

No.



9700374

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Idaho Agricultural Experiment Station

Whereas THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

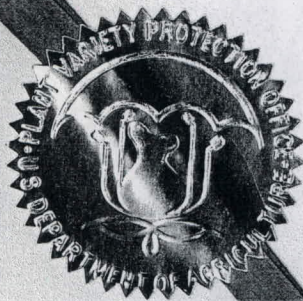
AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS 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 TWENTY 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 CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE SEED. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

MUSTARD, YELLOW

'Idagold'

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, D.C. this fifteenth day of November, in the year two thousand two.



Attest:

R. M. Jule

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

Arthur H. Gregory

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) <i>(as it is to appear on the Certificate)</i> Idaho Agricultural Experiment Station		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER BH.70.AJ (PI 597356)	3. VARIETY NAME 'IDAGOLD'
4. ADDRESS <i>(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)</i> IAES, College of Agriculture University of Idaho Moscow ID 83844-2331		5. TELEPHONE <i>(include area code)</i> (208) 885-7173	FOR OFFICIAL USE ONLY PVPO NUMBER -- 9700374 FILING AND EXAMINATION FEE: \$ 2450 DATE 12 August 1997 CERTIFICATION FEE: \$ 320 DATE June 14, 2002
7. GENUS AND SPECIES NAME Sinapis alba		6. FAX <i>(include area code)</i> (208) 885-6654	
8. FAMILY NAME <i>(Botanical)</i> Cruciferae		9. CROP KIND NAME <i>(Common name)</i> Yellow mustard	
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION <i>(corporation, partnership, association, etc.) (Common name)</i> University Experiment Station			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Jack Brown Dept PSES University of Idaho Moscow ID 83844-2339			14. TELEPHONE <i>(include area code)</i> (208) 885-7078
			15. FAX <i>(include area code)</i> (208) 885-7760
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED <i>(Follow instructions on reverse)</i>			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? <i>(See Section 83(a) of the Plant Variety Protection Act?)</i> <input checked="" type="checkbox"/> YES <i>(If "yes," answer items 18 and 19 below)</i> <input type="checkbox"/> NO <i>(If "no," go to item 20)</i>			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <i>(If "yes," give names of countries and dates)</i> <input checked="" type="checkbox"/> NO			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, 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(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT <i>(Owner(s))</i> <i>Richard C. Heimsch</i>		SIGNATURE OF APPLICANT <i>(Owner(s))</i> <i>Jack Brown</i>	
NAME <i>(Please print or type)</i> RICHARD C. HEIMSCH, DIRECTOR IDAHO AG. EXPERIMENT STATION		NAME <i>(Please print or type)</i> Jack Brown	
CAPACITY OR TITLE Breeder		CAPACITY OR TITLE Breeder	
DATE 8/4/97		DATE 7/24/97	

Attachment II
'IdaGold'
Condiment Yellow Mustard
(*Sinapis alba* L.)

Exhibit A: Origin and Breeding History

IdaGold is an open-pollinated cultivar selected for high adaptation to the dry-land environments of the Pacific Northwest (Idaho, Oregon and Washington). The cultivar was developed from a single plant selection in 1990 from the segregating F₃ population derived from the cross Mustang/BHLG.3553 made in 1988. Mustang is a high erucic acid oil cultivar that originated from Svalöv, Sweden, and BHLG.3553 is a low erucic acid high glucosinolate content cultivar from the collection of Agriculture Canada, Saskatoon, Canada. F₁ plants were increased to F₂ seed in the glasshouse in the fall of 1988 (Figure 1). F₂ seed harvested was bulk, and used to plant bulk field trials in 1989. This bulk evaluation was repeated in 1989 to obtain F₄ seed. At harvest 134 single plant selections were taken from the Mustang/BHLG.3553 F₄ populations. In 1990, these 134 single plant selections, along with over 1000 other single plants selected from other crosses, were planted as head rows at a single location in Idaho. Through out the growing season head-rows were visually evaluated for adaptability. At harvest 37, from the original F₆ population of IdaGold was selected in the field for evaluation in early yield trials (3 replicates, 5x20' plots at a single location) in 1992. After this early evaluation, four F₆ populations were selected from the Mustang/BHLG.3553 cross. Multiple-site, replicated field evaluation began using this seed source in the spring 1993. After the first year-site evaluations, the original IdaGold population was identified and seed increase operations began in that same year (Figure 2). Yield trials of IdaGold continued until PVP submission.

