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QUALITY OF ALFALFA SEED SOLD IN COLORADO, 1930-1931

By ANNA M. LUTE



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QUALITY OF ALFALFA SEED SOLD IN COLORADO, 1930-1931

By ANNA M. LUTE, State Seed Analyst

Alfalfa is one of the most important crops in the state of Colorado. The Colorado Year Book for 1930 gives the land devoted to alfalfa in the state as 785,000 acres. In order to maintain this acreage, at least one-fourth must be reseeded annually.

At the moderate seeding rate of 10 pounds per acre, the alfalfa seed requirements of Colorado are practically 2,000,000 pounds each year. It is estimated that this state produces 200,000 pounds of this seed, or one-tenth of its own needs.

Considerable Colorado-grown alfalfa seed is exported to other states because of its attractive appearance and other desirable qualities. It is necessary therefore for Colorado to import more than one and three-quarters million pounds each year.

This seed is brought in from 10 or 12 producing states. Occasional lots are brought in from foreign countries. In recent years most of the seed has been brought in from Utah and Idaho. However, Nebraska, Kansas, Oklahoma, Michigan, Montana, South Dakota and Wyoming each contributes to the state's needs.

It is evident that in the large amount of seed brought into Colorado there lies great danger of introducing serious weed pests. In the home-grown seed there lies the danger of distributing weed pests which have already become serious in some fields in Colorado.

The seed law requires that the label on alfalfa seed shall show the origin of the seed, the percentage of purity, the percentage of germination and the number of noxious weeds if there are more than 90 per pound. There are two additional facts of great interest to the farmer, namely the presence of sweet clover and the total number of weeds per pound contained in the seed.

The Colorado Pure Seed Law permits the sale of any quality of seed within the state. It protects the purchaser of seed by requiring that every lot of seed of 5 pounds or more shall be labelled to show the quality of that seed. In order to avail himself of the protection afforded by the labelling provision of the law, every purchaser of seed should buy from a seller in whom he has confidence. He should examine the tag on each bag of seed and make sure that the seller is willing to stand back of the guarantee on the label. If a seller, whether he is a farmer or a dealer, is not sufficiently interested to put the required label on seed, the purchaser is not warranted in placing too much confidence in his interest in selling seed of good quality.

It is up to every user of seed to see that he secures for himself

the protection which the pure seed law offers. He should buy only labelled seed from a dealer or farmer who understands the labelling provisions of the Colorado pure seed law and who is on record as complying with that law. Farmers should, from time to time, check on the labels by sending representative samples to the state seed laboratory for test.

A summary of the quality of alfalfa seed which was offered to the Colorado farmer during the planting seasons of 1930 and 1931 shows that by careful consideration of the quality it was possible for him to buy a good quality of seed in all parts of the state. It was likewise possible for him to purchase undesirable seed.

In order to determine the quality of seed actually on the market, an inspector sampled the stocks offered for sale by various dealers in all parts of the state. In 1930 a total of 216 alfalfa samples were taken from 153 dealers; in 1931 stocks of 84 dealers were represented by 113 samples.

Analyses of these samples show that sweet clover is becoming increasingly common in alfalfa. In 1930, 72 percent of the inspector's samples contained sweet clover while in 1931 the number which contained sweet clover had increased to 77 percent.

They also show that the number of weeds per pound varied from none to 153,810 in 1930, and from 90 to 26,100 in 1931. At the seeding rate of 10 pounds per acre, 153,810 weed seeds per pound would plant 35 weed seeds on each square foot of the field planted.

In addition to percentage of germination on the label, there is a percentage of hard seed which may be indicated. These hard seeds are practically all alive. All will germinate if they have the right conditions and sufficient time. The number of hard seeds which will get into the stand depends upon so many variables that it is impossible to estimate their value.

Analysis of Inspector's Samples of Alfalfa Seed

The following tests show the details of the analyses of inspector's samples and show compliance with the seed law or failure to comply therewith.

In addition to the data which the law requires shall be placed on the label, these tables show the number of weed seeds per pound and the presence or absence of sweet clover in alfalfa seed sold in Colorado.

In the following tables data which do not comply with the law are shown in boldface type.

Alfalfa Inspection—1930

Lab. No.	Name of Wholesaler Name of Dealer Place of Collection G—Given	F—Found	Identification mark	Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test
				Pure seed	Germi- nation	Hard seed				
314	T. B. Arbuckle, Fruita		Local Common No. 1	G -- F 96.28	-- 57.5	-- 34.5	-- 196	..... 11,446	Sweet clover	-- 5-30
315	T. B. Arbuckle, Fruita		Local Common No. 2	G -- F 83.49	-- 59.5	-- 22.0	-- 212	..... 64,292	Sweet clover	-- 5-30
*145	Ault Exchange Co., Ault		Grimm-Colo. Registered	G 99.5 F 99.34	86.5 40.5	-- 44.5	-- --	..... .....	..... .....	-- 4-30
*25	Sam H. Bober, Newell, S. Dakota Moody-Warren Com. Co., Ft. Collins		Grimm	G -- F 99.18	-- 65	-- 28	-- 16	..... 196	Sweet clover	-- 3-30
112	Bancroft-Marty Feed and Produce Co. Trinidad			G -- F 93.69	-- 72.5	-- 6	-- 204	..... 834	Sweet clover	-- 4-30
113	Bancroft-Marty Feed and Produce Co. Trinidad		Lot WH Local	G -- F 97.74	-- 63.5	-- 29.5	-- --	..... 270	Sweet clover	-- 4-30
116	Bancroft-Marty Feed and Produce Co Trinidad		No. 2 McClung Common, Local Stored	G -- F 98.90	-- 72.5	-- 23	-- --	..... 1,080	Sweet clover	-- 4.30
19	Barteldes Seed Co. Toliver and Kinney, Ft. Collins		Beehive	G 98.5 F 97.48	97 63	15 31	-- 49	..... 6,570	Sweet clover	2-30 3-30
23	Barteldes Seed Co. Otto B. Ehler, Wellington		Beehive	G 98.5 F 97.58	97 56.5	15 33	-- 2.5	..... 6,235	Sweet clover	2-30 4-30
121	Barteldes Seed Co. Baxter Hdw.-Trading Co., Walsenburg		Beehive	G 97.5 F 97.66	97 72	15 18.5	-- 147	..... 7,347	Sweet clover	2-30 4-30
131	Barteldes Seed Co. Bonnell Imp. Co., Loveland		Beehive	G 97.5 F 96.40	97 67	15 22.5	-- 204	..... 8,124	Sweet clover	2-30 4-30
133	Barteldes Seed Co. Loveland Hardware Co., Loveland		Beehive	G 97.50 F 96.78	97 65.5	15 28.5	-- 172	..... 8,002	Sweet clover	2-30 4-30

*Colorado seed registration service.

Lab. No.	Name of Wholesaler Name of Dealer Place of Collection		Identification mark		Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test
	G—Given	F—Found			Pure seed	Germi- nation	Hard seed				
135	Barteldes Seed Co. Berthoud Farm Products, Berthoud		Beehive	G	98.50	97	15	--	.....	Sweet	2-30
				F	96.91	69.5	26.5	213	7,413	clover	4-30
137	Barteldes Seed Co. Johnstown Hdw. Co., Johnstown		Beehive	G	98.50	97.0	15	--	.....	Sweet	2-30
				F	96.81	63.5	20.5	237	8,337	clover	4-30
138	Barteldes Seed Co. Windsor Mercantile Co., Windsor		Beehive	G	98.5	97	15	--	.....	Sweet	2-30
				F	97.36	67.5	17	254	7,096	clover	4-30
144	Barteldes Seed Co. Ault Exchange Co., Ault		Beehive	G	98.50	97.0	15	--	.....	Sweet	2-30
				F	97.31	70.0	23	82	8,001	clover	2-30
149	Barteldes Seed Co. Potato Growers Co-op. Co., Eaton		Beehive	G	98.50	97.0	15	--	.....	Sweet	2-30
				F	97.85	59.5	30.5	73	6,373	clover	4-30
150	Barteldes Seed Co. Cash Feed and Seed House, Greeley		Beehive	G	98.50	97.0	15	--	.....	Sweet	2-30
				F	96.93	74	17	139	7,069	clover	4-30
161	Barteldes Seed Co. C. A. Chalgren, Greeley		Beehive	G	97.50	97	15	--	.....	Sweet	2-30
				F	96.26	75	20.5	229	8,329	clover	4-30
162	Barteldes Seed Co. Williams Seed Store, Greeley		Beehive	G	98.5	97	15	--	.....	Sweet	2-30
				F	97.31	63.5	15	170	5,390	clover	4-30
165	Barteldes Seed Co. LaSalle Elevator, LaSalle		Beehive	G	98.5	97.0	15	--	.....	Sweet	2-30
				F	96.64	60	16.5	74	8,623	clover	4-30
168	Barteldes Seed Co. The Philip and Allsbrook Hdw. Co.		Beehive	G	97.50	97.0	15	--	.....	Sweet	2-30
				F	96.44	65.5	26.5	229	10,219	clover	4-30
169	Barteldes Seed Co. Robinson Grain Co., Colorado Spgs.		Beehive	G	97.5	97.0	15	--	.....	Sweet	2-30
				F	93.24	68	22	254	14,744	clover	4-30
235	Barteldes Seed Co. Otto B. Ehler, Wellington		Beehive	G	98.50	97	15	--	.....	Sweet	2-30
				F	97.55	63	34	32	6,422	clover	4-30

