## VARIETY DESCRIPTORS WHEAT (Triticum Soft Wh. Winter )

1.	Ki	nd of Wheat: (	circle on	e)			
	COI	MMON) DURUM	EMMER	SPELT	POLISH	POULARD	CLUB
	а.	If common, ty	pe of whe			ter d red winter	)
2.	b. Fac	Describe methor Protein, germ with insect to test no weevi	ination, esting no 1 were fo	milling a w is in p	nd baking rogress. I	and weight t n a 12(twe1v	ests,
	а.	Daylength sens		(circle o	ne) YES	NO (	UNKNOWN
	ь.	Winter surviva	al (circle	one or	range)		
		POOR FAIR	GOOD	EXCELL	ENT) NO:	T APPLICABLE	
		Compared to	Hills 81 Know var:		ESS) S	AME MOR	E
	c.	Reaction to ma	ajor disea	ses with	in area of	adaptation	(list)
	d.	Reaction to ma	jor insed	ts within	n area of a	See at adaptation (	tached sheet list)
*	e.	Other factors				See a	ttached shee
•	Pla	nt Characterist	ics:				
	λa.	Habit of growt	h (circle	one) (W	INTER SI	PRING OTH	ER
	b.	Coleoptile col	or (circl	le one) Wi	TITE RE	D OTHER	
	c.	Coleoptile exp	ression (	circle or	ne) REDUCE	ED HEIGHT (	CONVENTIONA
		Compared to (k	Hills 8 nown vari		ORTER (	SAME	LONGER
	d.	Juvenile plant	growth h	abit (cir	cle one)		
		PROSTRATE	SEM	I-ERECT		ERECT	<u> </u>
	e.	Plant tillerin	g (circle	one) LO	INI W	ERMEDIATE	HIGH
			Hills 8		ESS	SAME	MORE