Seed increase of IdaGold began in 1993, where a population of F₆ plants was grown and 50 single plant selections made at harvest. These were grown out as head rows in 1994. At harvest 4 single plants selections were taken from 15 'selected' plots (based on visual appearance). The four plants were planted in head rows in 1995. The remainder of the 2-row x 16' selected plot was threshed as a bulk and used for the following years yield trials. The 1995 procedure of head-row to single plant, plus bulk for yield trials was repeated. At harvest in 1996, the 'better' head-row plots were identified (40 plots and 20 single plants harvested from each selected plot). A Foundation seed increase was planted in 1997. plots in the Foundation seed house were visually rouged and off-type plots removed, spraying with herbicide (~25 plots were removed). Seed was harvested by bulk harvesting the 1997 F₁₀ head-rows.

IdaGold has been observed in yield trials from 1993 to 1997, and its performance has been further evaluated in small-plot multi-location trials, in larger plot on-farm tests, and also in commercial production from 1998 through 2001. Throughout this period IdaGold has been found to be uniform and stable in performance. Foundation seed of IdaGold has been certified pure by the state of Idaho on two occasions. Three certified seed increases of

IdaGold have passed certification by the state of Idaho over the past five years. During certification of Foundation or Certified seed, no off-types or variants have been found.

Exhibit B: Statement of Distinctness

IdaGold is most similar to the condiment yellow mustard cultivar 'Tilney'. IdaGold is, however, significantly taller than Tilney. IdaGold and Tilney when compared in replicated (4 replicates) field trials over the past four years under direct seeded and conventional seeding situations at two locals. Direct seeded conditions were considered as there was increasing interest amongst the growing community into direct seeding situations and IdaGold (along with other condiment yellow mustard) had shown beneficial effects when grown in direct seed cropping situations. Averaged over 11 site/years, IdaGold plants were 51.0 inches tall after flower ending, which was significantly taller ($P < 0.05$) taller than Tilney plants which averaged 46.7 inches tall. Over the 11 comparative trials IdaGold plants were significantly taller under six environments. In each environment IdaGold plants were taller, albeit, this difference was not significant at the 5% level.

Mucilage content is the leading quality factor in yellow mustard. Mucilage content is a determination of the viscosity of liquid used to boil mustard seeds. Mucilage content is determined by the following method. A 5.0 g sample of mustard seed is placed into a 250 ml. beaker and 45 ml of distilled water added, to a total weight of 50.0 g. The beaker is covered with a watch glass and brought to the boil on an electric plate. Seeds are boiled for 15 minutes, thereafter, the seed/water mix is allowed to cool at room temperature and adjusted to the original weight by adding distilled water. The mix is filtered through a plug of cheese cloth, and filtered liquid is transferred into the "G" tube of a clean and dry Ubbelohde Viscometer (Cannon Instrument Co. PO Box 16, State College, PA 16804; also available from Fisher Scientific Cat # 13-614B). Care must be taken to avoid air bubbles. Samples are introduced to between the "J" and "K" marker levels (see Viscometer user guide). The viscometer is then placed into a constant temperature bath set at 23-24° C (73.5 to 75° F). Allow 20 minutes for sample to come to bath temperature. Then a finger is placed over the "B" tube while suction is applied to the "A" tube, until the liquid reaches the center of bulb "C". Suction from tube "A" and the finger from tube "B" while immediately placing a finger over tube "A" until the sample drops away from the lower end of the capillary into tube "I". Measure the efflux time from mark "D" to mark "F". The viscosity of distilled water at the same temperature is determined using the methods described above. Mucilage content is calculated by:

