No. 7500079

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Northrup, King and Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF seventeen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. [illegible] THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS [illegible]LASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS [illegible]IED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Kombar'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office *to be affixed at the City of* Washington, DC *this* first *day of* June *in the year of our Lord one thousand nine hundred and* seventy-six

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(12-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1. VARIETY NAME OR TEMPORARY DESIGNATION: Kombar	2. KIND NAME: Barley	FOR OFFICIAL USE ONLY — PV NUMBER: 7500079
3. GENUS AND SPECIES NAME: Hordeum vulgare L.	4. FAMILY NAME *(Botanical)*: Gramineae	FILING DATE: 4.14.75 — TIME: 2 P.M.
	5. DATE OF DETERMINATION: June, 1973	FEE RECEIVED: $250 / $250 / $250 — BALANCE DUE: $ — / $ — / $ —
6. NAME OF APPLICANT(S): Northrup, King & Co.	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*: 1500 Jackson Street N.E. Minneapolis, Minnesota 55413	8. TELEPHONE AREA CODE AND NUMBER: (612) 781-8011

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Minnesota	1896

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Allenby L. White
Northrup, King & Co.
1500 Jackson Street N.E.
Minneapolis, Minn. 55413

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

[X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*

[X] 13B. Exhibit B, Botanical Description of the Variety

[X] 13C. Exhibit C, Objective Description of the Variety

[X] 13D. Exhibit D, Data Indicative of Novelty

[X] 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [X] YES [ ] NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? [X] YES [ ] NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? [X] FOUNDATION [X] REGISTERED [X] CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes that the variety is distinct, uniform, and stable as required in Section 41 and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

April 9, 1975
(DATE)

Allenby L. White
(SIGNATURE OF APPLICANT)

1

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.

13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.

13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.

13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.

13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

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EXHIBIT A

Origin and Breeding History of 314* Barley

314* originated in Woodland, California from the cross of Minnesota selection 64-98-8 with the public variety Briggs. Pedigree, single plant selection was followed until the F-3 generation whereupon a backcross was again made to the variety Briggs. Subsequent to this, pedigree selection was again followed. Individual plant selections were made from the F_2 to the F_4 generations. Line 2S254 was bulked as an F_4 line. In addition to bulking, 20 heads were selected at random within this same line. Bulk F-5 seed was used in yield tests and individual F-5 head rows were advanced to maintain purity. Seed bulked from 10 of the most uniform head rows was used to carry on yield tests the following year. Additionally, two heads were selected at random from each of the 10 head rows to maintain the line integrity of this selection. These 20 individual lines have been advanced one additional generation and bulked to give breeders seed. The pedigree of selection 314 can be denoted as follows: Minnesota 64-98-8/2 Briggs. Breeders seed is of a uniform type and genetically in the F-8 generation.

No variants have been identified in 314.*

Schematically, the parentage and generation advance for 314* barley is presented below:

Year				
1969	Minnesota 64-98-8 x Briggs			
1969		F-1		
1970		F-2		
1970		F-3 line OW620 x Briggs		
1970-71			F-1	
1971			F-2	
1971			F-3	
1972			F-4 line 2S254	
			20 head samples	Bulk
1973		F-5	20 head rows	Early generation yield test
			2 random heads from 10 selected rows	Bulk
1973	F-6	20 head rows		
1974	F-7	Seed multiplication of 20 head rows		Advanced generation yield test
		Bulk		
1974	F-8	Breeders Seed		

* Now called Kombar.

EXHIBIT B

Botanical Description

The kernels of Kombar barley are from 9.0-10.5 m.m. long and from 3.0-3.5 m.m. wide. The 1,000 kernel weight is approximately 50 grams. The hull is slightly wrinkled and without any hairs on the ventral furrow. The aleurone is colorless.

Kombar is of spring growth habit exhibiting a juvenile semiprostrate type of growth. Plant color during early growth to boot stage is, using the Lewis Robert's PMS Color Matching System, PMS 364 (10 parts yellow; 6 parts process blue; and 2 parts black). Leaf sheaths, blades and auricles are glabrous with anthocyanin absent. The flag leaf is upright. A waxy bloom is present on the flag leaf sheath and peduncle. The stem is hollow with 5 nodes found above the node at ground level. The neck or peduncle curves downward at maturity.

The spike is 6 rowed and lax with the kernels overlapping at the tip. Long hairs are found on the rachis edges and the glumes. The lemma possesses long semismooth awns and long rachilla hairs. The glumes have rough awns which are longer than the glume length.