(circle one) EARLY MIDSEASON LATE OTHER		
Appears most similar to Hills 81 (known variety)  b. Flag leaf at booting (circle one) (circle o		
Appears most similar to Hills 81 (known variety)  b. Flag leaf at booting (circle one) (circle o		
Appears most similar to Hills 81 (known variety)  b. Flag leaf at booting (circle one) (circle o		
Appears most similar to Hills 81 (known variety)  b. Flag leaf at booting (circle one) ERECT RECURVED (circle one) INISTED NOT THISTED (circle one) WAXY BLOOM NO WAXY BLOOM C. First leaf below flag leaf  1) 17 average millimeters in width (circle one) NARROW HID-WIDE WIDE  2) 235 average millimeters in length (circle one) SHORT HID-LONG LONG  3) Pubescence present? (circle one) YES NO  d. Auricles  1) Color (circle one) WHITE PURPLE OTHER NO  Time of Heading: (circle one) EARLY HIDSEASON LATE OTHER (known variety)  0 Average number of days earlier than Hills 81 (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-SIRONG STRONG Compared to Hills 81 (known variety)  LESS SAME MORE	-	Leaves:
Appears most similar to Hills 81 (known variety)  b. Flag leaf at booting (circle one)		a. Color at booting (circle one)
circle one) ERECT RECURVED  (circle one) INISTED NOT TWISTED  (circle one) WAXY BLOOM NO WAXY BLOOM  c. First leaf below flag leaf  1) 17 average millimeters in width (circle one)  NARROW MID-WIDE WIDE  2) 235 average millimeters in length (circle one)  SHORT MID-LONG LONG  3) Pubescence present? (circle one) YES NO  d. Auricles  1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY HIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  O Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK HID-STRONG STRONG  Compared to Hills 81 (known variety)		YELLOW-GREEN GREEN GRAY-BLUE
(circle one) ERECT RECURVED  (circle one) TWISTED NOT TWISTED  (circle one) WAXY BLOOM NO WAXY BLOOM  c. First leaf below flag leaf  1)17 average millimeters in width (circle one)  NARROW MID-WIDE WIDE  2)235 average millimeters in length (circle one)  SHORT MID-LONG LONG  3) Pubescence present? (circle one) YES NO  d. Auricles  1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY MIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  0 Average number of days later thannone known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG Compared to Hills 81 LESS SAME MORE		Appears most similar to <u>Hills 81</u> (known variety)
(circle one) TWISTED  (circle one) WAXY BLOOM  C. First leaf below flag leaf  1) 17 average millimeters in width (circle one)  NARROW MID-WIDE WIDE  2) 235 average millimeters in length (circle one)  SHORT MID-LONG LONG  3) Pubescence present? (circle one) YES NO  d. Auricles  1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY HIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  0 Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-SIRONG STRONG  Compared to Hills 81 (known variety)  LESS SAME MORE		b. Flag leaf at booting
(circle one) WAXY BLOOM  c. First leaf below flag leaf  1) 17 average millimeters in width (circle one)  NARROW MID-WIDE WIDE  2) 235 average millimeters in length (circle one)  SHORT MID-LONG LONG  3) Pubescence present? (circle one) YES NO  d. Auricles  1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY MIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  0 Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 (known variety)  (known variety)		(circle one) ERECT RECURVED
C. First leaf below flag leaf  1)		(circle one) IWISTED NOT TWISTED
1)		(circle one) WAXY BLOOM NO WAXY BLOOM
NARROW MID-WIDE WIDE  2) _235    average millimeters in length (circle one)  SHORT		c. First leaf below flag leaf
2)		<ol> <li>17 average millimeters in width (circle one)</li> </ol>
3) Pubescence present? (circle one) YES NO  d. Auricles  1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY MIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  O Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 (known variety)		NARROW MID-WIDE WIDE
d. Auricles  1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY MIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  0 Average number of days later than none known of (known variety)  Stem: a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG Compared to Hills 81 (known variety)  Compared to Hills 81 (known variety)		2) <u>235</u> average millimeters in length (circle one)
d. Auricles  1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY MIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  0 Average number of days later than none known of (known variety)  Stem: a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG Compared to Hills 81 (known variety)  Compared to Hills 81 (known variety)		SHORT MID-LONG LONG
1) Color (circle one) WHITE PURPLE OTHER  2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY HIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  0 Average number of days later than none known of (known variety)  Stem: a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK HID-STRONG STRONG Compared to Hills 81 (known variety)  Compared to Hills 81 (known variety)	ř.	3) Pubescence present? (circle one) YES NO
2) Pubescence present? (circle one) YES NO  Time of Heading: (circle one) EARLY MIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  0 Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG Compared to Hills 81 (known variety)  SAME MORE		d. Auricles
Time of Heading:  (circle one) EARLY MIDSEASON LATE OTHER  12 Average number of days earlier than Hills 81 (known variety)  O Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 (known variety)  SAME MORE		1) Color (circle one) WHITE PURPLE OTHER
(circle one) EARLY MIDSEASON LATE OTHER		2) Pubescence present? (circle one) YES NO
Average number of days earlier than Hills 81 (known variety)  O Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 (known variety)  SAME MORE		Time of Heading:
O Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 (known variety)  SAME MORE		(circle one) EARLY MIDSEASON LATE OTHER
Average number of days later than none known of (known variety)  Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 LESS SAME MORE		
Stem:  a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 LESS SAME MORE		
a. Color (circle one) WHITE PURPLE OTHER  b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 LESS SAME MORE		HVETage number of days later than
b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 LESS SAME MORE  (known variety)		Stem:
b. Strength (circle one) WEAK MID-STRONG STRONG  Compared to Hills 81 LESS SAME MORE  (known variety)		a. Color (circle one) (WHITE) PURPLE OTHER
Compared to Hills 81 LESS SAME MORE (known variety)		
		Compared to Hills 81 (LESS) SAME MORE

	/ d.	Waxy bloom present? (circle one) YES NO	
	e.	Internodes are (circle one) HOLLOW   SOLID	
	f.	Pubescence present on last internode of rachis?	
		(circle one) YES NO	
<b>.</b> .	Pla	ent Height:	
•	a.	Relative (circle one or range)	
		SHORT MEDIUM SHORT MEDIUM MEDIUM TALL	TALL
	ь.	Average height 82.5 centimeters.	
		Range $\frac{75}{}$ to $\frac{90}{}$ centimeters.	
	C.	centimeters taller than Gaines	
		(known variety)  35 centimeters shorter than Hill 81 (known variety)	
<b>*8.</b>	Tim	e of Anthesis:	
	a./	Relative (circle one or range) EARLY MIDSEASON  Total days to anthesis after planting	LATE
* . * .	υ. -	40	
	c.	No. of days earlier than Hills 81 (known variety)	
	•	O No. of days later than unknown (known variety)	•,
<b>★9.</b>	Spil	ke:	
	a,	Color of anthers (circle one) (YELLOW) PURPLE	
	b.	Awnedness (circle one)	
		AWNLESS APICALLY AWNLETED AWNLETED AWNED	
	c.	Average length of awns-range $\frac{6.5}{}$ to $\frac{8}{}$ cm.	
		(Circle one) SHOPT MID-LONG (LONG)	

