

BARLEY OBJECTIVE DESCRIPTION

VARIETY NAME: TR128

CDC STRATUS SPRING BARLEY

C. LEGEND

Characteristics that must always be included when completing the objective description form for variety registration, except when the state of expression of a preceding characteristic renders this impossible.

(+) Indicates an illustration for this trait is in the appendix.

CV Candidate variety

R1-R2 Reference or check varieties

Reference Varieties

R1

R2

D. OBJECTIVE DESCRIPTION

Name and Address of Applicant:

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CLASSIFICATION (check where appropriate):

Species: *Hordeum vulgare*

Type of barley: Two-row Winter
 Six-row Spring

Utilization: Feed
 Malting
 Either

PROPOSED DENOMINATION (VARIETY NAME): TR128

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| | CV | R1 | R2 |
|---|----|--------------------------|--------------------------|
| 1.0 PLANT CHARACTERISTICS | | | |
| 1.1 Juvenila growth habit (#): | | | |
| | 1 | <input type="checkbox"/> | <input type="checkbox"/> |
| Erect | 1 | | |
| Semi-erect | 3 | | |
| Intermediate | 5 | | |
| Semi-prostrate | 7 | | |
| Prostrate | 9 | | |
| 1.2 Coleoptile colour (#): | | | |
| | 1 | <input type="checkbox"/> | <input type="checkbox"/> |
| Green | 1 | | |
| Purplish | 2 | | |
| Purple | 3 | | |
| Mixed | 4 | | |
| 1.3 Coleoptile elongation: | | | |
| | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Short | 3 | | |
| Medium | 5 | | |
| Long | 7 | | |
| 1.4 Pubescence on sheaths of lower leaves (#): | | | |
| | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Glabrous | 3 | | |
| Few hairs | 5 | | |
| Pubescent | 7 | | |
| 1.5 Pubescence on blades of lower leaves (#): | | | |
| | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Glabrous | 3 | | |
| Few hairs | 5 | | |
| Pubescent | 7 | | |

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| 1.6 Colour of lower leaf sheath (#) : | | | |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Purple 3 | | | |
| White 5 | | | |
| Other 7 | | | |
| 1.7 Number of tillers | | | |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Few 3 | | | |
| Intermediate 5 | | | |
| Many 7 | | | |
| 2.0 PLANT CHARACTERISTICS AT BOOTING | | | |
| 2.1 Leaves: colour (#) | | | |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Yellow green 1 | | | |
| Green 2 | | | |
| Blue green 3 | | | |
| Gray green 4 | | | |
| 2.2 Leaves: waxy bloom (#) | | | |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Absent (glossy) 3 | | | |
| Slight 5 | | | |
| Pronounced 7 | | | |
| 2.3 Flag leaf: attitude (#) | | | |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Drooping 3 | | | |
| Intermediate 5 | | | |
| Upright 7 | | | |
| 2.4 Flag leaf: width (#) | | | |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Narrow 3 | | | |
| Medium 5 | | | |
| Wide 7 | | | |

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| 2.5 Flag leaf: length (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Short 3 | | | |
| Medium 5 | | | |
| Long 7 | | | |
| 2.6 Flag leaf: colour of auricles (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| White 3 | | | |
| Purplish 5 | | | |
| Purple 7 | | | |
| 2.7 Flag leaf: pubescence of auricle margins | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Glabrous 3 | | | |
| Few Hairs 5 | | | |
| Pubescent 7 | | | |
| 2.8 Flag leaf: pubescence of sheath | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Glabrous 3 | | | |
| Few hairs 5 | | | |
| Pubescent 7 | | | |
| 2.9 Flag leaf: pubescence of blade | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Glabrous 3 | | | |
| Few hairs 5 | | | |
| Pubescent 7 | | | |
| 3.0 PLANT CHARACTERISTICS AFTER HEADING | | | |
| 3.1 Heading date (80% of heads fully emerged from boot) (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Early 3 | | | |
| Midseason 5 | | | |
| Late 7 | | | |

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| 3.2 Height (stem plus spike) (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Short 3 | | | |
| Medium 5 | | | |
| Tall 7 | | | |
| 3.3 Stem exertion (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Slight (0-3cm) 3 | | | |
| Intermediate (3-10cm) 5 | | | |
| Fully (≥ 10 cm) 7 | | | |
| 3.4 Nodes: number (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Indicate number of nodes | | | |
| 3.5 Stem: thickness (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fine 3 | | | |
| Medium 5 | | | |
| Thick 7 | | | |
| 3.6 Stem: waxy bloom (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Absent 3 | | | |
| Slight 5 | | | |
| Pronounced 7 | | | |
| 3.7 Collar shape (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| V-shaped 1 | | | |
| Closed 2 | | | |
| Open 3 | | | |
| Other 4 | | | |