352	Barteldes Seed Co. Lindlinger & Niles Lbr. Co., Buena Vista	Beehive	G	97.50	97	15	--	.....	Sweet	2-30
			F	97.05	71.5	21	139	6,259	clover	4-30
374	Barteldes Seed Co. Columbine Merc. Co., Littleton	Beehive	G	97.50	97.0	15	--	.....	Sweet	2-30
			F	94.20	57.5	11	524	12,854	clover	4-30
375	Barteldes Seed Co. Leffingwell Merc. Co., Brighton	Beehive	G	97.50	97	15	--	.....	Sweet	2-30
			F	96.44	66	21	310	6,880	clover	2-30
407	Barteldes Seed Co. Brush Farmers Elev. Co., Brush	Beehive	G	97.50	97	15	--	.....	Sweet	2-30
			F	95.64	63	19	131	12,281	clover	4-30
439	Barteldes Seed Co. W. C. Harris Grain Co., Sterling	Beehive	G	99.12	94	12	--	.....	Sweet	2-30
			F	98.54	64.5	24	147	2,397	clover	4-30
586	Barteldes Seed Co. The Romeo Stores Co., Romeo	Beehive	G	97.50	97.0	15	--	.....	Sweet	2-30
			F	94.04	65	25	335	14,285	clover	6-30
20	Barteldes Seed Co. Toliver and Kinney, Fort Collins	Utah	G	97.0	--	--	--	.....	Sweet	--
			F	91.16	74	9	221	8,861	clover	4-30
132	Barteldes Seed Co. Bonnell Imp. Co., Loveland	P 5	G	99.5	97.5	12	5	.....	.....	1-30
			F	99.44	78.5	10.5	--	360	.....	.....	4-30
212	Barteldes Seed Co. Hamm Weller Hdw. and Imp. Co.	P 21	G	95.60	98.0	20	--	.....	Sweet	--
			F	95.03	76.5	20.5	56	4,196	clover	5-30
236	Barteldes Seed Co. Otto B. Ehler, Wellington	P 12	G	94.	97.50	20	--	.....	Sweet	2-30
			F	93.78	73.5	18	57	19,857	clover	6-30
356	Barteldes Seed Co. Seldomridge Grain Co., Colorado Spgs.	P 23	G	99.82	95.0	--	--	.....	Sweet	--
			F	97.32	70.5	16.5	8	3,068	clover	6-30
468	Barteldes Seed Co. Baldwin Hdw. Co., Hudson		G	--	--	--	--	.....	Sweet	--
			F	98.70	68	28.5	8	2,798	clover	6-30
568	Barteldes Seed Co. Baxter Hdw. & Trading Co., Walsenburg		G	95.60	98.50	--	--	.....	Sweet	--
			F	94.25	68.5	20.5	115	6,865	clover	6-30
361	Barteldes Seed Co. Seldomridge Grain Co., Colorado Spgs.	Turkestan No. Oklahoma	G	99.82	98.50	8.5	--	.....	.....	1-30
			F	99.88	91.50	6.5	--	.....	.....	6-30

Lab. No.	Name of Wholesaler Name of Dealer Place of Collection G—Given F—Found	Identification mark		Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test
				Pure seed	Germi- nation	Hard seed				
355	Barteldes Seed Co. Edw. Krueger Hdw. Co., Buena Vista	Turkestan-Colo.	G	96.40	98.0	--	--	.....	.....	4-30
			F	99.89	93.0	5.5	--	90	.....	.....	6-30
353	Barteldes Seed Co. Lindlinger & Niles Lbr. Co., Buena Vista	Turkestan No. Oklahoma	G	99.82	98.50	--	--	.....	.....	1-30
			F	99.85	88.0	6.5	--	180	.....	.....	6-30
228	Barteldes Seed Co. C. W. Thimmig Elev., Wellington	Grimm 7411	G	99.10	98	--	--	.....	Sweet	.....
			F	98.32	48	41	--	6,930	clover	5-30
170	Barteldes Seed Co. Robinson Grain Co., Colorado Springs	Affid. Grimm 7415	G	99.0	99	8	--	.....	Sweet	.....
			F	98.89	86	6.5	--	.....	clover	4-30
26	Barteldes Seed Co. Pierce Seed Co., Pueblo	Beehive-Utah Lot B	G	98.5	97	15	--	.....	Sweet	2-30
			F	96.09	64	25	188	7,748	clover	4-30
129	Barteldes Seed Co. Ferguson and Fairbairn Hdw. Co.	Beehive	G	--	--	--	--	.....	Sweet	.....
			F	97.82	78	7	41	2,831	clover	4-30
123	Baxter Hdw. Trading Co. Walsenburg	Lab. Test 2862 Common	G	--	--	--	--	.....	Sweet	.....
			F	93.62	43	50.5	16	15,496	clover	4-30
40	Beatty Mercantile Co. Manzanola	Lot JCC Crowley Co.	G	99.25	90.5	26	--	.....	Sweet	9-29
			F	99.25	80	11.5	--	630	clover	4-30
184	Bedrock Store, Bedrock W. H. Ray Market, Nucla	Colo.	G	--	--	--	--	.....	.....	.....
			F	99.80	72	18.5	--	.....	.....	4-30
17	Berry Seed Co., Clarinda, Iowa Sold to J. Forsberg		G	--	--	--	--	.....	Sweet	.....
			F	95.11	45	12.5	270	8,100	clover	2-30
14	Berry Seed Co., Clarinda, Iowa Sold to C. O. Land		G	--	--	--	--	.....	Sweet	.....
			F	96.61	69.5	5.5	16	3,000	clover	2-30
136	Berthoud Farm Products Co. Berthoud	Roy Welty Local	G	--	--	--	--	.....	Sweet	.....
			F	97.82	63.5	20	74	2,324	clover	4-30

15	Bowman Seed Co., Concordia, Kans. Sold to J. Forsberg		G	--	--	--	--	.....	Sweet	.....
			F	80.23	39.5	2.5	503	37,800	clover	2-30
38	Colorado Bean Growers, Fowler Chris Pederson, Fowler		G	--	--	--	--	.....	Sweet	.....
			F	94.73	54	17.5	--	12,420	clover	4-30
39	Colorado Bean Growers, Fowler Chris Pederson, Fowler (owner)		G	--	--	--	--	.....	Sweet	.....
			F	85.27	66	19.5	--	41,940	clover	4-30
571	Colorado Marketing Co., Alamosa Western Seed M'k'ing Co., Salt Lake City	Idaho Yellow Tag	G	99	86	--	--	.....	.....	1-30
		Cert. Grimm	F	97.70	56.5	19.5	41	4,451	.....	6-30
82	Colorado Savings and Trust Co. La Junta		G	--	--	--	--	.....	Sweet	.....
			F	98.40	80.5	6	107	556	clover	4-30
54	Jerre Cover, Rocky Ford	Lot CCS	G	--	--	--	--	.....	.....	.....
			F	98.72	74	7	--	180	.....	4-30
55	Jerre Cover, Rocky Ford	Lot WHR	G	--	--	--	--	.....	Sweet	.....
			F	98.14	80	14	8	98	clover	4-30
32	Jerre Cover, Rocky Ford Wiesel Seed Co., Pueblo	No Lot No.	G	--	--	--	--	.....	Sweet	.....
			F	97.73	79	11	8	98	clover	4-30
338	Craig Farmers M. & E., Craig	Grimm-Moffat Colo. Registered	G	99.57	86.5	--	--	.....	.....	.....
			F	99.19	41.5	37	--	180	.....	4-30
340	Craig Farmers M. & E., Craig	Grimm Local Craig	G	--	--	--	--	.....	Sweet	.....
			F	98.29	44	48.5	--	3,960	clover	5-30
342	Craig Farmers M. & E., Craig	Common Local	G	--	--	--	--	.....	.....	.....
			F	99.37	44	41.5	32	392	.....	5-30
433	Crook Hdw. Co., Crook	Common Local	G	--	--	--	--	.....	.....	.....
			F	98.50	40.5	42	--	90	.....	6-30
103	Denver Alfalfa Meal and Prod. Co. Lamar	Lot 1	G	--	--	--	--	.....	Sweet	.....
			F	90.94	69.5	19	--	37,170	clover	4-30
104	Denver Alfalfa Meal and Prod. Lamar	Lot 2	G	--	--	--	--	.....	Sweet	.....
			F	98.48	62	28	--	1,530	clover	4-30

