Onion Variety Trial

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The Commercial Vegetable Growers of ND is trying to bring new high value crop markets into the state. Mike Kirby, from Oviedo, Florida, was hired Executive Marketer for the Commercial Vegetable Growers of ND and worked during 2001 to connect with processing and fresh markets for vegetable crops. There are currently 300 acres of onions, along with production of carrots, cabbage, and pumpkins.

For onions, varieties need to be identified that will mature, meet size requirements for processing, and have few double centers. Single center onions give more rings per pound than multiple center types and they produce more usable product per pound to the processor. The two most important factors for producing single center onions are variety and lack of early season stresses (cold snap, lack of water, or chemical (herbicide mainly)).

In the future we will continue variety trials, and expand research to study production practices as well.

Onion yields ranged from 340 to 586 cwt/A (Table 1). Onions grown in North Dakota are marketed for processing with a 3 to 4 ½-inch size requirement. SWO 7074, SWO 7391, Vaquero, SWO 7761, and Tioga were the top yielding varieties in the 3 to 4 ½-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. The soil was allowed to dry out prior to a Goal + Buctril application at the 2-leaf stage. This may have water stressed the plants, causing the low percentage of single centers.

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Table 1.

Variety	Days to 1/2 down	<2 ¼"	2¼ to 3"	3 to 4"	4 to 4½"	>4½"	Total	Culls	Bulbs	Single Centers
		cwt/acre							1000s/A	%
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