Test Site Information - SRPN

Clovis, NM -- The irrigated nursery was planted on 9/24/96 into fallow. Plots were irrigated on 9/26/96, 1/29/97, 3/17/97, and 4/2/97. Fertilizer rates consisted of 200 lbs/a of 11-52-0. Seeding rate was 90 lbs/a. Harvested on July 10, 1997. The dryland nursery was planted on 9/25/96 at a rate of 40 lbs/a. Fertilizer rates consisted of 200 lbs/a of 11-52-0. The dryland nursery was irrigated on 9/26/96 to ensure germination. Harvested on July 8. 1997.

Farmington, NM -- Planted on 9/20/96 at seeding rate of 100 lbs/a. Fertilization was 80 lbs/a N and 104 lbs/a of P2O5. Irrigation was supplied by center pivot, as needed. The nursery was badly lodged.

Bushland, TX -- No additional information.

Chillicothe, TX -- No additional information. A severe freeze on April 12 caused significant damage to early maturing lines.

Prosper, TX -- No additional information.

Stillwater, OK -- Planted on 10/11/96 and harvested on 6/19/97. Good stands were obtained. A mid-April freeze caused some damage in early maturing lines, but good growing conditions in May permitted good recovery from the freeze. Leaf rust and SBMV were factors in production.

Altus, OK -- Planted on 10/25/96 and harvested 6/25/97. Some lines suffered freeze damage, but good yields were obtained on average. Leaf rust was a factor.

Lahoma, OK -- Planted on 10/15/96 and harvested on 6/27/97. There was little damage noted from the April freeze. Very favorable growing conditions in May resulted in good production levels. Leaf rust was a factor.

Goodwell, OK (irrigated) -- Planted on 10/2/96 and harvested on 7/9/97. Some freeze damage occurred in mid-April, but recovery was good due to favorable conditions in May and early June. Leaf rust was present late in the season, but was not a significant factor in yield differences.

Kansas Sites (KSU) -- Fall plantings and stand establishments were generally good. The winter was fairly dry, but subsoil moisture was good. A severe freeze occurred on April 11-12. Temperatures in SW and SC Kansas were as low as 12 to 15 degrees F for 8 to 24 hours with the wheat in Feekes stage 5-6 in many crop districts. Significant damage in south-central Kansas initially was expected due to stem damage

caused by ice. In southwest Kansas, many fields suffered as much as 15-50% tiller death in addition to stem damage. However, weather conditions following the freeze and throughout the growing season were excellent. Timely precipitation and cool weather were predominant and temperatures below 85 degrees F for virtually the entire grain filling period. Diseases were present on lower leaves throughout the growing season, but weather was unfavorable for development of most pathogens. Leaf rust was the only disease that caused significant yield losses. Losses were primarily localized to the south-central production areas of Kansas.

Wichita-I, KS -- The Trio SRPN site was planted on 10/3/96 and harvested 7/3/97.

Winfield, KS -- The Winfield SRPN site was managed by Cargill-Goertzen Seed Research.

Wichita-II, KS -- The HybriTech SRPN site was moved to Wichita in 1997.

Salina, KS -- The Agripro SRPN site was located at Salina, KS in 1997. Relative maturity was scored on a 1 (early) to 9 (late) scale. Leaf rust severity was scored as 1, clean to trace; 2, 0 to 10%; 3, 11 to 20%; 4, 21 to 30%; 5, 31 to 40%; 6, 41 to 50%; 7, 51 to 70%; 8, 71 to 85%; and 9, 86 to 100%. Leaf rust reaction was scored as 1, immune; 2, R; 3, RMR; 4, MR; 5, MRMS; 6, MS; 7, SMS; 8, S; and 9, VS. Percentage of grain sample that falls through a 6.5/64 x 3/4 inch screen during a 20 second shake was recorded.

Colorado Sites -- The Burlington nursery had poor stands due to very dry winter conditions and was severely impacted by WSMV, RWA, and moisture stress. The Fort Collins nursery was irrigated. The nurseries at Julesburg, Akron, and Walsh had normal production conditions.

Lincoln, NE -- The previous crop was spring oats. The nursery was planted on time in good moisture. Winter survival was good, but soil borne mosaic virus was present. The nursery had some period of drought stress during grainfill, but in general finished well.