Lab. No.	Name of Wholesaler Name of Dealer Place of Collection		Identification mark	Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test
	G—Given	F—Found		Pure seed	Germi- nation	Hard seed				
384	Denver Alfalfa Meal and Prod. Co. Kersey		Common Colo. Lamar	G 97.87 F 99.69	95 56	-- 40	-- --	90		-- 5-30
329	Dinkel Mercantile Co., Carbondale		DeBeque	G -- F 99.40	-- 52.5	-- 34.5	-- 49	769	Sweet clover	-- 5-30
435	Dye Hdw. Co., Julesburg		Common Elsie, Nebr.	G -- F 98.82	-- 65.5	-- 15.5	-- 32	1,472		-- 6-30
177	F. F. Edwards Feed Co. Florence		Local	G -- F 63.30	-- 49.5	-- 39	-- --	153,810	Sweet clover	-- 4-30
402	Farmers Platte Valley M. & E. Fort Morgan		U. S. V. O.	G 99.24 F 97.95	91 68	6 22.5	-- 114	834	Sweet clover	1-30 6-30
405	Farmers Platte Valley M. & E. Fort Morgan		Local	G 98.0 F 98.76	75 60	10 25	-- --	630		2-30 6-30
598	Farmers Supply Co., Durango		Lot 805 Local	G 75.25 F 77.54	62.5 67.5	29 20	731 393	42,513	Sweet clover	3-30 6-30
599	Farmers Supply Co., Durango		Grimm Local 807	G 99.12 F 99.12	43 54.5	52.5 35.5	-- --	540	Sweet clover	1-30 6-30
600	Farmers Supply Co., Durango		Local 804	G -- F 92.60	-- 67.5	-- 16	-- 65	10,775	Sweet clover	3-30 6-30
601	Farmers Supply Co., Durango		Lot 801 Local	G -- F 99.66	-- 40	-- 53.5	-- 25	7,045	Sweet clover	-- 6-30
151	Farr Produce Co., Lucerne		Utah	G -- F 99.57	-- 89.5	-- 4.5	-- --	450	Sweet clover	-- 4-30
153	Farr Produce Co., Greeley		W. Kansas Test 29110	G -- F 99.51	-- 74.5	-- 14.5	-- --			-- 4-30

154	Farr Produce Co., Greeley	W. Kansas No. 2 Test 29110	G	--	--	--	--	.....	Sweet	.....
			F	98.75	79	7.5	--	360	clover	4-30
155	Farr Produce Co., Greeley	Screenings W. Kansas	G	--	--	--	--	.....	Sweet	.....
			F	97.58	63.5	10	8	2,978	clover	4-30
158	Farr Produce Co., Greeley	Trinidad, Colo.	G	--	--	--	--	.....	Sweet	.....
			F	97.66	49	41	115	2,005	clover	4-30
247	Farr Produce Co. Western Elev., Pierce (Colo. M. & E.)		G	--	--	--	--	.....	Sweet	.....
			F	99.31	58.5	34.5	123	5,523	clover	6-30
256	Fields Hardware Co., Olathe	Test 29186 Brown Local	G	--	--	--	--	.....	Sweet	.....
			F	94.05	43	46.5	122	16,142	clover	4-30
257	Fields Hardware Co., Olathe	Local	G	--	--	--	--	.....	Sweet	.....
			F	85.35	54	33.5	262	24,292	clover	4-30
98	S. F. Goodwin, Bristol	Lot No. 1	G	--	--	--	--	.....	.....	.....
			F	97.34	62	11	--	6,210	.....	4-30
99	S. F. Goodwin, Bristol	Lot No. 2	G	--	--	--	--	.....	.....	.....
			F	79.00	51	33.5	--	81,810	.....	4-30
146	Grand Junction Seed Co. I. Rothschild Produce Co., Ault	Colorado Common	G	99.5	92	--	--	.....	.....	1-30
			F	99.48	62	25	--	540	.....	4-30
185	Grand Junction Seed Co. Field Bros. Hdw. Imp. Co., Ridgway	Colorado Common	G	99.5	96.5	--	--	.....	.....	12-29
			F	99.35	75.5	19.5	8	1,080	.....	4-30
189	Grand Junction Seed Co. Colona Merc. Co., Colona	U. S. V. O. Common M. H. Colorado	G	99.5	92	--	--	.....	Sweet	1-30
			F	98.59	61	24	131	491	clover	4-30
190	Grand Junction Seed Co. Montrose Elevator, Montrose	U. S. V. O. Common Colorado	G	99.5	92	--	--	.....	Sweet	1-30
			F	99.65	49	39.5	41	483	clover	4-30
194	Grand Junction Seed Co. Montrose Potato Gro. Asso., Montrose	U. S. V. O. Common M. H. Colorado	G	99.5	96.5	--	--	.....	Sweet	.....
			F	99.29	74	21.5	--	720	clover	4-30
200	Grand Junction Seed Co. Montrose Hardware Co., Montrose	Common-Choice	G	92.75	78	--	149	.....	Sweet	.....
			F	94.09	47.5	31	221	18,761	clover	4-30

Lab. No.	Name of Wholesaler Name of Dealer Place of Collection G—Given F—Found	Identification mark	Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test	
			Pure seed	Germi- nation	Hard seed					
251	Grand Junction Seed Co. Montrose Hardware Co., Montrose	Mountaineer	G	98.43	95.5	--	--	.....	1-30	
			F	97.36	53	40.5	139	8,869	.....	4-30
254	Grand Junction Seed Co. Fields Hardware Co., Montrose	U. S. V. O. Mountaineer Colorado	G	99.3	91	--	--	.....	1-30	
			F	97.84	60.5	31	24	3,256	.....	4-30
255	Grand Junction Seed Co. Fields Hardware Co., Montrose	U. S. V. O. Common M. H.	G	99.5	92	--	--	.....	1-30	
			F	99.49	57.5	35	25	385	.....	4-30
264	Grand Junction Seed Co. John W. Mack and Co.	Common M. H. U. S. V. O.	G	99.5	96.5	--	--	.....	Sweet	12-29
			F	98.94	73.5	16	16	1,366	clover	4-30
277	Grand Junction Seed Co. J. H. Dague Co., Hotchkiss	U. S. V. O. Common M. H.	G	99.5	96.5	--	--	.....	.....	12-29
			F	99.30	77.5	14	8	458	.....	4-30
279	Grand Junction Seed Co. E. P. Balch, Paonia	U. S. V. O. Common M. H.	G	99.5	92	--	--	.....	.....	1-30
			F	98.96	48.5	38.5	8	1,448	.....	4-30
280	Grand Junction Seed Co. E. P. Balch, Paonia	U. S. V. O. Grimm Cert. Colorado	G	99.5	93	--	--	.....	Sweet	3-30
			F	99.51	63	30.5	--	90	clover	4-30
283	Grand Junction Seed Co. W. V. Bauldin & Co., Cedaredge	U. S. V. O. Common M. H.	G	99.5	96.5	--	--	.....	Sweet	12-29
			F	99.32	76.5	18.0	18	458	clover	4-30
291	Grand Junction Seed Co. Grand Junction Seed Co., Grand Junction	U. S. V. O. Common Fair	G	89	61	--	--	.....	Sweet	12-29
			F	85.54	26	7.5	196	37,096	clover	5-30
293	Grand Junction Seed Co. Grand Junction Seed Co., Grand Junction	Local Common-Fair	G	89	61	--	--	.....	Sweet	1930
			F	88.41	28	2.5	417	23,457	clover	5-30
295	Grand Junction Seed Co. Grand Junction Seed Co., Grand Junction	Grimm No. 1	G	99.50	92	--	--	.....	.....	1930
			F	99.60	47	42.5	--	450	.....	5-30
301	Grand Junction Seed Co. Grand Junction Seed Co., Grand Junction	Common Choice, Colorado	G	97.0	84	--	--	.....	Sweet	1930
			F	92.27	48.5	3	3330	21,870	clover	5-30

331	Grand Junction Seed Co. C. C. Graham Hdw. Co., Glenwood Spgs.	Common M. II.	G	99.5	96.5	--	--	.....	Sweet	12-29
			F	99.36	72.5	16.5	57	507	clover	4-30
348	Grand Junction Seed Co. Theodore Stremme, Gypsum	U. S. V. O. M. H. Common Colorado	G	99.5	96.5	--	--	.....	.....	12-29
			F	98.95	61.5	23.5	8	990	.....	6-30
34	Greybull and Cline, Pueblo W. A. Finley, Crow	Pueblo Co., Colorado W. A. Finley, Crow	G	--	--	--	--	.....	Sweet	--
			F	92.79	45.5	37.5	33	16,740	clover	4-30
440	W. C. Harris Grain Co. Sterling	Utah Cert. No. 1	G	99.5	--	--	--	.....	.....	--
			F	99.27	58.5	26	--	990	.....	6-30
101	Holly Elevator, Holly	Lot No. 1	G	--	--	--	--	.....	Sweet	--
			F	98.14	66	18	--	6,300	clover	4-30
102	Holly Elevator, Holly	Lot No. 2	G	--	--	--	--	.....	Sweet	--
			F	97.71	72	18.5	--	3,310	clover	4-30
46	Hosler Seed Co., Ordway Al Houston, Sugar City	Common No. 1	G	--	--	--	--	.....	.....	--
			F	95.65	74	6.5	--	21,690	.....	4-30
47	Hosler Seed Co., Ordway	Grimm No. 1 Local	G	--	--	--	--	.....	Sweet	--
			F	97.20	75.5	4	--	7,470	clover	4-30
49	Hosler Seed Co., Ordway Hosler and Kilvert		G	--	--	--	--	.....	Sweet	--
			F	96.64	77	10.5	--	8,100	clover	4-30
50	Hosler Seed Co., Ordway Colorado Land Co., Ordway		G	--	--	--	--	.....	Sweet	--
			F	97.73	76	4.5	--	900	clover	4-30
330	Hubbard and Blossum Hdw. Co. Glenwood Springs	Meeker	G	--	--	--	--	.....	Sweet	--
			F	98.75	73.5	11.5	65	785	clover	5-30
357	Seldomridge Grain Co., Colorado Spgs. Idaho Grimm Alfalfa Seed Growers Asso.	Cert. Grimm No. 2 Idaho	G	--	--	--	--	.....	Sweet	--
			F	97.70	77	8	--	5,400	clover	5-30
447	Jacobs and Piney Mercantile Co. Merino	L. E. Johnson Willard, Colorado	G	--	--	--	--	.....	.....	--
			F	97.87	76	12.5	24	1,644	.....	6-30
65	James Seed Co., Rocky Ford	Weybright	G	--	--	--	--	.....	Sweet	--
			F	76.55	64.5	19.5	--	136,800	clover	4-30