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| 3.8 Neck: shape (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Straight 3 | | | |
| Slightly curved 5 | | | |
| Snake-shaped 7 | | | |
| 4.0 SPIKE CHARACTERISTICS | | | |
| 4.1 Spike: shape (#) (+) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Tapering 1 | | | |
| Strap 2 | | | |
| Clavate 3 | | | |
| Other (specify): 4 | | | |
| 4.2 Lateral kernels overlap (#) | NA <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| None 3 | | | |
| At tips 5 | | | |
| 1/4 - 1/2 of spike 7 | | | |
| 4.3 Spike: density (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lax 3 | | | |
| Medium 5 | | | |
| Long 7 | | | |
| 4.4 Spike: length (excluding awns) (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Short 3 | | | |
| Medium 5 | | | |
| Long 7 | | | |
| 4.5 Spike: attitude (#) (+) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Nodding 3 | | | |
| Semi-nodding 5 | | | |
| Erect 7 | | | |

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| 4.6 Spike: waxiness | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Absent 3 | | | |
| Slightly waxy 5 | | | |
| Waxy 7 | | | |
| 4.7 Sterile spikelet: attitude (2 row only) (+) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Parallel 3 | | | |
| Weakly divergent 5 | | | |
| Divergent 7 | | | |
| 4.8 Rachis: length of first segment (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Short 3 | | | |
| Medium 5 | | | |
| Long 7 | | | |
| 4.9 Rachis: curvature of first segment (+) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Absent or very weak 1 | | | |
| Weak 3 | | | |
| Medium 5 | | | |
| Strong 7 | | | |
| Very strong 9 | | | |
| 4.10 Pubescence of rachis edge | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lacking 3 | | | |
| Few 5 | | | |
| Covered 7 | | | |
| 4.11 Glume: position of hairs | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| None 1 | | | |
| Restricted to middle vein 2 | | | |
| Confined to band 3 | | | |
| Covered 4 | | | |

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| 4.12 Glume: awns (#) | <input checked="" type="checkbox"/> 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Less than equal to length of glume | 3 | | |
| Equal to length of glume | 5 | | |
| More than equal to length of glume | 7 | | |
| 4.13 Glume awns: presence of spiculation (barbs) on margin (#) (+) | <input checked="" type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> |
| Smooth | 3 | | |
| Semi smooth | 5 | | |
| Rough | 7 | | |
| 4.14 Glume awn tip: colour (#) | <input checked="" type="checkbox"/> 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Green | 3 | | |
| Purplish | 5 | | |
| Purple | 7 | | |
| 4.15 Lemma awns: length (#) | <input checked="" type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> |
| Awnless | 1 | | |
| Awnlets on central rows. | | | |
| Awnless on lateral rows. | 2 | | |
| Short on central rows. | | | |
| Awnlets on lateral rows. | 3 | | |
| Short (less than equal to length of spike) | 4 | | |
| Long (longer than spike) | 5 | | |
| Hooded | 6 | | |

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| 4.16 Lemma awns: presence of spiculations (barbs) on margins (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Awnless 1 | | | |
| Smooth (few barbs at tip) 2 | | | |
| Semi-smooth (barbs on one half to two thirds of the awn) 3 | | | |
| Rough (barbs from the tip to next to the kernel) 4 | | | |
| 4.17 Lemma awn tip: colour (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Green 3 | | | |
| Purplish 5 | | | |
| Purple 7 | | | |
| 5.0 KERNEL CHARACTERISTICS (must be consistent with kernel characteristics provided by the Canadian Grain Commission) | | | |
| 5.1 Kernel: anthocyanin colouration of nerves of lemma (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Absent 1 | | | |
| Weak 2 | | | |
| Medium 3 | | | |
| Strong 4 | | | |
| 5.2 Kernel: rachilla length (#) (+) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Short 3 | | | |
| Medium 5 | | | |
| Long 7 | | | |
| 5.3 Kernel: abnormal rachillas (#) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| None 3 | | | |
| Few 5 | | | |
| Frequent 7 | | | |

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| 5.4 Kernel: rachilla hair length (#) | <input type="checkbox"/> 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Short | 1 | | |
| Medium | 2 | | |
| Long | 3 | | |
| Mixed (short and long) | 4 | | |
| 5.5 Kernel: type (#) | <input type="checkbox"/> 4 | <input type="checkbox"/> | <input type="checkbox"/> |
| Hulless | 1 | | |
| Covered | 9 | | |
| 5.6 Kernel: length (#) | <input type="checkbox"/> 5 | <input type="checkbox"/> | <input type="checkbox"/> |
| Short | 3 | | |
| Medium | 5 | | |
| Long | 7 | | |
| 5.7 Kernel: width (#) | <input type="checkbox"/> 7 | <input type="checkbox"/> | <input type="checkbox"/> |
| Narrow | 3 | | |
| Medium | 5 | | |
| Wide | 7 | | |
| 5.8 Kernel: lateral veins on lemma (#) | <input type="checkbox"/> 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Glabrous | 3 | | |
| With few barbs | 5 | | |
| With many barbs | 7 | | |
| 5.9 Kernel: shape of basal markings (#) | <input type="checkbox"/> 1 | <input type="checkbox"/> | <input type="checkbox"/> |
| Horseshoe | 1 | | |
| Transverse crease | 2 | | |
| Incomplete horseshoe | 3 | | |
| Other (specify): | 4 | | |