Kombar, being of spring growth habit, is well adapted to the high yield areas of California and Arizona. Kombar is a mid-season to late variety, with a maturity 3-7 days later than the variety Briggs. The heading date of Kombar is typically 5-8 days later than Briggs.

Kombar is approximately 5 cm. shorter than Briggs and possess a stiffer, stronger straw. Resistance to lodging is very good. Shatter resistance is equal to or greater than that exhibited by other Coast barleys.

Kombar is susceptible to the commonly occurring races of Rhyncosporium secalis ~~and Pyrenophora teres~~ in California. It is moderately tolerant to the barley yellow dwarf virus.

Eat 1/20/76

The measurement data presented in Exhibit C were determined, analyzing plants obtained from a November 1974 planting date in Woodland, California. A planting rate of 90 kg/ha was used, and the fields received adequate fertilizer under natural rainfall.

Letter dated 1/13/76

FORM GR-470-5
(11-1-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED. OMB NO. 40-R3712

EXHIBIT C
(Barley)

OBJECTIVE DESCRIPTION OF VARIETY
BARLEY (*HORDEUM VULGARE*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Northrup, King & Co.

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
1500 Jackson Street N.E.
Minneapolis, Minnesota 55413

FOR OFFICIAL USE ONLY
PVPO NUMBER
7500079
VARIETY NAME OR TEMPORARY DESIGNATION
Kombar

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in first box (i.e. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. GROWTH HABIT:

[1] 1 = SPRING 2 = FACULTATIVE WINTER 3 = WINTER

[2] Early Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE 3 = ERECT

2. MATURITY (50% Flowering):

[2] 1 = EARLY (California Mariout) 2 = MIDSEASON (Betzes) 3 = LATE (Frontier)

[ ] No. of days *Earlier* than . . . . . [ ]
[10] No. of days *Later* than . . . . . [2]
} 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON 5 = PIROLINE 6 = PRIMUS 7 = UNITAN

3. PLANT HEIGHT (From soil level to top of head):

2 [~~8~~] 1 = SEMIDWARF 2 = SHORT (California Mariout) 3 = MEDIUM TALL (Betzes) 4 = TALL (Conquest)
1/22/76 EXT (telephone conversation)

[0 5] Cm. *Shorter* than . . . . . [8]
[1 8] Cm. *Taller* than . . . . . [2]
} 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON 5 = PIROLINE 6 = PRIMUS 7 = UNITAN 8 = BR 166 S
EXT 1/20/76

4. STEM:

[1] Exertion (*Flag to spike at maturity*): 1 = 0 - 3 cm. 2 = 3 - 10 cm. 3 = 10 - 15 cm.

[1] Anthocyanin: 1 = ABSENT 2 = PRESENT

[0 5] NO. OF NODES (Originating from node above ground)

[1] Collar Shape: 1 = CLOSED 2 = V-SHAPED 3 = OPEN 4 = MODIFIED CLOSED OR OPEN

[3] Shape of Neck: 1 = STRAIGHT 2 = SNAKY 3 = OTHER (Specify) curves downward

5. LEAF:

[1] Basal leaf sheath (*seedling*): 1 = GLABROUS 2 = PUBESCENT

[2] Position of flag leaf (*at boot stage*): 1 = DROOPING 2 = UPRIGHT

[3] Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY 3 = WAXY

[1 3] MM. WIDTH (First leaf below flag leaf)

[2 2] CM. LENGTH (First leaf below flag leaf)

[1] Anthocyanin in leaf sheath: 1 = ABSENT 2 = PRESENT

6. HEAD:

[2] Type: 1 = TWO-ROWED 2 = SIX-ROWED

[1] Density: 1 = LAX 2 = ERECT (Not dense) 3 = ERECT (Dense)

[1] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) _____

[3] Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY 3 = WAXY

[2] Lateral Kernels Overlap: 1 = NONE 2 = AT TIP 3 = 1/4 - 1/2 OF HEAD

[3] Rachis (*Hair on edge*): 1 = LACKING 2 = FEW 3 = COVERED

7. GLUME:

[2] Length: 1 = 1/3 OF LEMMA 2 = 1/2 OF LEMMA 3 = MORE THAN 1/2 OF LEMMA

[3] Hairs: 1 = NONE 2 = SHORT 3 = LONG

[3] Hair covering: 1 = NONE 2 = RESTRICTED TO MIDDLE 3 = CONFINED TO BAND 4 = COMPLETELY COVERED

[3] Awns: 1 = LESS THAN EQUAL TO LENGTH OF GLUMES 2 = EQUAL TO LENGTH OF GLUMES 3 = MORE THAN EQUAL TO LENGTH OF GLUMES

[3] Awn Surface: 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH

4

Letter rec'd 1/13/76

EXHIBIT D

Data Indicative of Novelty

Kombar Barley is most similar to the variety Briggs. It differs from Briggs in that it flowers an average of 7 days later; is 5 cm. shorter; has stronger straw; is more resistant to lodging; has longer, more dropping heads, and has bright white kernels whereas those of Briggs are yellow.