Lab. No.	Name of Wholesaler		Identification mark	Percentages			Nox-ious weeds per lb.	Weeds per pound	Other crops present	Date of Test		
	Name of Dealer	Place of Collection		Pure seed	Germination	Hard seed						
	G—Given	F—Found										
66	James Seed Co., Rocky Ford		Kesterson	G	--	--	--	.....	.....	- ....
				F	99.52	86.5	6	--	180	.....	4-30	
70	James Seed Co., Rocky Ford		Cert. Hardigan No. 3 Mich. Crop Imp. Assoc.	G	99	76	19	30	.....	.....	3-29	
				F	99.4	78.5	14	8	906	.....	4-30	
37	Boyd Grain Co., Fowler James Seed Co., Rocky Ford		No Lot Number	G	--	--	--	.....	.....	Sweet	-	
				F	97.97	82.5	13.5	--	450	.....	clover	4-30
579	Monte Vista Flour Mills, Monte Vista Kelly-Western Seed Co., Salt Lake City		Teton Common Utah	G	97.70	90	--	--	.....	.....	Sweet	2-30
				F	99.20	83.5	13	--	540	.....	clover	6-30
343	J. H. Klühner, Craig		Grimm Local	G	--	--	--	--	.....	.....	- ....
				F	99.53	30	42.5	8	90	.....	.....	5-30
78	La Junta Elevator, La Junta		Local Otero	G	--	--	--	--	.....	.....	Sweet	-
				F	98.71	73	17	8	998	.....	clover	4-30
107	La Junta Trading Co., La Junta		Lot B Local	G	--	--	--	--	.....	.....	Sweet	-
				F	90.15	60	15	--	.....	.....	clover	4-30
108	La Junta Trading Co., La Junta		Lot D Local	G	--	--	--	--	.....	.....	Sweet	-
				F	87.83	38.5	9.5	49	27,229	.....	clover	4-30
179	La Junta Trading Co., La Junta Thomas and Kirkton, Canon City			G	--	--	--	--	.....	.....	Sweet	-
				F	98.12	56.5	29	--	2,250	.....	clover	4-30
81	La Junta Trading Co., La Junta			G	--	--	--	--	.....	.....	- ....
				F	94.74	71.5	9.5	--	17,640	.....	.....	4-30
83	Las Animas Seed Co., Las Animas		Local	G	--	--	--	--	.....	.....	Sweet	-
				F	98.09	65	13	--	2,070	.....	clover	4-30
89	Las Animas Warehouse, Las Animas		Local Lab. 28614	G	--	--	--	--	.....	.....	Sweet	-
				F	97.65	81.5	4.5	--	4,860	.....	clover	4-30

90	Las Animas Warehouse, Las Animas	Local Lab. 28614	G	--	--	--	--	.....	.....	- ....
			F	98.61	69.5	22.5	--	1,440	.....	4-30
91	Las Animas Warehouse, Las Animas	Local Lab. 28614	G	--	--	--	--	.....	Sweet	.....
			F	97.28	80	10	--	6,930	clover	4-30
94	Las Animas Warehouse, Las Animas M. E. Pouquett, Las Animas	Local	G	--	--	--	--	.....	.....	- ....
			F	97.98	76	5.5	--	7,650	.....	4-30
612	Lathrop Hardware Co., Montrose	Paradox Valley	G	--	--	--	--	.....	Sweet	.....
			F	99.12	65.5	21.5	25	1,014	clover	6-30
263	John W. Mack and Co., Delta	Lot A. Baltic, Meeker	G	99.15	97	38	--	.....	.....	2-30
			F	99.04	51.5	42	--	1,260	.....	4-30
278	John W. Mack and Co., Delta J. H. Dague, Hotchkiss	Baltic, Meeker	G	99.15	97	--	--	.....	.....	2-30
			F	99.45	56.5	31	--	450	.....	4-30
317	Molina Mercantile Co., Molina	Common Local	G	--	--	--	--	.....	.....	- ....
			F	99.42	58.5	35	--	2,430	.....	5-30
1	Moody-Warren Elevator, Timnath J. G. Peppard Seed Co., Kansas City, Mo.	Common Mont. Lot No. E131	G	98	94	--	--	.....	Sweet	12-28
			F	95.93	80	8.5	--	1,170	clover	3-30
2	Moody-Warren Elevator, Timnath J. G. Peppard Seed Co., Kansas City, Mo.	Common Utah U. S. V. O. 13-5-R	G	97.7	90	1.5	--	.....	Sweet	.....
			F	97.74	93	1	17	4,770	clover	3-30
577	Monte Vista Farmers Supply Co. Monte Vista	Idaho Cert. Grimm Red Tag	G	90	--	--	--	.....	Sweet	.....
			F	99.58	89	1.5	33	303	clover	6-30
201	Nebraska Seed Co., Consigned to Moody-Warren Commercial Co.	Aira, New Mexico	G	96.2	85	2	--	.....	.....	1-30
			F	96.55	65.5	8.5	147	5,085	.....	3-30
202	Nebraska Seed Co., Consigned to Moody-Warren Commercial Co.	Afbee A-18 Montana	G	97.76	90	3.5	--	.....	.....	11-29
			F	98.30	65.5	8.5	117	541	.....	3-30
203	Nebraska Seed Co., Consigned to Moody-Warren Commercial Co.	Album A 100, Kansas	G	99.5	93	4	--	.....	.....	12-29
			F	99.65	85.5	10	9	1,989	.....	3-30
204	Nebraska Seed Co., Consigned to Moody-Warren Commercial Co.	Adeno A-18, Montana	G	99.0	90	3	--	.....	Sweet	11-29
			F	98.99	87	3.5	18	180	clover	3-30

Lab. No.	Name of Wholesaler Name of Dealer		Identification mark	Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test
	Place of Collection G—Given	F—Found		Pure seed	Germi- nation	Hard seed				
312	Osborn Mercantile Co., Fruita		Lot 25593 DeBeque	G	--	--	--	.....	Sweet	-
				F	98.79	52.5	31	--	clover	5-30
26	Pierce Seed Co., Pueblo		Beehive, Utah	G	98.5	97.5	15	.....	Sweet	2-30
				F	96.09	64.0	25	188	7,748	clover	4-30
318	Lee L. Prewett Merc. Co., Mesa		Common Local	G	--	--	--	.....	Sweet	-
				F	98.47	39.0	58.5	671	1,844	clover	5-30
176	Rocky Mountain Seed Co., Denver Florence Feed and Fuel Co., Florence		Fancy Eastern Colorado	G	99.0	95.0	16	.....	Sweet	-
				F	98.49	72.5	7	65	965	clover	4-30
377	Rocky Mountain Seed Co., Denver Brighton Imp. Co., Brighton		Domestic Fancy No. Wyoming	G	99.24	96	--	.....	Sweet	1-30
				F	97.84	59	25	24	564	clover	5-30
178	Rocky Mountain Seed Co., Denver John Jacobs Co., Canon City		Fancy Eastern Colorado	G	99	95	16	.....	Sweet	2-30
				F	99.25	87	6.5	--	180	clover	4-30
335	Thomas W. Rogers, Craig		Grimm, Craig	G	--	--	--	.....	.....	- ....
				F	98.80	55.5	31.5	--	2,070	.....	5-30
336	Thomas W. Rogers, Craig Kremer Brothers		Colorado Reg. 990 Grimm, Moffat Co., No. 1	G	99.79	94.5	38	.....	.....	- ....
				F	96.73	33.5	58	--	180	.....	5-30
13	I. Rothschild Prod. Co., Windsor		Colorado Reg. Seed Grimm	G	99.99	89	--	.....	.....	- ....
				F	99.78	71	22	--	.....	.....	3-30
18	I. Rothschild Prod. Co., Windsor		U. S. V. O. 25932 Colo.	G	--	--	--	.....	Sweet	-
				F	99.42	71	34.5	17	990	clover
357	Seldomridge Grain Co. Colorado Springs		Lot 4919 Cert. Grimm No. 2 Ida.	G	--	--	--	Sweet	-
				F	97.70	77	8	--	5,400	clover	5-30
583	Simmons Grain Co., Hooper		Common Baca County	G	--	--	--	.....	.....	- ....
				F	96.87	76.5	18.5	--	2,790	.....	6-30

