

Onion Hybrid Performance Trial, Carrington, ND, 2001. (Paul Hendrickson) The study was conducted at the NDSU Carrington Research Extension Center on a loam soil with a 7.9 pH and 3.1% organic matter. The trial was seeded with a Stanhay vegetable planter on April 28, 2001 into 3-inch paired rows on 16-inch centers at 200,000 seeds/A. Individual plots were 3 feet by 20 feet, with two paired rows per plot. The experimental design was a randomized complete block with four replicates. Fertilizer, weed, disease, and insect control measures are listed in Table 1. Weekly evaluations were made once the plants started to mature and fall down. Plots were pulled two weeks after the half-down date. Bulbs were pulled by hand and allowed to dry in the field before bagging. All varieties were pulled by September 19 and bagged on October 2 and 3. The onions were graded and weighed October 25 and 26.

Onion yields ranged from 340 to 586 cwt/A (Table 2). Onions grown in North Dakota are marketed for processing with a 3 to 4 -inch size requirement. SWO 7074, SWO 7391, Vaquero, SWO 7761, and Tioga were the top yielding varieties in the 3 to 4 -inch category with yields ranging from 289 to 313 cwt/A. All varieties tested had less than 50% single centers with the exception of Vaquero, which had 65% single centers.

*Table 1.*

Fertilizer:	Soil test results; 58 lb N/A, 6 lb P/A, and 200 lb K/A. Incorporated 130 lb P/A as 0-46-0 on 4/26/2001. On 7/10/2001, broadcast 75 lb N/A as 46-0-0 and incorporated with irrigation.
Weed control:	Dacthal at 8 lb/A on 4/30/01, Roundup Ultra at 1 qt/A on 5/13/01, Prowl at 1.5pt/A on 5/24/01, 28% N at 19 gal/A (56 lb N/A) on 6/8/01, Goal + Buctril at 0.6 pt/A and 1.5 pt/A on 7/5/01, and Assure II at 8 oz/A + 1% v/v COC on 7/10/01.
Disease control:	Bravo Ultrex at 1.4 lb/A on 8/2/01 and 8/17/01.

*Table 2.*

Variety	Days to 1/2 down	Yield by grade and total yield						Total	Culls	Bulbs 1000s/A	Single centers %
		<2 ?"	2? to 3"	3 to 4"	4 to 4?"	>4?"					
cwt/acre											
Frontier	121	76	265	29	0	0	370	1	140	18	
Hercules	130	12	157	199	0	0	368	37	88	13	
Millennium	136	66	255	136	0	0	457	4	136	35	
Pathfinder	128	15	151	174	0	0	340	35	89	8	
Sabroso	143	20	217	257	0	0	494	15	119	33	
SWO 7074	130	20	136	279	10	0	445	13	103	13	
SWO 7144	130	34	171	144	0	0	349	5	99	33	
SWO 7391	139	17	245	291	0	0	553	12	122	40	
SWO 7402	138	21	248	178	0	0	447	5	107	18	
SWO 7761	138	29	207	310	0	0	546	21	126	38	
T-439	132	38	264	244	0	0	545	6	138	8	
Tenshin	126	30	237	103	0	0	370	1	101	5	
Teton	128	26	305	255	0	0	586	12	139	35	
Tioga	128	28	241	313	0	0	582	9	139	23	
Uni-globe 108	130	30	258	220	4	0	511	5	128	25	
Vantage	123	66	332	168	0	0	567	4	165	23	
Vaquero	139	16	139	292	0	0	447	6	101	65	
LSD (0.05)	7	17	77	73	ns	ns	74	17	23	22	