemma - Beak length:**

**Lower lemma - Beak swelling:**

**Apical rachis segment - convex face hairiness:** medium to strong

**Grain - colour:** red

**Grain - Shape:**

**Grain - Brush hair length in dorsal view:** light

**Grain - Colouration with phenol:**

**Seasonal type:** spring

**Extra characters:**
<table>
<thead>
<tr>
<th>Characters in Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ear</strong></td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
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<td>Density</td>
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<td>Awns or scurs at tip of ear - length</td>
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<td>Colour</td>
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<tr>
<td><strong>Straw</strong></td>
</tr>
<tr>
<td>Length</td>
</tr>
<tr>
<td>Wall thickness @20cms below ear</td>
</tr>
<tr>
<td><strong>Glaucosity</strong></td>
</tr>
<tr>
<td>Flag leaf – sheath</td>
</tr>
<tr>
<td>Culm – neck</td>
</tr>
<tr>
<td>Ear</td>
</tr>
<tr>
<td><strong>Plant growth characters</strong></td>
</tr>
<tr>
<td>Coleoptile – anthocyanin colouration</td>
</tr>
<tr>
<td>Plant - growth habit</td>
</tr>
<tr>
<td>Time of ear emergence</td>
</tr>
<tr>
<td>Flag leaf – anthocyanin colouration of auricles</td>
</tr>
</tbody>
</table>
**SPRING WHEAT**

**ZIRCON**

**Origin**  
CPBT W62 x Ebony

**Breeder**  
CPB Twyford Ltd., Church Street, Thriplow, Royston, Herts, SG8 7RE

**CHARACTERS IN DETAIL**

<table>
<thead>
<tr>
<th>Character</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ear</strong></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Length</td>
<td>medium</td>
</tr>
<tr>
<td>Density</td>
<td>lax to medium</td>
</tr>
<tr>
<td>Shape-side profile</td>
<td>parallel sided</td>
</tr>
<tr>
<td>Awns or scurs - presence</td>
<td>scurs present</td>
</tr>
<tr>
<td>Awns of scurs - distribution</td>
<td>upper 1/4</td>
</tr>
<tr>
<td>Apical rachis segment - convex face hairiness</td>
<td>weak to medium</td>
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<tr>
<td>Anthers - anthocyanin colouration</td>
<td>absent</td>
</tr>
<tr>
<td><strong>Lower glume</strong></td>
<td></td>
</tr>
<tr>
<td>External surface</td>
<td>smooth</td>
</tr>
<tr>
<td>Extent of internal hairs</td>
<td>medium - Group 2</td>
</tr>
<tr>
<td>Beak length</td>
<td>short</td>
</tr>
<tr>
<td>Beak curvature</td>
<td>slightly curved</td>
</tr>
<tr>
<td>Shoulder width</td>
<td>medium</td>
</tr>
<tr>
<td>Shoulder shape</td>
<td>straight to elevated</td>
</tr>
<tr>
<td><strong>Lower lemma</strong></td>
<td></td>
</tr>
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<td>Beak curvature</td>
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<td><strong>Grain</strong></td>
<td></td>
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<td>red</td>
</tr>
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<td>medium</td>
</tr>
<tr>
<td><strong>Straw</strong></td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>short to medium</td>
</tr>
<tr>
<td>Wall thickness @20cms below ear</td>
<td>medium (intermediate)</td>
</tr>
<tr>
<td><strong>Glaucosity</strong></td>
<td></td>
</tr>
<tr>
<td>Flag leaf - sheath</td>
<td>strong</td>
</tr>
<tr>
<td>Flag leaf- blade (lower side)</td>
<td></td>
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<td>strong</td>
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<td>Ear</td>
<td>strong</td>
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<tr>
<td><strong>Plant growth characters</strong></td>
<td></td>
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<tr>
<td>Coleoptile - anthocyanin colouration</td>
<td>intermediate</td>
</tr>
<tr>
<td>Plant - growth habit</td>
<td></td>
</tr>
<tr>
<td>Time of ear emergence</td>
<td>medium to late</td>
</tr>
<tr>
<td>Flag leaf - anthocyanin of auricles</td>
<td>absent or very weak</td>
</tr>
</tbody>
</table>