EXHIBIT D.

1973-74 Barley Replicated Yield Trial Data - Pacific Division
Top 10 Entries
Trial I

Woodland, Calif.

Entry	Yield (Kg/Ha)	% check
Briggs	3299	100
312	5040*	153
214	4947*	150
121	4935*	150
215	4871*	148
212	4783*	145
323	4746*	144
314**	4691*	142
408	4594*	139
414	4520*	137
320	4501*	136

C.V. = 14%
L.S.D. = 751

Comments: Briggs shattered badly due to extensive North winds just prior to harvest.

Five Points, Calif.

Entry	Yield (Kg/Ha)	% check
Cm67	3421	100
215	3933	116
312	3922	116
408	3878	114
409	3856	114
Numar	3844	114
414	3745	110
121	3691	109
415	3616	106
314**	3563	105
206	3486	102

C.V. = 15%
L.S.D. = 664

Comments: Excessive winter rain caused standing water. Late spring was dry giving moisture stress conditions.

Bakersfield, Calif.

Entry	Yield (Kg/Ha)	% check
Cm67	4595	100
214	6743*	147
215	6613*	144
314-L	6369*	139
320	6297*	137
502	6134*	133
314**	5980*	130
314-M	5947*	129
312	5844*	127
121	5835*	127
221	5500	120

C.V. = 15%
L.S.D. = 1058

Comments: High yield trial which showed potential of NK experimental barleys.

* Significant difference in yield.

Lodging Degree (1-5) 1 = no lodging

Briggs	2	Cm 67	4	Cm 67	5
314**	2	Numar	2	Numar	2
214	1	314	1	314**	1
		214	2	214	1

** Now called Kombar.

FORM GR-470-5 (Reverse)

8. LEMMA:

[5] Awn: 1 = AWNLESS 2 = AWNLETS ON CENTRAL ROWS, AWNLESS ON LATERAL ROWS 3 = SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4 = SHORT (less than equal to length of spike) 5 = LONG (longer than spike) 6 = HOODED

[3] Awn Surface: 1 = AWNLESS 2 = SMOOTH 3 = SEMISMOOTH 4 = ROUGH

[2] Teeth: 1 = ABSENT 2 = FEW 3 = NUMEROUS

[1] Hair: 1 = ABSENT 2 = PRESENT

[1] Shape of base: 1 = DEPRESSION 2 = SLIGHT CREASE 3 = TRANSVERSE CREASE

[2] Rachilla Hairs: 1 = SHORT 2 = LONG

9. STIGMA:

[2] Hairs: 1 = FEW 2 = MANY

10. SEED:

[2] Type: 1 = NAKED 2 = COVERED

[1] Hairs on Ventral Furrow: 1 = ABSENT 2 = PRESENT

[4] Length: 1 = SHORT (8.0 mm.) 2 = SHORT TO MIDLONG (7.5 - 9.0 mm.) 3 = MIDLONG (8.5 - 9.5 mm.) 4 = MIDLONG TO LONG (9.0 - 10.5 mm.) 5 = LONG (10.0 mm.)

[2] Wrinkling of hull: 1 = NAKED 2 = SLIGHTLY WRINKLED 3 = SEMIWRINKLED 4 = WRINKLED

[1] Aleurone Color: 1 = COLORLESS (White or Yellow) 2 = BLUE

[0 0] PERCENT ABORTIVE

[5 0] GMS. PER 1000 SEEDS

11. DISEASE. (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3=tolerant

[0] SEPTORIA	[0] NET BLOTCH	[0] SPOT BLOTCH	[0] POWDERY MILDEW
[0] LOOSE SMUT	[0] BACTERIAL BLIGHT	[0] COVERED SMUT	[0] FALSE LOOSE SMUT
[0] STEM RUST	[1] LEAF RUST	[0] SCAB	[1] SCALD
[0] AY	[0] BSMV	[3] BYDV	[0] OTHER (Specify)

