REGISTRATION OF HOLSTON BARLEY1
(Reg. No. 53)
E. L. Smith2

'HOLSTON' (Hordeum vulgare L., emend. Lam.), CI 9571 ('Tenn. Upright 236-4-46'), was selected by N. I. Hancock at the
Tennessee Agricultural Experiment Station from the cross, F1
'Wong' X 'Jackson No. 1' 2x 'Tennessee Hooded 6.' The final
cross was made in 1947.

Holston is a six-rowed, winter variety with semismooth awns.
It is medium in plant height, medium-late in maturity, and
has relatively stiff straw. The spike is dense, midlong, and slightly
nodding. Holston is resistant to some races of scald and powdery
mildew and is slightly more winter hardy than 'Watauga'. It is
classed as a feed barley and was distributed in 1957, principally
because of its stiff straw and disease resistance. Grain yields of
Holston, in comparison with Watauga and Jackson No. 1, are
given in Table 1. The history and description of Holston have
been published. Data on its agronomic performance and disease
reaction are available.

Table 1. Grain yields of Holston, Watauga, and Jackson No. 1
at 5 locations in Tennessee for a 4-year period, 1954–57.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Average grain yields, bu./A. at 5 locations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knox-</td>
</tr>
<tr>
<td>Holston</td>
<td>58.6</td>
</tr>
<tr>
<td>Watauga</td>
<td>65.2</td>
</tr>
<tr>
<td>Jackson No. 1</td>
<td>61.1</td>
</tr>
</tbody>
</table>

Application for registration was made by E. L. Smith but credit
is due N. I. Hancock for the development of the variety.

1 Registered under a memorandum of understanding between the
Crops Research Division, ARS, USDA, and the American Society
of Agronomy. Received Nov. 1, 1963.
2 Assistant Professor of Agronomy, University of Tennessee,
Knoxville, Tennessee.
297. 1959.
4 Shelby, T. O. Performance trials of field crop varieties. Ten-
5 Wiebe, G. A., and Reid, D. A. Classification of barley varie-
ties grown in the United States and Canada in 1958. USDA Tech.

REGISTRATION OF WATAUGA BARLEY1
(Reg. No. 58)
E. L. Smith2

'WATAUGA' (Hordeum vulgare L., emend. Lam.), CI 9172
('Tenn. Upright 11-172') was developed at the Tennessee Agri-
cultural Experiment Station. It was selected by N. I. Hancock from
the cross, F1 'Wong' X 'Jackson No. 1' 2x 'Polders', made in 1944. The history and description of Watauga and of the three
parent varieties have been published.1

Watauga is a six-rowed, smooth-awned winter variety with blue
aleurone. It is medium in height and medium-late in maturity.
The spike is lax, mid-long and slightly nodding. It is classed as
a feed barley and was distributed principally as a superior variety
for grazing. Watauga has a semiprostrate habit of early growth
and is moderately winter hardy. Grain yields of Watauga (no
further data available) in Tennessee and North Dakota com-
pared to Trophy and Traill, in the Red River Valley area in
1946, averaged 51 bushels per acre. Watauga is considered
an important six-rowed malting barley producing area. Forty-two
varieties grown to a limited extent in Tennessee.

Application for registration was made by E. L. Smith but credit
is due N. I. Hancock for the development of the variety.

REGISTRATION OF TROPHY BARLEY
(Reg. No. 56)
G. A. Peterson2

'TROPHY' (Hordeum vulgare L., emend. Lam.), CI 570,
61.1 37.3 56.8 55.7 43.7 50.9
is a six-rowed, rough-awned spring barley with kernels of
a type having long rachilla hairs and colorless aleurone.
The variety are mid-tall with moderately strong straw and
season maturity. Field reaction of Trophy to prevalent
diseases includes resistance to stem rust; moderate suscepti-
blot and loose smut; and susceptibility to Septoria leaf
blotch and powdery mildew. Moderate field resistance to
been noted in some trials. Trophy is classified as an
malting barley variety by the malting industry. Consult
for agronomic and quality characteristics are available.

Table 1. Agronomic and quality comparisons of Trophy
and Traill barley in North Dakota, 1957–62.

<table>
<thead>
<tr>
<th>Character</th>
<th>No. station</th>
<th>year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trophy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yield (bu./A.)</td>
<td>51</td>
<td>49.4</td>
</tr>
<tr>
<td>Kernels on 6/8&quot; x 3/4&quot; steve (%)</td>
<td>29</td>
<td>35.3</td>
</tr>
<tr>
<td>Date headed</td>
<td>22</td>
<td>7-5</td>
</tr>
<tr>
<td>Lodging (%)</td>
<td>9</td>
<td>34</td>
</tr>
<tr>
<td>Plant height (in.)</td>
<td>27</td>
<td>28</td>
</tr>
<tr>
<td>Kernel nitrogen (%)</td>
<td>20</td>
<td>2.38</td>
</tr>
<tr>
<td>Malt extract (%)</td>
<td>20</td>
<td>74.8</td>
</tr>
<tr>
<td>Diastatic power (L°)</td>
<td>20</td>
<td>159</td>
</tr>
</tbody>
</table>

History. Trophy is of hybrid origin from the cross
of colorless aleurone selection of U.M. 570 (CI 105)
1954 at the North Dakota Agricultural Experiment
Station and preliminary selections were made by W. W. Van
agronomic selection in the F1 generation and testing were done
under the direction of G. A. Peterson. The Departments
of Agronomy and branch stations of the Agricultural
Experiment and Malt Laboratories participated in the agar-
cooperated in agronomic evaluations. The Department
Wisconsin, and collaborative industry laboratories partici-
participated in the quality testing. Trophy was named and released
in 1961. About 2850 bushels were allocated to producers
initial increase.

Distribution. Production of Trophy is expected within
the Central States of the United States. Major concentra-
ated in the Red River Valley of North Dakota and
is an important six-rowed malting barley producing area to be
occupied by Trophy. An increase in the Trophy
been accompanied by a corresponding decline in Traill
and Kindred'. The improvement in kernel plumpness of Trophy
and Kindred has been a major factor in rapid growth.

3 Registered under a memorandum of understanding between the
Crops Research Division, ARS, USDA, and the American Society
of Agronomy. Published with the approval of the North Dakota Agr. Exp. Sta., as Journal Article No. 33. Received Nov. 1, 1963.
4 Associate Agronomist, North Dakota State University, Fargo, North Dakota.

REGISTRATION OF LARKER BARLEY
(Reg. No. 55)