

2001 ANNUAL REPORT ON COMMERCIAL FEEDS & ANIMAL REMEDIES

January 1, 2001 to December 31, 2001

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QUESTIONS

Questions regarding this publication may be directed to the Department of Agriculture at 605-773-4432. The Department of Agriculture also maintains an internet site, which contains a copy of this report, as well as other information including the commercial feed and animal remedy regulations, license application and feed tonnage inspection fee report forms, and e-mail addresses for Department personnel. The address for that web-site is:

<http://www.state.sd.us/doa>

2001 COMMERCIAL FEED & ANIMAL REMEDY ANNUAL REPORT

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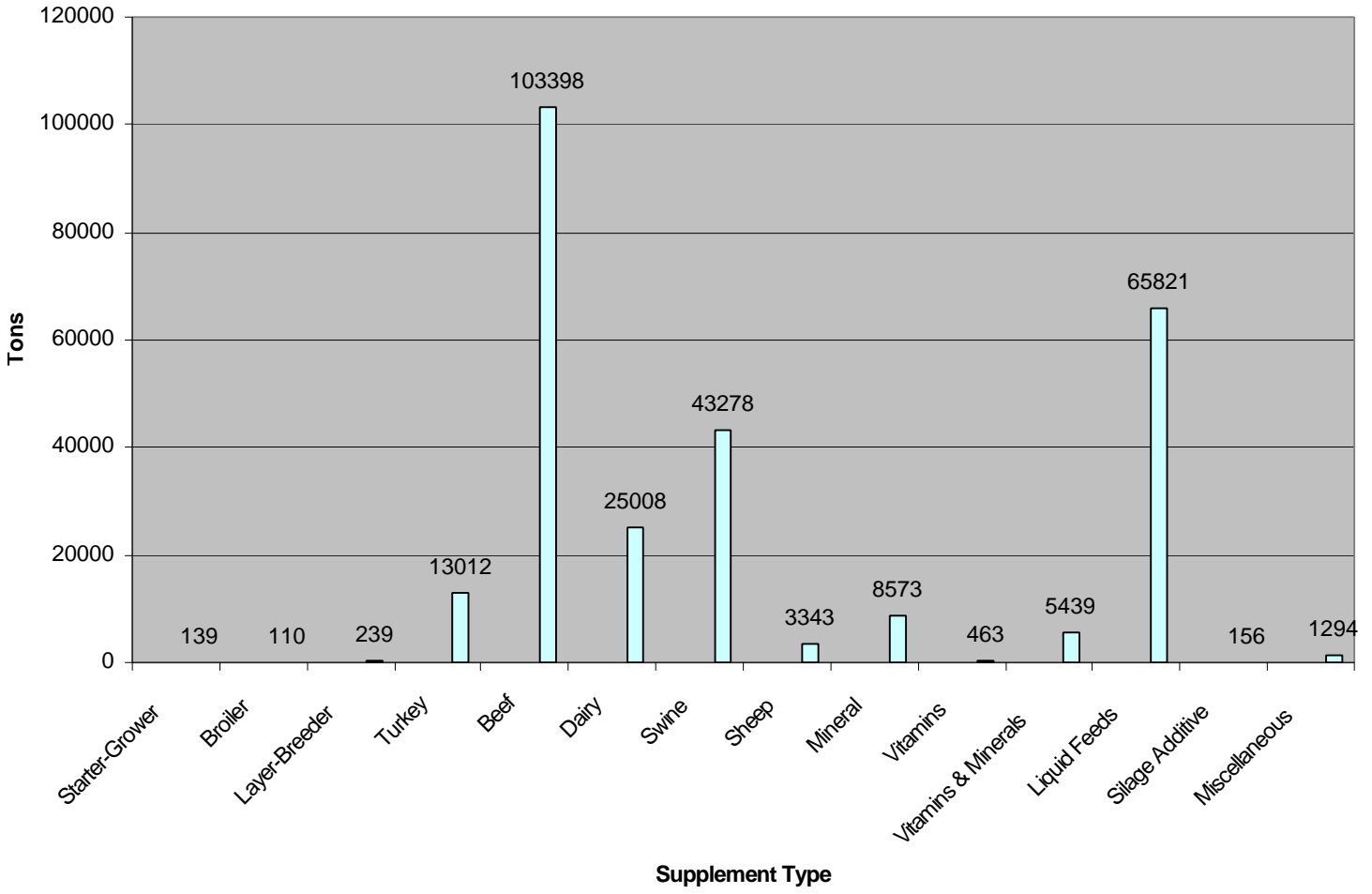
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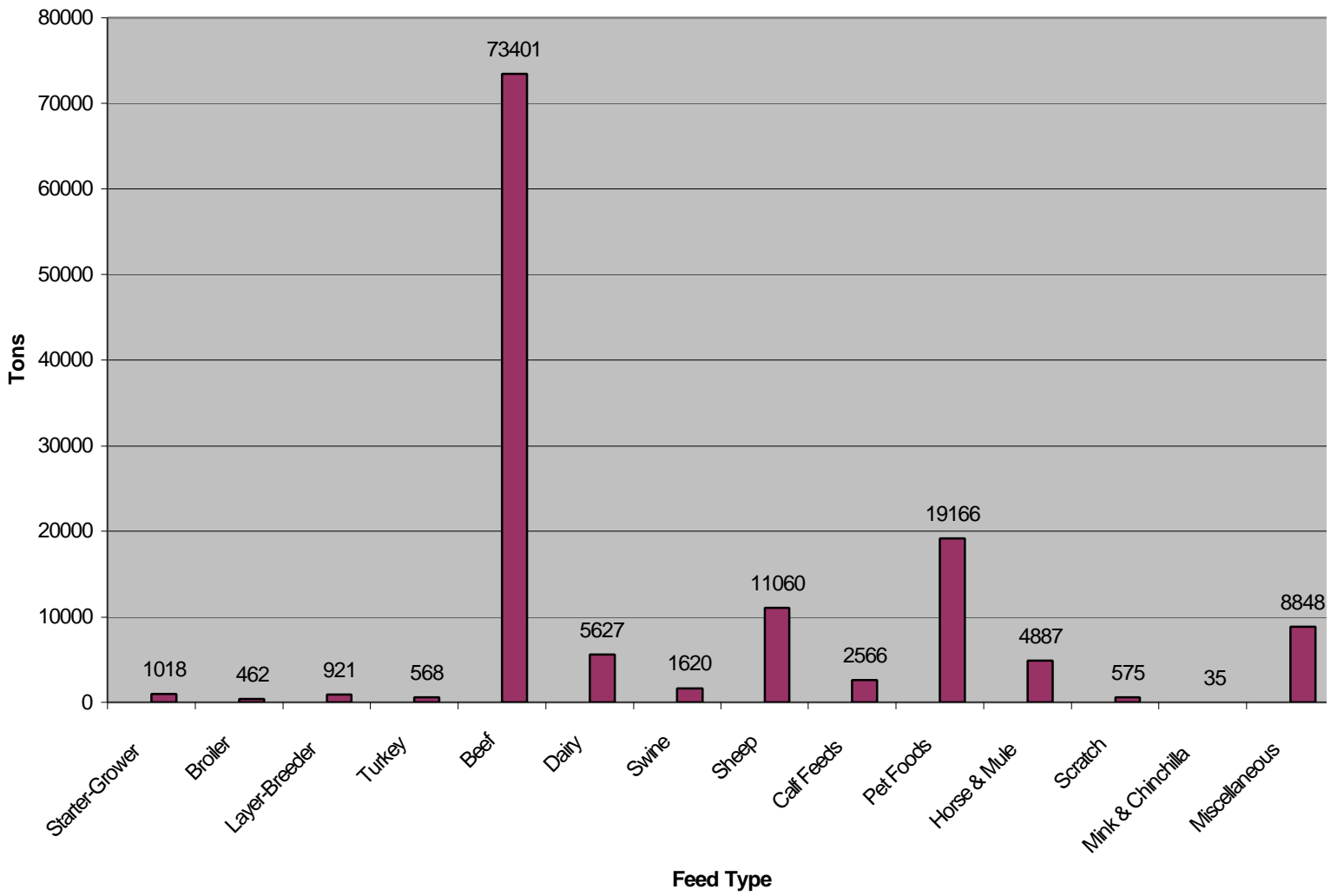
**SOUTH DAKOTA DEPARTMENT OF AGRICULTURE
COMMERCIAL FEED TONNAGE REPORT
2001 TOTAL – 1,025,252 TONS**