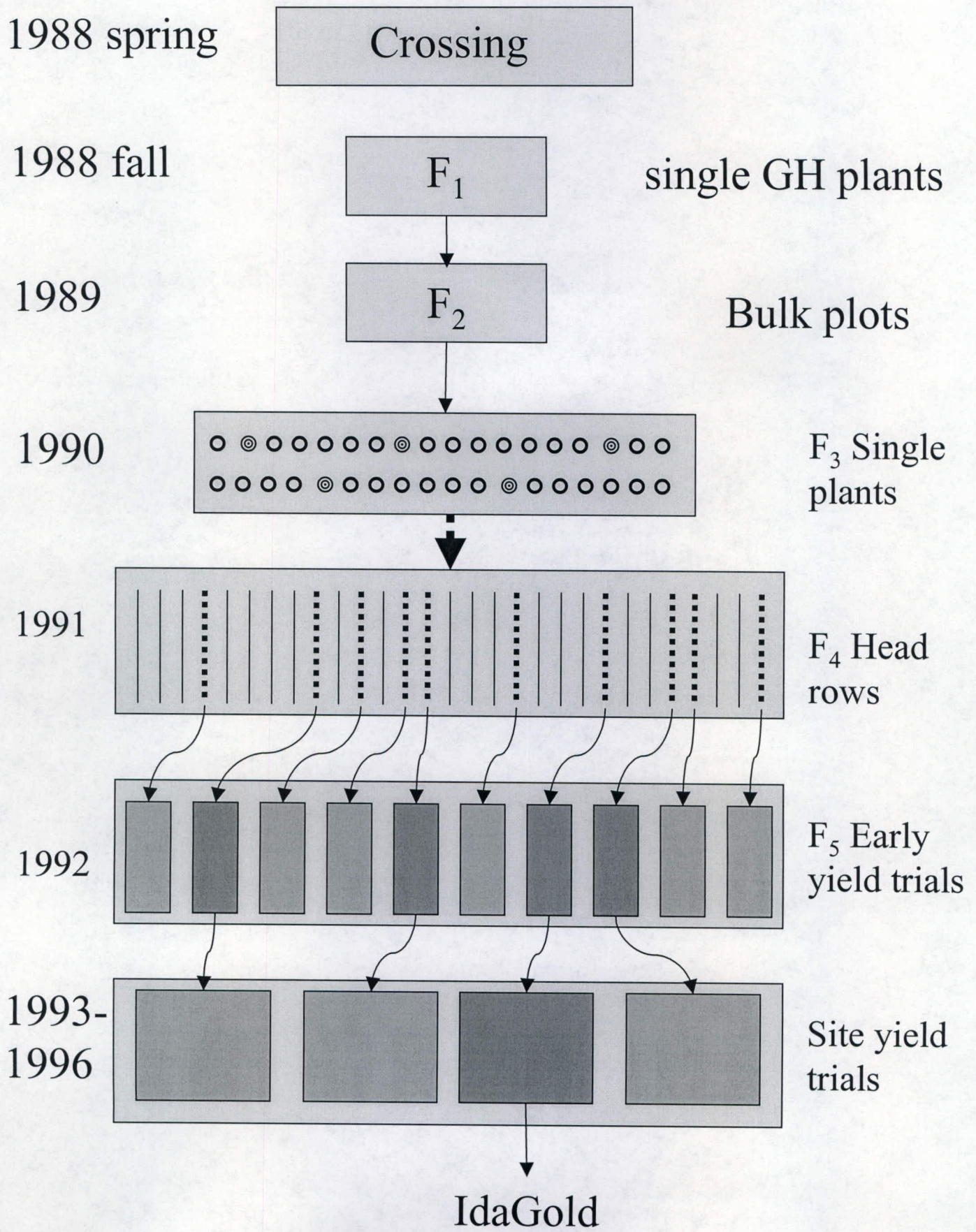
$$cSt * ml/g = [\text{sample time} - \text{water time}] * \text{viscometer constant} * 9.0$$

(Method reference: Method No. 32A, Rickitt & Colman, England. Instructions for use of the Ubbelohde Viscometer: Rickitt & Colman #203, P80-81).

Mucilage content in IdaGold is significantly and markedly higher (better quality) than in any of the alternative cultivars available (Table 2). IdaGold mucilage content was more than doubled compared to AC pennant and Tilney (considered as a quality standard).

Figure 1. Flow chart describing the breeding and evaluation history of IdaGold condiment yellow mustard.

Figure 2. Flow chart describing seed increase history of IdaGold condiment yellow mustard.