12. INSECT: (0 = Not tested, 1 = Susceptible 2 = Resistant)

[0] GREEN BUG	[0] ENGLISH GRAIN APHID	[0] CHINCH BUG	[0] ARMYWORM
[0] GRASS HOPPERS	[0] CERIAL LEAF BETTLE	[0] OTHER (Specify)	

HESSIAN FLY RACES: [0] GP [0] A [0] B [0] C [0] D [0] E [0] F [0] G

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APR 14 1975
U.S. DEPARTMENT OF AGRICULTURE
AMS, GRAIN DIV.
PVPO

13. CHEMICAL (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] DDT [ ] OTHER (Specify) _____

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Briggs	Seed size	CM67
Leaf size	Briggs	Coleoptile elongation	Briggs
Leaf color	Briggs	Seedling pigmentation	Briggs
Leaf carriage	Briggs		

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

1. Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
2. Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests. Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61 - 84.
3. Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

1973-74 Barley Replicated Yield Trial Data - Pacific Division
Top 10 Entries
Trial I

Yuma, Arizona		
Entry	Yield (Kg/Ha)	% check
Arivat	4978	100
214	7826*	157
314 **	7452*	150
320	6838*	137
303	6831*	137
209	6720*	135
105	6689*	134
311	6673*	134
211	6535*	131
117	6445*	129
108	6315*	127

C.V. = 16%
L.S.D. = 1275

Comments: High yield trial. 314*production field (20 Ac.) yielded identically to the above small plot data.

* Significant difference in yield.

(1-9) Lodging Score	
Arivat	9
Cm 67	9
314 **	5
214	5

** Now called Kombar.

Year 1973

Location - Woodland, Calif.

Entry	Heading Date	Plant Height	Lodging Degree (1 = no lodging)
314 **	4-23-73	75 cm.	1
Briggs	4-16-73	80 cm.	3

Location - Yuma, Arizona

314 **	4-01-73	98 cm.	3
Cm67	3-14-73	85 cm.	8

Year 1974

Location - Woodland, Calif.

Entry	Heading Date	Plant Height	Lodging Degree (1 = no lodging)
314 **	4-05-74	90 cm.	2
Briggs	3-31-74	95 cm.	3

Location - Bakersfield, Calif.

314 **	4-15-74	96 cm.	1
Briggs	4-07-74	104 cm.	4

Location - Yuma, Arizona

314 **	3-01-74	95 cm.	5
Briggs	2-23-74	87 cm.	9

** Now called Kombar.

1974 University of Calif. Barley Rep. Trial Data

Entry	Yield (lbs/Ac)	Shatter	Yellow dwarf rating	Scald	Mildew	Lodging
Location: West Side Field Station						
Briggs	4736	0				100%
Numar	3719	1.25				100%
Cm67	3703	0				100%
Cal Mariout	3910	0				100%
Sutter						
UC Signal (Holt)						
UC 566						
Cm72						
NK 314 **	6141	5				60%
C.V.	12.7%					
L.S.D.	904					
U.C. Davis						
Briggs	2758		8.0	1.6	5.3	
Numar	3070		6.3	6.0	5.3	
Cm67	3515		2.3	4.0	5.0	
Cal Mariout						
Sutter						
UC Signal (Holt)	3284		6.7	3.7	4.7	
UC566	3487		2.7	6.7	6.0	
Cm72	3677		2.7	5.7	0	
NK 314 **	3999		5.3	5.0	2.0	
C.V.	14.0%					
L.S.D.	858					
Sutter Co. (Meridian)						
Briggs	2968	70	6.5	5.0	1.0	0
Numar	1586	80	4.2	8.0	4.2	1.5
Cm67	1568	80	1.2	4.0	2.8	1.8
Cal Mariout	1457	84	4.8	6.0	3.8	2.8
Sutter	1945	88	1.2	1.0	2.2	0
UC Signal (Holt)	1316	89	5.0	4.8	3.0	1.2
UC 566	1813	82	1.0	7.8	2.8	0
Cm72	1562	66	1.5	6.5	0	0
NK 314 **	3379	55	4.2	4.0	4.2	2.7
C.V.	17.2%					
L.S.D.	653					

** Now called Kombar.

EXHIBIT E

Statement of the Basis of Applicant's Ownership

Northrup, King & Co. is the sole and original breeder of Kombar Barley which was developed by the means outlined in Exhibit A, Origin and Breeding History of 314* Barley.

* Now called Kombar.