125	Sporleder Selling Co., Walsenburg	Local Lot 350	G	--	--	--	--	.....	Sweet	.....
			F	94.39	44	39	115	12,715	clover	4-30
126	Sporleder Selling Co., Walsenburg	Common Local Lot 355	G	--	--	--	--	.....	Sweet	.....
			F	94.86	68.5	15	41	4,360	clover	4-30
35	Standard Fuel and Grain Co., Pueblo		G	--	--	--	--	.....	Sweet	.....
			F	97.22	79	12	--	.....	clover	4-30
16	Standard Seed Co., Kansas City, Mo. Sold to J. Forsberg		G	--	--	--	--	.....	Sweet	.....
			F	91.58	44	3	900	15,000	clover	2-30
346	Steamboat Springs Farmers Elevator Steamboat Springs	Common Hayden	G	--	--	--	--	.....	.....	.....
			F	96.98	38.5	36	73	2,503	.....	5-30
97	Strain Brothers Seed Co., Lamar	Lot 1207	G	--	--	--	--	.....	Sweet	.....
			F	99.37	63	24	--	1,260	clover	4-30
96	Strain Brothers Seed Co., Lamar	Lot 1076 Local	G	--	--	--	--	.....	.....	.....
			F	94.54	61.5	28	57	28,080	.....	4-30
105	W. M. Stull, Lamar		G	--	--	--	--	.....	Sweet	.....
			F	65.95	49.5	29.5	8	83,258	clover	4-30
36	Taylor Mercantile Co., Avondale	Local	G	--	--	--	--	.....	Sweet	.....
			F	95.73	58.5	29	49	36,139	clover	4-30
324	L. H. Tomkins Hdw. Co., Aspen	Common DeBeque	G	--	--	--	--	.....	Sweet	.....
			F	98.46	50	42.5	65	1,955	clover	5-30
119	Trinidad Grain Co., Trinidad	Lot Thompson Cheraw, Colo.	G	--	--	--	--	.....	Sweet	.....
			F	88.0	55	17.5	--	1,530	clover	4-30
124	Unfug Hdw. Co., Walsenburg	Test 28799 Common Local	G	--	--	--	--	.....	Sweet	.....
			F	97.10	54	26.5	33	2,102	clover	4-30
43	United Produce Co., Crowley	Local	G	--	--	--	--	.....	.....	.....
			F	98.92	68	12.5	--	90	.....	4-30
44	United Produce Co., Crowley	Local	G	--	--	--	--	.....	.....	.....
			F	98.98	64	20.5	--	1,790	.....	4-30

Lab. No.	Name of Wholesaler Name of Dealer		Identification mark		Percentages			Noxious weeds per lb.	Weeds per pound	Other crops present	Date of Test
	Place of Collection G—Given	F—Found			Pure seed	Germi- nation	Hard seed				
246	Western Elevator, Pierce Farr Produce Co., Greeley		Trinidad	G	99.21	98	--	--	.....	Sweet	.....
				F	96.90	55.5	25.5	1094	8,294	clover	6-30
358	Western Seed M'k'ting Co., Salt Lake City Seldomridge Grain Co., Colorado Spgs.		Grimm Sealed by Idaho Seed Commissioner	G	92	87	--	--	.....	Sweet	1-29
				F	87.59	30	3	155	28,235	clover	5-30
33	Western Seed Co. McClelland Merc. Co., Pueblo		Gold Seal U. S. V. O. U. 1043	G	99.20	99.0	4	--	.....	Sweet	11-29
				F	99.15	83.5	8	--	540	clover	4-30
127	Western Seed Co. Sporeleder Selling Co., Walsenburg		Gold Seal U. S. V. O. U. 1043	G	99.20	100	5	--	.....	Sweet	.....
				F	99.24	86	7	--	360	clover	4-30
141	Western Seed Co. Windsor Merc. Co., Windsor		Gold Seal U. S. V. O. U. 1036	G	99.20	99	9	--	.....	Sweet	2-30
				F	98.21	88	5.5	--	2,160	clover	4-30
181	Western Seed Co. Salida Trading and Wrecking Co., Salida		Gold Seal U. S. V. O. U. 1140	G	99.2	100	5	--	.....	Sweet	11-29
				F	98.06	83.5	4.5	--	270	clover	4-30
199	Western Seed Co. Montrose Hdw. Co., Montrose		Gold Seal U. S. V. O. U. 1171	G	99.28	99	13	--	.....	Sweet	.....
				F	98.54	83	9	--	3,330	clover	4-30
370	Western Seed Co. Douglas Co. Merc. Co., Castle Rock		Gold Seal U. S. V. O. U. 1036	G	99.20	100	5	--	.....	Sweet	11-29
				F	98.08	82.5	7.5	--	2,970	clover	4-30
573	Western Seed Co. Sargent and Co. Hdw., Alamosa		Gold Seal U. S. V. O. U. 1043	G	99.20	100	5	--	.....	Sweet	11-29
				F	98.83	85	6.5	--	720	clover	6-30
575	Western Seed Co. Heilman-Seaberg Co., Alamosa		Gold Seal U. S. V. O. U. 1209	G	99.25	97	19	--	.....	.....	2-30
				F	98.90	77	16	--	900	.....	6-30
584	Western Seed Co. Murphy-Rivera Hdw. Co., La Jara		Gold Seal U. S. V. O. U. 1246	G	99.20	98	15	--	.....	Sweet	4-30
				F	98.34	70	20.5	--	5,400	clover	6-30
406	Western Seed Co. Brush Hardware Co., Brush		Gold Seal U. S. V. O. U. 1409	G	99.20	96	16	--	.....	Sweet	3-30
				F	97.80	66	21	57	1,227	clover	5-30

222	Western Seed Co. Cook Grain and Flour Co., Fort Collins	Gold Seal Tag Lost	G F	99.25 99.22	97 78	19 16	-- 8	..... 1,548	Sweet clover	2-30 5-30
27	Western Seed Co. Pierce Seed Co., Pueblo	Gold Seal U. S. V. O. U. 1216	G F	99.15 98.66	98 75	8 17	-- --	..... 1,170	Sweet clover	2-30 4-30
166	Western Seed Co. The Weld Grain Co., Peckham	Gold Seal U. S. V. O. U. 1049	G F	99.18 98.44	97 78.5	21 10	-- --	..... 720	Sweet clover	1-30 4-30
432	Western Seed Co. Crook Hardware Co., Crook	Colorado Approved Yellow Tag	G F	99.49 99.60	97.5 74	-- 19.5	.04 107	..... 737	..... .....	-- 5-30
10	Western Seed Co. Johnstown Elevator Co., Johnstown	Utah Certified Grimm Blue Tag	G F	99.80 99.38	99 77	17 14.5	-- --	..... .....	..... .....	12-29 3-30
574	Western Seed Co. Sargent and Co. Hdw., Alamosa	Utah Certified Blue Tag Grimm	G F	99.80 99.41	99 78.5	17 11	-- --	..... .....	Sweet clover	12-29 6-30
111	Western Seed Co. Bancroft-Marty Feed & Pro. Co., Trinidad	Grimm—Utah Certified No. 1	G F	99.90 99.30	99.0 80.5	17 13	-- --	..... 90	..... .....	12-29 4-30
28	Western Seed Co. Pierce Seed Co., Pueblo	Utah Certified Grimm No. 1	G F	99.90 99.27	99.0 73.5	17 15	-- --	..... 90	..... .....	12-29 4-30
140	Western Seed Co. Windsor Mercantile Co., Windsor	Utah Certified No. 1 Grimm	G F	99.20 99.49	99 77.5	17 13.5	-- --	..... 90	Sweet clover	12-29 4-30
608	Western Seed Co. Farmers Supply Co., Durango	Utah Certified No. 1 Grimm	G F	99.80 99.51	99 77.5	17.0 14.5	-- --	..... .....	..... .....	12-29 6-30
160	Western Seed Co. Greeley Co-op. Co., Greeley	Argentina	G F	99.54 99.05	95 82.5	10.0 8.0	-- 49	..... 409	Sweet clover	12-29 4-30
180	Western Seed Co. Geo. W. Vaughn, Salida	U. S. V. O. Colo. Dom. Turk.	G F	99.18 99.40	93.0 58.5	36 28	-- --	..... 90	Sweet clover	12-29 4-30
585	Western Seed Co. Hayney Hardware Co., Manassa	Dom. Turk. U. S. V. O.	G F	99.20 98.69	95.9 73.0	9 13.5	-- --	..... 540	Sweet clover	2-30 6-30

Lab. No.	Name of Wholesaler Name of Dealer		Identification mark	Percentages			Noxious weeds per lb.	Weeds per pound	Other crops present	Date of Test	
	Place of Collection G—Given	F—Found		Pure seed	Germi- nation	Hard seed					
327	Western Seed Co. Robert Shaw, Aspen		Common Colorado	G	97.75	98.0	10	--	.....	Sweet	2-30
				F	96.04	85.0	2.5	--	13,320	clover	4-30
385	Western Seed Co. Chris Johnson, Goodrich		Prime Colo. Tag Lost	G	--	--	--	--	.....	Sweet	.....
				F	85.55	50.0	9.5	25	30,264	clover	5-30
576	Western Seed Co. Monte Vista Farm. Sup. Co., Monte Vista		Affidavit—Grimm Utah-Wyoming	G	98.0	97	36	--	.....	Sweet	12-28
				F	98.76	71	15.5	1391	1,939	clover	6-30
570	Western Seed Co. La Veta Hardware Co., La Veta		Susie Utah-Idaho	G	99.0	99	20	--	.....	Sweet	1-30
				F	98.59	68	19	65	1,415	clover	6-30
230	Western Seed Co. Gould Lumber & Imp. Co., Wellington		Ruby Taylor U. S. V. O.	G	99.25	94	--	--	.....	Sweet	3-30
				F	97.89	61	19	41	3,101	clover	5-30
143	Western Seed Co. J. H. Kester Hdw. Co., Severance		Argentine U. S. V. O.	G	99.24	95	10	--	.....	Sweet	12-29
				F	99.53	82	7.5	33	573	clover	4-30
142	Western Seed Co. Mosher and Parker, Severance		U. S. V. O. Colo.	G	95.45	99	12	--	.....	Sweet	12.29
				F	94.07	79.5	8	--	108	clover	4-30
148	Western Seed Co. Potato Growers Co-op., Eaton		U. S. V. O. Idaho L. 101	G	99.30	98.0	16	--	.....	Sweet	12-30
				F	99.48	72.5	21	82	442	clover	4-30
150	Western Seed Co. Northern Imp. and Pro. Co., Eaton		U. S. V. O. Wyoming- Montana U. 1273	G	98	90	21	--	.....	Sweet	2-30
				F	73.17	76	18	16	2,986	clover	4-30
11	Western Seed Co. Johnstown Elevator, Johnstown		U. S. V. O. Utah U. 1209	G	99.25	97	19	--	.....	Sweet	2-30
				F	98.82	75.5	14.5	25	1,980	clover	3-30
213	Western Seed Co. Hamm-Weller Hdw. & Imp., Longmont		U. S. V. O. U. 1409 Colo.	G	99.20	96.0	16	--	.....	Sweet	3-30
				F	98.53	71.0	22	16	1,816	clover	5-30
350	Western Seed Co. Lundgren and Lundgren, Gypsum		U. S. V. O., U. 1352	G	97.75	98.0	10	--	.....	Sweet	3-30
				F	97.86	79.0	5	86	626	clover	4-30