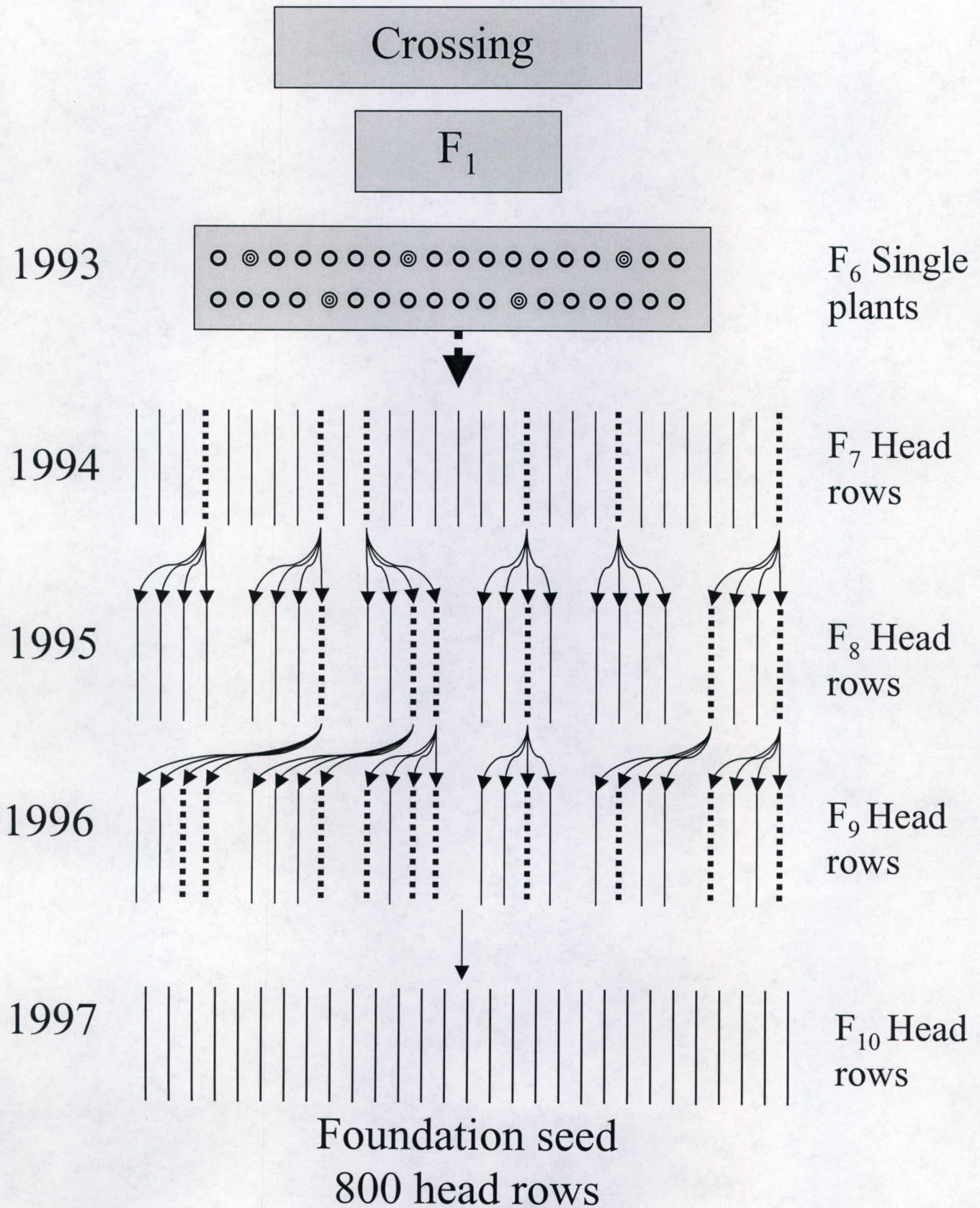


Table 1. Plant Height (inches) in comparative morphology trials 1998 to 2001

<i>Cultivar</i>	2001				2000			1999		1998	
	Mosc	Mo-N	Gene	Ge-N	Mosc	Gene	Ge-N	Mosc	Gene	Mosc	Gene
IdaGold	46.2	55.6	54.6	50.7	59.1	57.1	56.1	49.2	44.3	44.1	43.8
Tilney	41.3	53.1	52.1	47.7	52.1	53.1	49.7	43.3	39.8	43.3	38.9
LSD 5%	3.61 *	ns	2.41 *	ns	5.44 *	1.82 *	3.83 *	1.19 **	ns	ns	ns

ns = not significantly different; *, ** = Significantly different at 5% and 1% level respectively.

Mosc and Mo-N are locations near Moscow, Idaho, that were conventionally tilled and direct seeded, respectively, and Gene and Ge-N are locations near Genesee, Idaho, that were conventionally tilled and direct seeded, respectively.

Table 2. Mucilage values (viscometer constants: 629-0.02721, 556 – 0.03182) of IdaGold, Tilney and AC. Pennant from comparative quality trials 1999 to 2001

<i>Cultivar</i>	2001				2000				1999			
	Mosc	Mo-N	Gene	Ge-N	Mosc	Mo-N	Gene	Ge-N	Mosc	Mo-N	Gene	Ge-N
IdaGold	68.4	73.5	71.9	72.6	71.1	75.7	79.1	84.2	42.6	52.8	51.5	46.0
Tilney	29.7	31.3	30.3	32.3	35.7	34.9	33.3	34.3	26.4	26.5	27.9	25.6
AC.Pennant	33.0	32.9	33.6	33.6	33.5	34.6	37.0	39.2	27.6	25.3	27.9	29.3
LSD 5%	16.44 **	12.32 **	9.15 ***	8.52 ***	11.43 **	10.98 **	24.75 *	16.87 **	13.54 *	9.22 **	13.96 *	11.39 *

ns = not significantly different; *, **, *** = Significantly different at 5%, 1% and 0.1% level, respectively.