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| 5.10 Kernel: disposition of lodicules (+) | | | |
| | 1 | | |
| Frontal 1 | | | |
| Clasping 9 | | | |
| 5.11 Kernel: colour of aleurone (#) | | | |
| | 1 | | |
| Colourless (white or yellow) 1 | | | |
| Bluish 2 | | | |
| Mixed 3 | | | |
| Other (specify): 4 | | | |
| 5.12 Kernel: weight (#) | | | |
| | 4.4 | | |
| Indicate grams per 1000 kernels | | | |
| 6.0 REACTION TO DISEASE | | | |
| 0 - Not tested | | | |
| 1 - Susceptible | | | |
| 2 - Moderately susceptible | | | |
| 3 - Moderately resistant | | | |
| 4 - Tolerant | | | |
| 5 - Resistant | | | |
| Common root rot, <i>Cochliobolus sativus</i> , | 2-3 | | |
| Spot blotch, <i>Cochliobolus sativus</i> | 0 | | |
| Take-all, <i>Gaeumannomyces graminis</i> var. <i>tritici</i> | 0 | | |
| Net blotch, <i>Pyrenophora teres</i> | 3 | | |
| Septoria speckled leaf blotch, <i>Septoria passerinii</i> | 1 | | |

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| Scald, <i>Rhynchosporium secalis</i> | 1 | <input type="checkbox"/> | <input type="checkbox"/> |
| Leaf stripe, <i>Pyrenophora graminea</i> | 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Leaf rust, <i>Puccinia hordei</i> | 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Stem rust, <i>Puccinia graminis</i> | 2 | <input type="checkbox"/> | <input type="checkbox"/> |
| Powdery mildew, <i>Erysiphe graminis</i> f.sp. <i>hordei</i> | 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Fusarium head blight (Scab), <i>Fusarium graminearum</i> , perfect state <i>Gibberella zeae</i> | 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Ergot, <i>Claviceps purpurea</i> | 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Covered smut, <i>Ustilago hordei</i> | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| False loose smut, Black semi-loose smut, <i>Ustilago nigra</i> | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Loose smut, <i>Ustilago nuda</i> | 2 | <input type="checkbox"/> | <input type="checkbox"/> |
| Bacterial blight, bacterial streak and black chaff, <i>Xanthomonas translucens</i> | 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Stripe mosaic, Barley stripe mosaic virus | 0 | <input type="checkbox"/> | <input type="checkbox"/> |

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| Yellow dwarf, Barley yellow dwarf virus | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other (specify): | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

7.0 REACTION TO INSECTS

- 0 - Not tested
- 1 - Susceptible
- 2 - Moderately susceptible
- 3 - Moderately resistant
- 4 - Tolerant
- 5 - Resistant

| | | | |
|--------------------|-------------------------------------|--------------------------|--------------------------|
| Aphids | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Armyworm | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Cereal leaf beetle | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Grasshopper | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Jointworm | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Nematode | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other (specify): | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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| 8.0 REACTION TO CHEMICALS | | | |
| 0 - Not tested | | | |
| 1 - Susceptible | | | |
| 2 - Tolerant | | | |
| 3 - Resistant | | | |
| Fungicide(s) (specify chemical(s)): | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Insecticide(s) (specify chemical(s)): | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Herbicide(s) (specify chemical(s)): | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| Other (specify): | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> |
| 9.0 AGRONOMIC CHARACTERISTICS | | | |
| 9.1 Winter survival | <input type="checkbox"/> 4 | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor 1 | | | |
| Fair 2 | | | |
| Good 3 | | | |
| Not applicable 4 | | | |
| 9.2 Lodging resistance (#) | <input type="checkbox"/> 7 | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor 3 | | | |
| Fair 5 | | | |
| Good 7 | | | |
| 9.3 Shattering resistance (#) | <input type="checkbox"/> 7 | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor 3 | | | |
| Fair 5 | | | |
| Good 7 | | | |

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| 9.4 Tolerance to straw breaking | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor 1 | | | |
| Fair 2 | | | |
| Good 3 | | | |
| 9.5 Tolerance to neck breaking | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor 1 | | | |
| Fair 2 | | | |
| Good 3 | | | |
| 9.6 Tolerance to drought | 3 | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor 1 | | | |
| Fair 2 | | | |
| Good 3 | | | |
| 10.0 QUALITY CHARACTERISTICS | | | |
| 10.1 Kernel: malting quality | 7 | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor 3 | | | |
| Medium 5 | | | |
| Good 7 | | | |
| 10.2 Protein content | 5 | <input type="checkbox"/> | <input type="checkbox"/> |
| Low 3 | | | |
| Medium 5 | | | |
| High 7 | | | |
| 10.3 Protein: content | 11.8 | <input type="checkbox"/> | <input type="checkbox"/> |
| Indicate mg per gram of ground kernel | | | |

11.0 Describe chemical reactions of this variety that aid in its identification (e.g. electrophoresis, gibberellic acid, etc...).