Clay Center, NE -- Previously fallow. The nursery was planted in adequate moisture, but suffered severe winterkilling and some blowing. The recovery of surviving plants was excellent after late spring/early summer rains.

North Platte, NE -- Planted into ecofallow following corn. The nursery was planted on time and in adequate moisture, but just before a rain which may have slowed emergence. Winter was not severe, but the plots never looked vigorous. This may have been due to little residual soil

moisture. The nursery received late rains--good for the weeds, but not much help for the wheat.

Sidney, NE -- The nursery was planted on time, but just before a rain which partially flooded the field. The field survived the winter, but suffered from WSMV infection. Lines with seed treatments seemed to do better which may indicate an interaction between WSMV and additional diseases. Yields were better than appearances.

Alliance, NE -- The nursery was planted on time into good moisture. It survived the winter well. The crop had excellent potential, but was drought stressed in the late tillering and grainfilling periods.

Brookings, SD -- (Brookings County, Aurora Farm)
Nurseries were planted no-till (on 9/24/96) into weedy flax stubble with soil moisture somewhat greater than optimum. Based on a soil test, supplemental nitrogen (105 lbs/acre) was applied as a foliar on 4/27/97. The flax stubble, coupled with above average snowfall amounts that remained until spring, contributed toward excellent survival and plant health coming out of winter. Very little rain was received from the time the snow melted up until two weeks after heading. While visual drought stress symptoms were not evident (other than a compressed heading date window), spring wheat in adjacent fields was heading at about one foot tall. Genotypes that performed poorly may have had a poorly developed root system and did not respond well or recover from the early-season drought stress. Nurseries were harvested on 8/1/97.

Watertown, SD -- (Codington County, NE Research Station)
The RGON was planted no-till (on 10/7/98) into standing oat stubble with very good soil moisture. As at some other locations, late planting, poor fall growth, and severe winter weather contributed to a near-complete loss throughout the entire field. Average survival estimates for a winter rye trial in the same field were 20% (Roughrider was estimated at 5-10% survival in the state variety trial).

Pierre, SD -- (Hughes County, Dakota Lakes No-Till Research Farm)
Nurseries were planted no-till (on 10/2/96) into pea residue with very good soil moisture. As at Winner, late planting, poor fall growth, and severe winter weather resulted in some winterkill in the nurseries (though not nearly as severe as at Winner). Based on a soil test, supplemental nitrogen (45 lbs/acre) was applied as a foliar on 5/15/97. The most predominant factor in the nursery was an early- to mid-February Canadian goose infestation that caused significant, non-uniform stand damage throughout the nurseries. Leaf rust became significant at this site, somewhat earlier than normal (beginning at milk stage). Nurseries were harvested on 8/5/97.

Winner, SD -- (Tripp County, Farmer-Cooperator)
Nurseries were planted no-till (on 10/1/96) into standing spring wheat stubble (cut with a stripper head, about 2-3 feet tall) with very good soil moisture. Soil fertility was managed by the farmer-cooperator, based on a fall soil test and late fall granular applications for a 70 bushel yield goal. Late planting (due to excessive rains in mid-September), coupled with insufficient fall growth in response to cool fall temperatures, resulted in significant winterkill in the nurseries (particularly the SRPN) following a series of blizzards in early- to mid-January. Significant leaf spotting disease pressure (mostly Tan spot) was observed. Temperatures from heading through grain filling were normal throughout the state. Nurseries were harvested on 8/8/97.

Columbia, MO -- Planted on 10/2/96 and harvested 7/9/97. Planting was timely and winter conditions were mild. There was a long, cool spring and grain-fill period. High aphid populations contributed to significant BYDV infections. Septoria tritici also was significant. Environmental yield potential was high, with better soft wheats yielding 75-85 bu/a in the same field. Fertilizer rate was 40 lb/a N fall applied and 66 lb/a N spring applied.

Lind, WA -- The plots received about 2 inches of irrigation prior to seeding. A total of 15 inches of rain were received during the crop year, compared with long-term average of 9.5 inches. No diseases affected yield.

Crawfordsville, Iowa -- Harvest index is reported as the ratio of seed weight to above ground biomass.