Mosc and Mo-N are locations near Moscow, Idaho, that were conventionally tilled and direct seeded, respectively, and Gene and Ge-N are locations near Genesee, Idaho, that were conventionally tilled and direct seeded, respectively.

9700374

7. LEAVES:

- * 3 Margins (serration): 1 = Absent or very weak (Akela) 2 = Weak (Arvor, Jet Neuf)
3 = Medium (Primor) 4 = Strong (Candle, Kentan)
- * 5 Lobing (fully developed leaf on plant or rosette):
1 = Absent or very weak (Akela) 2 = Weak (Arvor) 3 = Medium (Primor)
4 = Medium strong (Argus) 5 = Strong (Kentan)
- * 3 Leaf Attachment to stem: 1 = Fully clasping (Candle) 2 = Partial clasping (Jet Neuf) 3 = ~~No clasping~~ **9700374**
- * 1-2 Color: 1 = Light green (Arvor) 2 = Medium green (Primor)
3 = Medium dark green (Oro) 4 = Dark green (Brunowski, Rapora)
- * 1 Glaucosity: 1 = Absent 2 = Weak (Span) 3 = Weak to medium (Gulliver)
4 = Medium (Magnus) 5 = Medium to strong (Oro) 6 = Strong

8. FLOWERS:

- * 1 Flower Buds Location:
1 = Buds at tip of apical meristem (Jet Neuf) 2 = Buds immediately below apical meristem (Candle)
- * 2 Petal color: 1 = Pale yellow () 2 = Yellow (Jet Neuf, Primor)
3 = Orange () 4 = White ()
- * 1 Anther dotting (at opening of flower; give percentage: 0 %)
1 = Absent () 2 = Few () 3 = Medium (Primor) 4 = Many ()
- * Flowering class (Autumn sown): 2 Flowering class (Spring sown):
1 = Very early (Arvor) 1 = Very early (Tower)
2 = Early (Primor) 2 = Early (Kosa)
3 = Medium early () 3 = Medium early ()
4 = Medium late () 4 = Medium late ()
5 = Late (Marcus) 5 = Late (Petranova)
6 = Very late () 6 = Very late ()

9. PODS (Slique):

- * 1 Pod type: 1 = Bilateral single pod (Jet Neuf) 2 = Other ()
- * 3 Siliqua beak length: 18.19 mm Short (Forto) 2 = Medium (Liragold) 3 = Long (Rapol)
- * 1 Pod length; (give length: 13.74 mm) 1 = Short () 2 = Medium () 3 = Long ()
- * 3 Pod width; (give width: 4.69 mm) 1 = Narrow () 2 = Medium () 3 = Wide ()
- * 5 Pod habit: 1 = Erect (Gulliver) 2 = Semi-erect to erect (Oro) 3 = Semi-erect
4 = Horizontal to semi-erect (Brink) 5 = Horizontal
- * 1 Pedicel length: 11.83 mm
1 = Very short () 2 = Short () 3 = Long ()
- * 2 Ripening Class (Autumn sown): 1 = Very early () 2 = Early () 3 = Medium ()
4 = Late () 5 = Very late ()

9. PODS (Continued):

- * 96 days to maturity:
- * _____ days earlier than Check variety: _____
- * maturity same as Check variety: TILNEY
- * _____ days later than Check variety: _____

10. SEEDS:

- * 5.5 g/1000 unsized seed:
- * _____ g less than Check variety: _____
- * weight same as Check variety: _____
- * 0.2 g more than Check variety: TILNEY
- * 4 Weight Class (grams) 1 = less than 3.0 (Candle) 2 = 3.0 - 3.9 ()
3 = 4.0 - 5.0 (Jet Neuf) ④ = more than 5.0 ()
- * 1 Seeds Per Pod: (give number: 4.17 per pod) ① = Low () 2 = Medium () 3 = High ()
- * 3 Testa Color: 1 = Black (Jet Neuf) 2 = Red ()
③ = Yellow (Yellow Sarson) 4 = Dark brown to black ()
5 = Reddish-brown to black () 6 = Other _____

