

**NDSU Carrington Research Extension Center  
2013 Variety Trial Data**

**Table 1. General Performance of Potatoes in Irrigated Potato Variety Trial** **Turtle Lake (K & T Farms)**

ID	Variety	Type	Sept. 4'	Oct. 3'	Plant Spacing at Harvest	Weight / Harvested Plant	Total Yield cwt	Potato Grade (tuber size) <sup>2</sup>				Hollow Heart <sup>3</sup>	Internal Quality <sup>4</sup>
			Early Vine Health <sup>1</sup> 1 to 10	Late Vine Health <sup>1</sup> 1 to 10				0 - 4 oz %	4 - 6 oz %	6 - 12 oz %	> 12 oz %		
1	Russet Burbank	Russet	7.8	7.8	11.6	4.23	603	0.9	6.8	45.2	47.5	3.7	10.0
2	Umatilla	Russet	7.3	7.0	12.2	4.24	575	0.0	9.2	47.5	43.4	1.7	10.0
3	Ranger Russet	Russet	7.5	6.5	12.3	3.88	521	0.0	6.1	41.4	52.6	0.0	10.0
4	Experimental A	Red	4.5	3.0	11.0	4.31	645	na	na	na	na	na	na
5	Red Norland	Red	2.5	2.0	11.6	4.21	600	na	na	na	na	na	na
MEAN			5.9	5.3	11.7	4.17	588.8	0.3	7.3	44.7	47.8	1.8	10.0
C.V. (%)			10.1	20.6	7.8	9.3	7.6	346	94	25	21.6	199	0.2
LSD 0.10			0.8	1.4	NS	NS	56.2	NS	NS	NS	NS	NS	NS
LSD 0.05			0.9	1.7	NS	NS	68.9	NS	NS	NS	NS	NS	NS
# REPS			4	4	4	4	4	4	4	4	4	4	4

**Planting Date = May 8; Harvest Date: Reds = September 12; Russets = October 3**

<sup>1</sup> Vine Health: Vine health as reported is a subjective assessment of relative vine health. Assessment is based on relative vigor still maintained by the plant, coupled with degree of necrotic plant tissue present within the vines. Scored on scale of 1 to 10, where 1 = vines dead or fully necrotic to 10 = fully healthy viable vines with no (zero) necrosis within vines.

<sup>2</sup> Potato Quality Assessments: na = not available, the russet varieties evaluated for quality at the CREC; red quality data is pending. Assessments based on randomly sampling 15 tubers from each of the two harvest rows. Values reported represent average assessment based on 30 tubers.

<sup>3</sup> Hollow Heart: The percent of the tubers sampled that had any expression of hollow heart symptoms.

<sup>4</sup> Internal Quality: The overall internal quality of each tuber which was cut in half with each half visually assessed to determine quality. Scored on scale of 1 to 10 where 1 equates to significant discoloration and a 10 equates to perfectly bright - white coloration.

**NDSU Carrington Research Extension Center  
2013 Variety Trial Data**

\*\* Specific Gravity: The russet varieties were processed at the CREC to determine specific gravity, values will be available at a later date.

Table 2. Potato quality assessments for the 'Red' varieties derived from determinations by 'Black Gold Farms'.

Factors Referenced Below are Determined as Based on a Qualitative Assessment											
ID	Variety	Type	Tuber	Skin Set	Tuber	Tuber Skin	Eye Dept	Overall External Appearance	Flesh Color	Surface Scab	Score 0 to 5
			Skin Color		Shape	Texture					
4	ND8555-8R	Red	Red 2.25	Good	Oblong to Long Mostly	Slightly Net Moderately	Medium	Good (3) (1)	Fair	White	0
5	Red Norland	Red	Red 1.0	Fair	Round	Smooth	Medium	Good (3) (1)	Fair	White	0

\*\* All values reported represent an average of independent assessments derived from the four (4) replications individually.

Number of Affected Tubers in Sample (sample size = 40)											
ID	Variety	Type	Silver	Rhizoctonia	Internal Heat	Hollow	Vascular	Wet Breakdown	Growth Cracks	Pythium	
			Scurf		Necrosis	Heart	Discoloration				
4	ND8555-8R	Red	0	0	0	3	0	0	0	0	
5	Red Norland	Red	0	0	0	1	1	0	2	0	

\*\* All values reported represent an average of independent assessments derived from the four (4) replications individually.

\*\* For a full explanation of these tuber quality assessments please contact either John Nordgaard ([john.nordgaard@blackgoldfarms.com](mailto:john.nordgaard@blackgoldfarms.com)) or Jose Rodriguez