d.	Size	•				
	1)	Average leng	th of spike	8 to	10 cm.	
		(circle one)	SHORT	SHORT	TO MID-LON	G
		MIDLONG	MID-LONG	G TO LONG	LONG	
	2)	Average widt	13 to	16 mm		
		(circle one)	NARROW	MID-W	IDE	WIDE
e.	Shape	(circle one o	range) Fl	JSIFORM	OBLONG	CLAVATE
	ELLIPI	ICAL	OTHER	***		
f.	Densit	y (circle one	or indicate	range)		
	VERY L	AX LAX	MID-DENS	DEN DEN	SE (	JERY DENSE
9.	Color	of awns at mad	curity (circ	le one) BL	ACK BLUI	E BROWN
	GREY	PURPLE	RED TAN	WHITE/	AMBER YI	ELLOW
	ROW MI	XED FOR COLOR	ML	ILT ICOLORED	PLANT PART	
h.	Positi	on of spike a	maturity (	circle one)		
	ERECT	I	ICL INED	NODDIN	G	
i.	Shatte	ring (circle d	ne)	•		
	(very		4 5	6 7	8 9 (very high)	)
•	Compar	ed to <u>Hill</u> (know	LE Variety)	SS SAME	MORE	
Glu	mes:			·		
a.	Color	at maturity (c	ircle one)	BLACK	BLUE I	BROWN
	GREY	PURPLE	RED	TAN WH	ITE/AMBER	YELLOW
•	ROW MI	XED FOR COLOR	MULT	ICOLORED PL	ANT PART	
<b>b</b> .	Average	e length <u>8-10</u>	m m	e.		
	Relativ	ve (circle one	) SHORT	MID-L	DNG	LONG
c.	Average	e width	M m			
. :	Relativ	e (circle one	) NARROW	MID-W	IDE	WIDE

**\*10.** 

	a.	Sho	oulder	•				
		1)	Width in mm.	(circle one	∍) NARROW	MID-	IDE	WIDE
		2)	Shape (circle	one or rar	nge WANT IN	G OBI	LIQUE	ROUNDED
			SQUARE	ELEVATEI		AP ICULATE		
	e.	Beak	· · · · · · · · · · · · · · · · · · ·			-	•	
		1)	Width (circle	one) Na	ARROW	MID-WIDE	WIDE	
		2)	Lengthrange	66	_ to	9nm		
			(circle one)	VERY SHOP	RT SHO	RT MEI	DIUM SHORT	ı
material (*)	₹ .	(	MEDIUM	MEDIUM LON	lG LON	G VE	RY LONG	
		3)	Shape of apex	(circle or	e) (ACUMII	NATE OF	BTUSE	ACUTE
	f.	Pub	escence of glu	me (circle	one) 1 2 1=	3 4 5 6	5 7 8 9 abrous	,
k11.	See	ed Ch	aracteristics:					
٠.	<b>/</b> a.	Col	or (circle one	) WHITE 4	MBER RED	PURPLE (	THER	***************************************
	b.	Siz	e	•				
		1)	Length (circl	e one) Sh	IORT	MID-LONG	LON	G
, · ·			Average lengt	h <u>7</u> m	m (not inc	luding brus	sh)	
· .		2)	Width (circle	one) N	ARROW (	MID-WIDE	WIDE	
			Average width	4	_ mm			•
		3)	Average weigh	t per 1000	seeds	49	_grams.	
	٠.,	/ Sha	pe (circle one	OVATE	00	AL F	ELL IPT ICAL	•
	ď.		cribe texture wn variety.	and quali	ty of this	variety as	compared	to a
	e.	Brus	5h					_
•	4	1)	Size (circle	one) SMA	LL	MEDIUM	LAR	GE
		2)	Length (circle	e one) SHO	RT (	MEDIUM	LON	G
		3)	Collared? (c:	ircle one)	YES	NO		

- f. Crease
  - 1) Width (circle one) NARROW MID-WIDE WIDE
  - 2) Depth (circle one) SHALLOW MID-DEEP DEEP
- g. Cheek (circle one) ROUNDED ANGULAR
- h. Germ
  - 1) Size (circle one) SMALL MEDIUM LARGE
- \*12. Variant (See definition):

  Describe variants observed, including frequency of occurrence. Not to include off-type. Spike length increased from (8) mesh to (14)

  fourteen mesh two years in (18) crop years (8) eight mesh to (10) ten

  mesh ten years of the 18 year crops. Stem length 29" to 36" varied with
- \*13. List any other traits or special markers that may be helpful in identifying the variety, including characteristics determined by use of biochemical methods (e.g. phenol reaction or electrophoresis).
  - Longer heads, winter hardiness shows high, 1989 no damage loss. (other varities from 40% to 90% of which most had to replant to spring varities. 1990 already has a loss of 20% to 25% on W. Wheat seeded. (another winter hardiness test) 10 days of heavy rain before harvest-kernel discolor by fungus was very little. Sprout in the embryo showed a fraction. All other varieties in the same area suffered badly and went for feed only.

-weather conditions.