- 9700374

11. CHEMICAL COMPOSITION OF SEED:

- * 2 Erucic Acid 1 = Low (less than 2%)
② = Intermediate
3 = High (more than 50%)
 - * 2 Glucosinate Content; (give: 244.1 ^{micro} millimoles/g, _____ mg/g)
1 = Low - Less than 30 millim/g (Candle)
③ = High - More than 30 millim/g (Mikado)
 - * 25.1 % Oil _____ % Protein (oil free meal)
- Fatty Acid Composition (%):
- | Palmitic
16:0 | Stearic
18:0 | Oleic
18:1 | Linoleic
18:2 | Linolenic
18:3 | Eicosenoic
20:1 | Erucic
22:1 |
|------------------|-----------------|---------------|------------------|-------------------|--------------------|----------------|
| <u>3.0</u> | <u>1.1</u> | <u>28.1</u> | <u>10.2</u> | <u>10.3</u> | <u>11.1</u> | <u>31.7</u> |

12. FROST TOLERANCE (Late spring frosts):

- * 1 Tolerance: 1 = Not hardy - susceptible (Indore) 2 = Moderately suscesptible ()
3 = Moderately resistant () 4 = Hardy (Bridger)

13. LODGING RESISTANCE:

- * 4 Resistance: 1 = Weak (Span) 2 = Moderately weak (Olga)
3 = Moderately strong () 4 = Strong (Torpe)

14. HERBICIDE RESISTANCE:

- * 1 Atrazine: 1 = Susceptible (Jet Neuf) 2 = Resistant ()
- Other: SU
1 = Susceptible
2 = Resistant

15. DISEASE RESISTANCE: 0 = Not tested 1 = Susceptible 2 = Low resistance
3 = Moderate resistance 4 = High resistance

- * Sclerotinia Stem Rot (*Sclerotinia sclerotiorum*)
- * Black Leg, Stem Canker (*Leptosphaeria maculans*, *Plenodomus lingam*)
(*Phoma lingam*)
- * White Rust (*Albugo candida*, *A. cruciferrarum*)
- Light Leaf Spot (*Pyrenopeziza brassicae*)
- Downy Mildew (*Peronospora parasitica*)
- Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Alternaria Black Spot (*Alternaria brassicicola*)
- Other _____

- 9700374

16. COMMENTS: Please give any additional comments which characterizes the variety.

Glucosinolate Profile + Total (μ moles/gm)

Total	Pent	OH-Benz
244.1 \pm 3.95	8.5 \pm 0.20	235.6 \pm 4.06

17. DIRECTIONS: Select the number which characterizes the variety in the features above. Those characteristics marked with an asterisk * should be recorded. Any others should be recorded if possible to help establish novelty or uniqueness. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Give test area _____ conditions _____.

Table 1. Average seed yield (lb/acre) 'IdaGold' and three control cultivars from yellow mustard (*Sinapis alba* L.) regional trials 1993 to 1996.

Cultivar	Mean	Rank	1993 5 sites	1994 6 sites	1995 7 sites	1996 5 sites
Gisilba	1428	2	1505	1245	1694	1268
Ochre	1410	3	1728	1150	1730	1034
Tilney	1396	4	1570	1060	1817	1139
IdaGold	1593	1	1919	1283	1879	1290
se (mean)	132		133	94	176	T14 9700374
LSD 5%	258		263	186	348	225

Table 2. Total glucosinolates ($\mu\text{mol}/\text{gram}$ of defatted seed meal) and glucosinolate profile of IdaGold Breeder's Seed and control cultivars. Data presented are averages of 40 samples, standard errors are presented in parenthesis.

Cultivar	Total	Progoitrin ¹	Sinalbin
Gisilba	257.00	7.70	249.30
Tilney	230.95	2.35	228.60
IdaGold	244.05 (4.06)	8.46 (0.20)	235.59 (3.95)

¹ Sinalbin (*p*-hydroxybenzyl glucosinolate) and progoitrin (2-hydroxy-3-butenyl glucosinolate),

Table 3. Fatty acid profile (% of total oil) of IdaGold Breeder's Seed and control cultivars. Data presented are averages of 40 samples, standard errors are shown in parenthesis.

Cultivar	16:0 ¹	18:0	18:1	18:2	18:3	20:1	22:1	24:1
Gisilba	2.6	1.2	29.6	9.5	8.2	11.8	33.3	1.2
Tilney	2.6	1.0	25.1	9.6	11.0	9.1	37.5	2.3
IdaGold	3.0 (0.04)	1.1 (0.02)	28.1 (0.42)	10.2 (0.14)	10.3 (0.06)	11.1 (0.08)	31.7 (0.56)	2.1 (0.04)

¹ 16:0 = palmitic acid; 18:0 = stearic acid; 18:1 = oleic acid; 18:2 = linoleic acid; 18:3 = linolenic acid; 20:1 = eicosenoic acid; 22:1 = erucic acid; and 24:1 = nervonic acid.