379	Western Seed Co. Kersey Grain and Feed Co., Kersey	Common U. S. V. O. U. 1409	G F	99.20 98.03	96 68.5	16 15	-- 25	..... 1,015	Sweet clover	3-30 5-30
445	Western Seed Co. Colo. Grain and Bean Co., Sterling	U. S. V. O. Colo. U. 1409	G F	99.20 97.93	96 73.5	16 14	-- 16	..... 1,816	Sweet clover	3-30 6-30
582	Western Seed Co. Simmons Grain Co., Hooper	U. S. V. O., U. 1209	G F	99.25 98.48	97 77.5	19 18	-- 57	..... 1,967	Sweet clover	2-30 6-30
596	Western Seed Co. Graden Mercantile Co., Durango	U. S. V. O., U. 1121	G F	99.60 99.82	97.0 85.5	9 6	-- -- 450	Sweet clover	12-29 6-30

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623	Barteldes Seed Co. Hamm-Weller Hdw. & Imp., Longmont	Colo. Western Lot 8113	G F	-- 98.34	-- 87.5	-- 6.5	-- -- 1,620	Sweet clover 5-31
625	Barteldes Seed Co. Berthoud Elevator Co., Berthoud	Beehive 31160	G F	97.90 97.52	-- 65	-- 26	-- --	..... 3,586	..... .....	2-31 3-31
629	Barteldes Seed Co. Dave Severance Seed Co., Greeley	Beehive	G F	-- 97.64	-- 55	-- 35.5	-- 130	..... 5,310	Sweet clover	..... 3-31
630	Barteldes Seed Co. Dave Severance Seed Co., Greeley	Utah-Colo. 8202	G F	98.36 96.43	-- 74.5	-- 14.5	-- 49	..... 2,840	Sweet clover	..... 3-31
631	Barteldes Seed Co. Dave Severance Seed Co., Greeley	Wyoming 8199	G F	99 98.90	-- 51.5	-- 37	-- 33	..... 2,250	Sweet clover	..... 3-31
632	Barteldes Seed Co. Dave Severance Seed Co., Greeley	Lyman Grimm 8225	G F	97.6 97.86	89.5 81.5	9.0 6.5	-- 66	..... 3,746	Sweet clover	3-31 5-31
633	Barteldes Seed Co. Cash Feed and Seed Store, Greeley	Beehive B. 197	G F	97.90 97.58	-- 63	-- 27	-- 57	..... 4,647	Sweet clover	2-31 5-31
653	Barteldes Seed Co. Windsor Mercantile Co., Windsor	Beehive 8197	G F	97.90 98.83	-- 56.5	-- 35.5	-- 86	..... 2,962	Sweet clover	2-31 5-31
656	Barteldes Seed Co. Johnstown Imp. & Hdw. Co., Johnstown	Beehive 8197	G F	97.90 97.76	-- 67.5	-- 30	-- 73	..... 506	Sweet clover	2-31 5-31

Lab. No.	Name of Wholesaler Name of Dealer		Identification mark		Percentages			Nox-ious weeds per lb.	Weeds per pound	Other crops present	Date of Test
	Place of Collection				Pure seed	Germi-nation	Hard seed				
	G—Given	F—Found									
664	Barteldes Seed Co. Ault Exchange, Ault		Beehive 8174	G	97.90	--	--	--	.....	Sweet	2-31
				F	96.54	64	20	146	6,266	clover	6-31
670	Barteldes Seed Co. Phillip & Allenbrook Hdw., Ft. Lupton		Beehive 8174	G	97.90	--	--	--	.....	Sweet	2-31
				F	97.58	75.5	16.5	138	4,728	clover	6-31
703	Barteldes Seed Co. Robinson Grain Co., Colorado Springs		Beehive Utah	G	98.0	74.5	21.5	--	.....	Sweet	.....
				F	97.67	68.5	27.0	163	4,663	clover	5-31
709	Barteldes Seed Co. Nichans Store, Penrose		Grimm SG 2	G	97.76	87.5	--	--	.....	Sweet	2-31
				F	96.32	83.0	5	--	10,440	clover	6-31
710	Barteldes Seed Co. A. R. Davis Produce Co., Canon City		Turkestan, Baca Co.	G	98	80	8	--	.....	.....	3-31
				F	98.10	74.5	8	--	900	.....	6-31
771	Barteldes Seed Co. Farmers Feed Mill, Center		Beehive	G	97.90	95.5	--	--	.....	Sweet	2-31
				F	96.37	57	30.5	180	8,280	clover	5-31
772	Barteldes Seed Co. Farmers Feed Mill, Center		Dom. Turkestan	G	99.0	88	--	--	.....	.....	1-31
				F	99.43	84	11	--	720	.....	6-31
782	Barteldes Seed Co. Kit Carson Trading Post, Sanford		Beehive 8197	G	97.90	70	--	--	.....	Sweet	3-31
				F	97.27	58	35	122	5,612	clover	6-31
784	Barteldes Seed Co. Romeo Stores Co., Romeo		Beehive 8197	G	97.90	70	26.5	--	.....	Sweet	3-31
				F	97.69	63	29.5	57	4,647	clover	5-31
787	Barteldes Seed Co. Columbine Mercantile Co., Littleton			G	97.90	70	--	--	.....	Sweet	3-31
				F	98.09	62	29	57	2,847	clover	6-31
799	Barteldes Seed Co. Dye Hardware Co., Julesburg		Common S 13	G	98.0	86	--	--	.....	Sweet	4-31
				F	98.89	90	3	--	1,530	clover	8-31
662	Blotz Seed and Produce Co. Standard Mercantile Co., Fort Collins		Common Ark. Valley	G	99.0	83	15	--	.....	.....	1-31
				F	99.28	70	13	--	1,080	.....	6-31

671	Blotz Seed and Produce Co. Oiteson Grain Co., Fort Lupton	Common Ark. Valley	G	99	82	14	--	.....	Sweet	.....
			F	98.38	82	9.5	8	5,588	clover	6-31
691	Blotz Seed and Produce Co. Bancroft-Marty Feed & Pro. Co., Trinidad	Common Ark. Valley	G	99	81	16	--	.....	Sweet	3-31
			F	99.32	81	14.5	154	604	clover	6-31
694	Blotz Seed and Produce Co. Sporleder Selling Co., Walsenburg	Common Ark. Valley	G	99.50	84	14	--	.....	.....	.....
			F	99.20	72	7	--	360	.....	6-31
727	Blotz Seed and Produce Co. Dinkle Merc. & Lumb. Co., Carbondale	Common Ark. Valley	G	99.0	83	15	--	.....	Sweet	1-31
			F	99.01	72	13	--	180	clover	6-31
626	Charles A. Chalgren, Greeley	Wyoming	G	--	--	--	--	.....	Sweet	.....
			F	99.24	65	28	41	580	clover	3-31
796	Colo. Grain and Bean Co. Chas. A. Chalgren, Greeley	Wyoming	G	99	65	28	--	.....	Sweet	.....
			F	99.11	80	11	48	228	clover	8-31
761	Cortez Land and Securities Co., Cortez	Common Local	G	97.83	46	41.5	--	.....	Sweet	.....
			F	97.89	43	52.0	16	450	clover	6-31
780	Jerre Cover, Rocky Ford Murphy-Rivera Hdw. Co., La Jara	Ark. Valley Common	G	99.50	89	--	--	.....	Sweet	1-31
			F	97.80	78.5	8	--	6,300	clover	6-31
693	Jerre Cover, Rocky Ford Baxter Hardware Co., Walsenburg	Ark. Valley Common	G	96.50	87	--	--	.....	Sweet	1-31
			F	95.31	72	7.5	--	15,660	clover	6-31
721	Craig Farmers M. & E., Craig	Common Local	G	93.50	47.5	38	--	.....	Sweet	4-31
			F	90.95	54	33	8	10,088	clover	6-31
755	Fields Hardware Co., Olathe	Common	G	93.12	46.5	39	--	.....	Sweet	.....
			F	79.39	75	13	2520	74,520	clover	6-31
699	Grabeal and Cline, Pueblo	Common Local	G	--	--	--	--	.....	Sweet	.....
			F	92.52	66	17.5	--	26,100	clover	8-31
651	Grand Junction Seed Co. Farmers Mercantile Co., Greeley	Fancy Colorado 27021	G	99.60	92	--	--	.....	Sweet	1-31
			F	94.69	61	33	114	744	clover	5-31
666	Grand Junction Seed Co. I. Rothschild Produce Co., Ault	Fancy Colorado 27652, 26639, Etc.	G	99.60	92	--	--	.....	Sweet	1-31
			F	99.57	67	28.5	57	597	clover	6-31