9700374

Table 4. Seedling emergence (1 to 9 scale with 9 = rapid emergence), days from planting to flower start, plant height (cm), oil content (%), 1000 seed weight (g) and seed color (1 to 9 scale, with 9 = bright yellow color and 1 = dull pale color) of IdaGold and control cultivars. Data presented are averages over four years.

Cultivar	Emerg-ence	Flower start	Plant height	Oil content	1000 seed wt.	Seed color
Gisilba	6.4	42.8	121	24.9	5.36	7.96
Tilney	5.7	44.0	127	25.2	5.57	7.59
Ochre	6.0	43.8	133	25.2	5.42	7.09
IdaGold	5.9	46.1	129	25.1	5.51	7.58
s.e. mean	0.30	0.38	1.60	0.50	0.37	0.27
LSD 5%	0.59	0.74	3.14	0.98	0.73	0.53

Table 5. Seed Yield (lb/acre) of 'IdaGold' and three control cultivars from the 1993 Yellow Mustard (*Sinapis alba* L.) Regional Trial grown at: Parker Farm, Moscow, ID (Mosc); Kambitsch Farm, Genesee, ID (Gene); Tensed, ID (Tens); Lewiston, ID (Lewi); Washtucna, WA (Wash)

	Mean	Rank	Mosc	Gene	Tens	Lewi	Wash
Gisilba	1505	3	2174	1740	1544	921	1185
Ochre	1728	2	2403	2211	2064	992	971
Tilney	1570	4	2318	1605	1895	1050	982
IdaGold	1919	1	2311	2850	2252	1046	1134
s.e. (mean)	133		162	137	67	137	143
LSD 5%	263		321	271	133	271	283

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Table 6. Seed yield (lb/acre) of 'IdaGold' and three control cultivars from the 1994 Yellow Mustard (*Sinapis alba* L.) Regional Trial grown at: Parker Farm, Moscow, ID (Mosc); Kambitsch Farm, Genesee, ID (Gene); Tensed, ID (Tens); Lewiston, ID (Lewi); Washtucna, WA (Wash); and Grangeville, ID.

	Mean	Rank	Mosc	Gene	Tens	Lewi	Wash	Gran
Gisilba	1245	2	795	619	2125	1524	1298	660
Ochre	1150	4	1029	531	2065	1486	1175	615
Tilney	1060	3	1123	371	2036	1171	*	600
IdaGold	1283	1	1287	578	2211	1519	1503	601
s.e. (mean)	94		38	126	79	135	91	49
LSD 5%	186		75	249	156	267	180	97

Table 7. Seed yield (lb/acre) of 'IdaGold' and three control cultivars grown in the 1995 Yellow Mustard (*Sinapis alba* L.) Regional Trial grown at: Parker Farm, Moscow, ID (Mosc); Kambitsch Farm, Genesee, ID (Gene); Tensed, ID (Tens); Cavendish, ID (Cavi); Tammany, ID (Tamm); Lewiston, ID (Lewi); and Pendleton, OR (Pend).

	Mean	Rank	Mosc	Gene	Tens	Cavi	Tamm	Lewi	Pend
Gisilba	1694	4	1772	2543	1466	1057	2003	1488	2029
Ochre	1730	3	1814	2317	1687	790	2309	1199	1994
Tilney	1817	2	1762	2986	1334	914	2410	1290	2144
IdaGold	1879	1	1927	2617	1823	936	2268	1445	2130
s.e. (mean)	176		139	181	181	78	251	81	240
LSD 5%	348		275	358	358	154	497	160	475

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Table 8. Seed yield (lb/acre) of 'IdaGold' and three control cultivars from the 1996 Yellow Mustard (*Sinapis alba* L.) Regional Trial grown at: Parker Farm, Moscow, ID (Mosc); Kambitsch Farm, Genesee, ID (Gene); Lewiston, ID (Lewi); Potlatch, ID (Potl); and Walla Walla, WA (Wala).

Identifier	Mean	Rank	Mosc	Gene	Lewi	Potl	Walla-Walla
Gisilba	1268	2	809	1152	2158	868	1354
Kirby	1212	3	602	1144	2273	818	1221
Ochre	1034	5	625	890	1735	797	1125
Tilney	1139	4	619	970	2082	734	1289
IdaGold	1290	1	830	995	2351	805	1468
s.e. (mean)	114		100	77	185	38	47
LSD 5%	225		198	152	366	75	93

Table 9. Rate of seedling emergence (Emerg, 1 to 9 scale, 9 = rapid emergence), days to first flowering (F.Start) and oil content (%) of Yellow Mustard (*Sinapis alba* L.) Regional Trial 1993. Data presented are averaged over 5 sites, grown at: Parker farm, Moscow, ID; Kambitsch Farm, Genesee, ID; Tensed, ID; Lewiston, ID; and Washtucna, WA.