Lab. No.	Name of Wholesaler Name of Dealer		Identification mark	Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test	
	Place of Collection G—Given	F—Found		Pure seed	Germi- nation	Hard seed					
713	Grand Junction Seed Co. Lewis and Kluge, Eagle		Common M. H. 51116	G	99.5	73	10	--	.....	.....	3-31
				F	99.52	73.5	23.5	162	1,422	.....	6-31
714	Grand Junction Seed Co. Lewis and Kluge, Eagle		Common Mt. 51119	G	99.3	71	18	--	.....	.....	3-31
				F	98.97	69	13	32	1,710	.....	6-31
731	Grand Junction Seed Co. Grand Junction Seed Co., Grand Junction		Mountaineer 51123	G	98.4	76.3	18	--	.....	Sweet	3-31
				F	97.75	70.5	20	8	3,878	clover	6-31
732	Grand Junction Seed Co. Grand Junction Seed Co., Grand Junction		Colorado M. H. 51115	G	99.3	77.5	20	--	.....	Sweet	3-31
				F	98.52	75.5	17.5	--	2,160	clover	6-31
738	Grand Junction Seed Co. W. V. Bouldin and Co., Cedaredge		Mile High 27509	G	99.3	73	18	--	.....	Sweet	3-31
				F	97.71	78	17	65	6,988	clover	6-31
745	Grand Junction Seed Co. Allison Bros. Feed Store, Paonia		Mile High 51118	G	99.3	73	18	--	.....	Sweet	3-31
				F	98.99	81	13	16	1,276	clover	6-31
754	Grand Junction Seed Co. Fields Hardware Co., Olathe		Mile High 51115	G	99.3	73	18	--	.....	Sweet	2-31
				F	99.63	80	18.5	147	1,137	clover	6-31
759	Grand Junction Seed Co. Valley Fuel and Feed Co., Montrose		Mile High 51122, 27492	G	99.5	73	18	--	.....	Sweet	3-31
				F	98.97	79	11	--	810	clover	6-31
760	Grand Junction Seed Co. Valley Fuel and Feed Co., Montrose		Grimm Cert. Colo.	G	99.3	73	18	--	.....	Sweet	2-31
				F	96.88	89	3.5	--	.....	clover	6-31
765	Grand Junction Seed Co. Farmers Supply Co., Durango		Mile High Colorado	G	99.6	73	18	--	.....	Sweet	2-31
				F	99.19	78	13.5	--	1,170	clover	6-31
769	Grand Junction Seed Co. Graden Mercantile Co., Durango		Common Mt. Colorado	G	99.3	72	18	--	.....	Sweet	3-31
				F	96.78	66.5	20.5	462	6,312	clover	6-31
770	Grand Junction Seed Co. Graden Mercantile Co., Durango		Choice 27484	G	97	70	14	--	.....	Sweet	3-31
				F	91.38	44.5	25	1890	22,680	clover	6-31

717	Hayden Mercantile Co., Hayden	Grimm Local	G	--	--	--	--	.....	Sweet	.....
			F	92.61	46.5	43	16	37.816	clover	6-31
683	Holly Elevator Co., Holly	Common Local	G	93.37	70.5	22	--	.....	Sweet	10-30
			F	95.14	81.5	11.5	--	16,920	clover	8-31
682	Hosler Seed Co., Ordway	Grimm Sugar City	G	99.5	87.5	--	--	.....	Sweet	1-31
			F	99.24	83.5	4.5	--	90	clover	8-31
711	John Jacobs Co., Canon City Geo. W. Vaughn Feed & Prod. Co., Salida	Common E. Colorado	G	99.10	59.5	17	--	.....	Sweet	--
			F	99.30	82	9	--	4,050	clover	6-31
752	R. H. James Delta Elevator, Delta	Colorado San Luis Valley	G	99.11	85.5	16	--	.....	Sweet	3-31
			F	98.93	76.5	17	--	1,440	clover	6-31
676	R. H. James, Rocky Ford R. H. James, Rocky Ford	Colorado Registered	G	99.09	89	8.5	--	.....	Sweet	--
			F	98.94	80.5	10	--	90	clover	6-31
741	R. H. James, Rocky Ford Weaver Lumber and Merc. Co., Austin	Common	G	--	--	--	--	.....	Sweet	--
			F	98.78	73.5	22.5	--	1,890	clover	6-31
803	M. M. Jensen, Wray	Common Local	G	--	--	--	--	.....	.....	--
			F	99.14	74.5	2	--	630	.....	8-31
681	La Junta Trading Co. Hanagan Brothers, Swink		G	--	--	--	--	.....	Sweet	--
			F	99.03	90.5	3.5	--	1,350	clover	7-31
742	John W. Mack Seed Co. C. W. Smith and Son, Hotchkiss	Colo. L. A. Park	G	97.91	95	--	--	.....	.....	--
			F	98.64	45	47	--	3,780	.....	6-31
746	John W. Mack Seed Co. John W. Mack Seed Co., Delta	Grimm J. Coalrott	G	--	--	--	--	.....	Sweet	--
			F	99.02	31.5	62.5	49	1,039	clover	6-31
747	John W. Mack Seed Co., John W. Mack Seed Co., Delta	Common W. H. Carpenter	G	--	--	--	--	.....	Sweet	--
			F	99.18	35.5	50	41	1,211	clover	6-31
723	A. Oldland and Co., Meeker	Baltic Local	G	--	--	--	--	.....	.....	--
			F	97.84	64	27	188	3,338	.....	6-31
724	A. Oldland and Co., Meeker	Common Local	G	--	--	--	--	.....	.....	--
			F	97.49	55.5	40	--	7,020	.....	6-31

Lab. No.	Name of Wholesaler Name of Dealer		Identification mark	Percentages			Nox- ious weeds per lb.	Weeds per pound	Other crops present	Date of Test
	Place of Collection G—Given	F—Found		Pure seed	Germi- nation	Hard seed				
617	W. K. Patterson Feed and Seed Store Greeley			G -- F 99.48	-- 80.5	-- 12.0	-- --	..... 1,340	Sweet clover	-- 5-31
615	J. G. Peppard Seed Co. Charles A. Chalgren, Greeley		Utah-Colo. U. S. V. O.	G -- F 97.75	-- 70	-- 10.5	-- 49	..... 6,259	Sweet clover	-- 2-31
684	J. G. Peppard Seed Co. Denver Alf. M. & E. Prod. Co., Lamar		Sealed by Idaho Comm. A. B. Lyman, Inc.	G -- F 98.96	-- 89	-- 6	-- --	..... 1,170	Sweet clover	-- 6-31
786	Rocky Mountain Seed Co. Castle Rock Feed & Fuel Co., Castle Rock		Fan. Dom. Ark. Valley	G 99.50 F 98.30	87 70	-- 15	-- --	..... 5,400	.....	1-31 6-31
616	Rocky Mountain Seed Co. W. K. Patter- son Feed & Seed Store, Fort Morgan		Fan. Dom. Ark.	G 99.0 F 98.89	92 74	-- 12	-- --	..... 2,340	.....	-- 5-7
618	Rocky Mountain Seed Co. Donnen Brothers, Fort Morgan		Fan. Dom. Ark. Valley	G 99.0 F 99.51	92 77.5	12 11.5	-- --	..... 360	.....	1-31 5-31
669	Rocky Mountain Seed Co. Weld Grain Co., Peckham		Fan. Dom. Ark. Valley	G 99.0 F 97.70	77 75	-- 12	-- --	..... 7,110	Sweet clover	1-31 6-31
718	Thomas W. Rogers, Craig		Local Grimm	G 99.20 F 98.27	56.5 51	38 38	-- --	..... 90	Sweet clover	2-31 6-31
719	Thomas W. Rogers, Craig		Colo. Seed Reg. Serv.	G -- F 99.42	-- 39	-- 56.5	-- --	..... 630	.....	-- 6-31
775	The Romeo Stores Co. Hellmen-Seaberg Co., Alamosa		Beehive	G 98.0 F 97.69	74.5 67.0	-- 26	-- 57	..... 4,197	Sweet clover	3-31 6-31
707	Seldomridge Grain Co., Colorado Spgs.		Domestic Kansas	G 99.60 F 99.10	90 89.5	-- 2.5	-- --	..... 180	Sweet clover	-- 6-31
629	Dave Severance, Greeley		Beehive	G -- F 97.64	-- 69	-- 29.5	-- 137	..... 5,000	Sweet clover	-- 3-31