Identifier	Emerg	F.Start	Plant Height	Oil content
Gisilba	6.08	46.62	116.0	26.47
Tilney	5.08	48.25	131.0	26.12
Ochre	6.42	48.00	146.0	26.52
IdaGold	5.75	51.75	129.0	27.42
s.e. (mean)	0.77	0.57	0.42	0.42
LSD 5%	1.52	1.13	0.83	0.83

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Table 10. Days to first flowering (F.Start), plant height at maturity (cm), oil content (%), 1000 seed weight (g) and seed color (1 to 9 scale, 9 = bright yellow color) of Yellow Mustard (*Sinapis alba* L.) Regional Trial 1994. Data presented are averaged over 6 sites, grown at: Parker Farm, Moscow, ID (Mosc); Kambitsch Farm, Genesee, ID (Gene); Tensed, ID (Tens); Lewiston, ID (Lewi); Washtucna, WA (Wash); and Grangeville, ID.

Identifier	Flower Start	Plant Height	Oil Content	Seed Weight	Seed Color
Gisilba	41.08	148.07	24.01	5.56	6.80
Tilney	43.00	146.57	23.95	5.71	7.40
Ochre	42.67	152.97	24.07	5.63	6.40
IdaGold	45.62	156.75	23.36	5.46	6.80
s.e. (mean)	0.57	3.67	0.43	0.10	0.32
LSD 5%	1.13	7.27	0.85	0.20	0.65

Table 11. Rate of seedling emergence (Emerg, 1 to 9 scale, 9 = rapid emergence), time of first flowering (1 to 9 scale with 9 = very late flowering), plant height at maturity (cm), oil content (%), and 1000 seed weight (g) of Yellow Mustard (*Sinapis alba* L.) Regional Trial 1995. Data presented are averaged over 6 sites, grown at: Parker Farm, Moscow, ID (Mosc); Kambitsch Farm, Genesee, ID (Gene); Tensed, ID (Tens); Cavendish, ID (Cavi); Tammany, ID (Tamm); Lewiston, ID (Lewi); and Pendleton, OR (Pend).

Identifier	Emerg	Flower Start	Plant Height	Oil Content	Seed Weight
Gisilba	6.83	6.25	125.00	24.48	5.20
Kirby	6.96	6.25	143.75	25.35	5.45
Ochre	6.62	6.25	141.25	25.25	5.25
Tilney	6.54	6.17	138.75	25.75	5.30
IdaGold	6.29	6.00	133.75	24.85	5.55
s.e. (mean)	0.09	0.45	2.04	0.65	0.07
LSD 5%	0.18	0.89	4.03	1.29	0.14

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Table 12. Rate of seedling emergence (Emerg, 1 to 9 scale, 9 = rapid emergence), days to first flowering (F.Start), plant height at maturity (cm), oil content (%), and 200 seed weight (g) of Yellow Mustard (*Sinapis alba* L.) Regional Trial 1996. Data presented are averaged over 6 sites, grown at: Parker Farm, Moscow, ID (Mosc); Kambitsch Farm, Genesee, ID (Gene); Lewiston, ID (Lewi); Potlatch, ID (Potl); and Walla Walla, WA (Wala).

Identifier	Emerg	Flower Start	Plant Height	Oil Content	Seed Weight	Seed Color
Gisilba	5.97	81.0	47.1	*	*	7.83
Ochre	4.62	81.0	45.5	*	*	7.92
Tilney	5.27	81.0	42.0	5.3	*	7.83
IdaGold	5.58	81.0	49.6	5.5	*	8.08
s.e. (mean)	0.05	0.0	0.29	--		0.23
LSD 5%	0.10	--	0.57	--		0.45



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IDAGOLD

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Idaho Agricultural Experiment Station	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER BH.70.AJ (PI 597356)	3. VARIETY NAME 'IDAGOLD'
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) IAES, College of Agriculture University of Idaho Moscow ID 83844-2337	5. TELEPHONE (include area code) (208) 885-7173	6. FAX (include area code) (208) 885-6654
7. PVPO NUMBER 9700374		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. YES NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country YES NO

10. Is the applicant the original breeder? If no, please answer the following: YES NO

a. If original rights to variety were owned by individual(s):
Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country _____

b. If original rights to variety were owned by a company:
Is the original breeder(s) U.S. based company? If no, give name of country _____

11. Additional explanation on ownership (If needed, use reverse for extra space):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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