679	M. L. Stubbs Grain and Feed Elevator, Fowler		G	--	--	--	--	.....	Sweet	.....
			F	96.83	71	9.5	8	3,428	clover	6-31
661	Toliver and Kinney, Fort Collins	Beehive	G	--	--	--	--	.....	Sweet	.....
			F	97.92	84	12.5	16	7,216	clover	6-31
680	United Produce Co., Crowley		G	--	--	--	--	.....	.....	.....
			F	98.86	73.5	12.5	--	90	.....	7-31
722	Paul Wear, Meeker	Common Local	G	--	--	--	--	.....	Sweet	.....
			F	90.31	57	32.5	8	180	clover	6-31
619	Western Seed Co. Ferguson and Fairbairn, Loveland	Gold Seal	G	99.75	82	11	--	.....	Sweet	1-31
			F	99.30	81.5	12	--	630	clover	5-31
620	Western Seed Co. Ferguson and Fairbairn, Loveland	Grimm Wyoming	G	99.60	63	33	--	.....	Sweet	1-31
			F	99.22	73	20	--	540	clover	5-31
621	Western Seed Co. Ferguson and Fairbairn, Loveland	Gold Seal Wyoming	G	99.75	84	9	--	.....	Sweet	1-31
			F	99.11	83	11	--	180	clover	5-31
622	Western Seed Co Ferguson and Fairbairn, Loveland	Grimm-Wyoming Blue Tag	G	99.70	59	40	--	.....	.....	1-31
			F	99.79	51	45.5	--	180	.....	5-31
624	Western Seed Co. Gould Lumber and Inv. Co., Berthoud	Gold Seal Colorado	G	99.55	87	9	--	.....	.....	1-31
			F	98.32	81.5	11	--	3,600	.....	5-31
654	Western Seed Co. Loveland Hardware Co., Loveland	Gold Bee Utah	G	99.05	79	18	--	.....	Sweet	5-31
			F	98.70	72.5	21.5	73	1,235	clover	5-31
655	Western Seed Co. Ferguson and Fairbairn, Loveland	Utah Blue Tag	G	99.58	78	19	--	.....	.....	1-31
			F	99.43	66.5	28	--	.....	.....	5-31
657	Western Seed Co. Johnstown Elevator Co., Johnstown	Aff. Grimm Wyoming	G	98.90	85	13	--	.....	Sweet	2-31
			F	95.27	61.5	35.5	--	14,400	clover	5-31
660	Western Seed Co. Toliver and Kinney, Fort Collins	Gold Seal Mont.	G	99.60	82.0	15.0	--	.....	Sweet	1-31
			F	99.70	87.5	9.5	24	.....	clover	6-31
663	Western Seed Co. Standard Mercantile Co., Fort Collins	Wyoming	G	97.05	83.0	10	--	.....	Sweet	.....
			F	96.39	85.5	8.5	8	278	clover	6-31

Lab. No.	Name of Wholesaler		Identification mark	Percentages			Noxious weeds per lb.	Weeds per pound	Other crops present	Date of Test	
	Name of Dealer	Place of Collection		Pure seed	Germi- nation	Hard seed					
	G—Given	F—Found									
665	Western Seed Co. Ault Exchange, Ault		Wyoming Blue Tag	G	99.80	65.0	29	--	.....	.....	1-31
				F	99.17	38	49.5	--	.....	.....	6-31
668	Western Seed Co. Northern Imp. and Produce Co., Windsor		Gold Bee Colorado-Utah	G	98.00	82	12	--	.....	Sweet	3-31
				F	98.66	71	20	--	900	clover	6-31
672	Western Seed Co. Otteson Grain Co., Fort Lupton		Gold Seal Colorado	G	99.20	91	8	--	.....	Sweet	1-31
				F	98.62	80.5	10	--	1,710	clover	6-31
698	Western Seed Co. Sporleder Selling Co., Walsenburg		Grimm-Utah Registered	G	99.58	78	19	--	.....	.....	3-31
				F	99.47	74.5	27.5	--	.....	.....	6-31
763	Western Seed Co. Dolores Lumber and Supply Co., Dolores		Grimm-Wyoming	G	99.70	79	20	--	.....	.....	1-31
			Blue Tag	F	99.45	52.5	44.5	--	450	.....	6-31
766	Western Seed Co. Farmers Supply Co., Durango		Gold Seal Wyoming	G	99.75	84	9	--	.....	Sweet	1-31
				F	99.26	80	13	--	90	clover	6-31
776	Western Seed Co. Monte Vista Flour Mills, Monte Vista		Wyo. Ex. No. 1	G	99.80	61	36	--	.....	.....	1-31
			Blue Tag	F	99.46	52	43.5	--	90	.....	6-31
777	Western Seed Co. Monte Vista Flour Mills, Monte Vista		Wyo. Affidavit Grimm	G	99.60	63	33	--	.....	Sweet	1-31
				F	99.26	79	17	--	900	clover	6-31
778	Western Seed Co. Monte Vista Flour Mills, Monte Vista		Grimm-Wyoming	G	99.50	72	27	--	.....	Sweet	1-31
			Blue Tag	F	99.74	74.5	20.5	--	.....	clover	6-31
783	Western Seed Co. Romeo Stores Co., Romeo		Aff. Grimm Colorado	G	99.33	87	7	--	.....	Sweet	1-31
				F	99.41	79.5	3	--	990	clover	6-31
793	Western Seed Co. W. C. Harris Seed Co., Sterling		Utah Blue Tag	G	99.58	79.0	14.0	--	.....	Sweet	4-31
				F	99.60	79.0	13.5	--	180	clover	7-31
838	Western Seed Co. Toliver and Kinney, Fort Collins		Mont.	G	99.60	82	10	--	.....	Sweet	-
				F	99.38	85	9	--	212	clover	6-31

839	Western Seed Co.	Utah-Idaho	G	90.60	62	12	--	.....	Sweet	-
	Toliver and Kinney, Fort Collins		F	90.56	40	15	--	23,760	clover	6-31
840	Western Seed Co.	Utah-Idaho- Nevada-Oregon	G	97.0	78	12	--	.....	Sweet	-
	Toliver and Kinney, Fort Collins		F	95.50	71.5	8.5	80	4,683	clover	6-31
781	Western Seed Co.	Wyoming Blue Tag Grimm	G	99.70	79	20	--	.....	.....	-
	Murphy-Rivera, La Jara		F	99.32	42.5	48.5	--	1,710	.....	6-31
728	Western Seed M'k'ting Co., Salt Lake City	Utah Yellow Tag	G	97.0	91	--	--	.....	Sweet	2-31
	Farmers Co-op. Union, Basalt		F	93.19	48	14	131	59,081	clover	6-31

Responsibility for the labels on seeds in sealed bags should rest upon the agency which has charge of sealing the seeds. While the following samples are published under the name of a dealer in order to complete the records, the responsibility should be fixed as follows:

145 Colorado seed registration service
571 Idaho seed registration service
338 Colorado seed registration service
280 Colorado seed registration service
440 Utah seed registration service
357 Idaho seed registration service
70 Michigan seed registration service
577 Idaho seed registration service
336 Colorado seed registration service
13 Colorado seed registration service

358 Idaho seed registration service
571 Idaho seed registration service
432 Colorado seed registration service
10 Utah seed registration service
574 Utah seed registration service
111 Utah seed registration service
222 Tag lost while in hands of retailer.
676 Colorado seed registration service
684 Idaho seed registration service

719 Colorado seed registration service
622 Wyoming seed registration service
665 Wyoming seed registration service
698 Utah seed registration service
776 Wyoming seed registration service
778 Wyoming seed registration service
793 Utah seed registration service
781 Wyoming seed registration service
728 Utah seed registration service

Average purity of inspection samples for 1931 is more than 1 percent higher than for 1930. Table 1 following, shows the comparison and also shows what should be expected of the highest-grade seed.

TABLE 1

	Average percentage for alfalfa			
	Purity	Germination	Hard Seed	Live Seed
Inspection 1930	96.54	66.5	21.4	87.98
Inspection 1931	97.78	69.0	20.8	89.8
Highest-grade seed	99.81	81.0	17.0	98.0

A careful examination of the preceding tables will show that compliance with the seed law or failure to comply with it does not tell the whole story as to the quality of seed handled by a dealer.

Samples from the same lot of seeds, even tho taken very carefully, are rarely identical. For this reason it is necessary to allow a variation between the statements on the label and the results of the official test. Definite work has determined that 1 percent variation is sufficient for all alfalfa samples except those of a very low grade. It must be taken into account that this variation, or established tolerance, means that the test of a second sample may fall that much either above or below the test of the original sample.

The Colorado seed law allows a variation of 2 percent between the purity given on the analysis tag and that found by the official test. This means that the dealer who handles seed which actually tests 96 percent purity may label it as low as 94 percent or as high as 98 percent and yet comply with the law. The man who always takes advantage of this provision and increases the actual purity by the legal 2 percent may be law abiding, but his labels tell the purchaser very little about the quality of seed he sells.

In the same way the man who always takes advantage of the 10 percent variation permitted in germination may be complying with the legal requirements but he is deceiving the purchaser.

The number of noxious weed seeds must be stated when there are more than 90 per pound. Seed which contains noxious weeds, but fewer than 90 per pound, need not have the presence of noxious weeds indicated on the label. Such seed is, however, distinctly inferior to seed which contains no noxious weeds.

In 1930, 50 percent of the samples contained noxious weeds while only 23 percent contained such seed in excess of 90 per pound. That is, more than half of the seeds which had noxious weeds would not have them indicated on the label.

In 1931, 45 percent of the inspector's samples contained noxious weeds while only 15 percent contained such seed in excess of 90 per pound. The other 30 percent would be a source of infection to the purchaser's fields, but the label need bear no suggestion of this fact.

It is evident therefore that it behooves the farmer to select his seed dealer carefully.