FORMULA FEED	TONS COMPLETE	TONS SUPPLEMENT	FEED INGREDIENTS (CONTINUED)	TONS
Starter-Grower	1018	139	Beet Products	699
Broiler	462	110	Brewery Products	2
Layer-Breeder	921	239	Citrus Products	
Turkey	568	13012	Corn Products	12592
Beef	73401	103398	Cottonseed Products	242
Dairy	5627	25008	Distillers Products	8657
Swine	1620	43278	Drugs	359
Sheep	11060	3343	Fats & Oils Products	2268
Mineral		8573	Grain Sorghum Products	144
Vitamins		463	Lespedeza Products	
Vitamins & Minerals		5439	Linseed & Flax Products	71
Calf Feeds	2566		Marine Products	164
Pet Foods	19166		Milk Products	507
Horse & Mule	4887		Minerals	6587
Scratch	575		Molasses	765
Liquid Feeds		65821	Oat Products	165
Mink & Chinchilla	35		Peanut Products	5
Silage Additive		156	Rice Products	
Miscellaneous	8848	1294	Rye Products	
			Soybean Products	20853
TOTAL FORMULA FEED	145332	270273	Urea	385
			Vitamins	145
FEED INGREDIENTS	TONS		Wheat Products	749
Alfalfa Products	5714		Yeast Products	33
Animal Products	16600		Miscellaneous	2759
Bakery Products	117			
Barley Products	108		TOTAL INGREDIENTS	60964

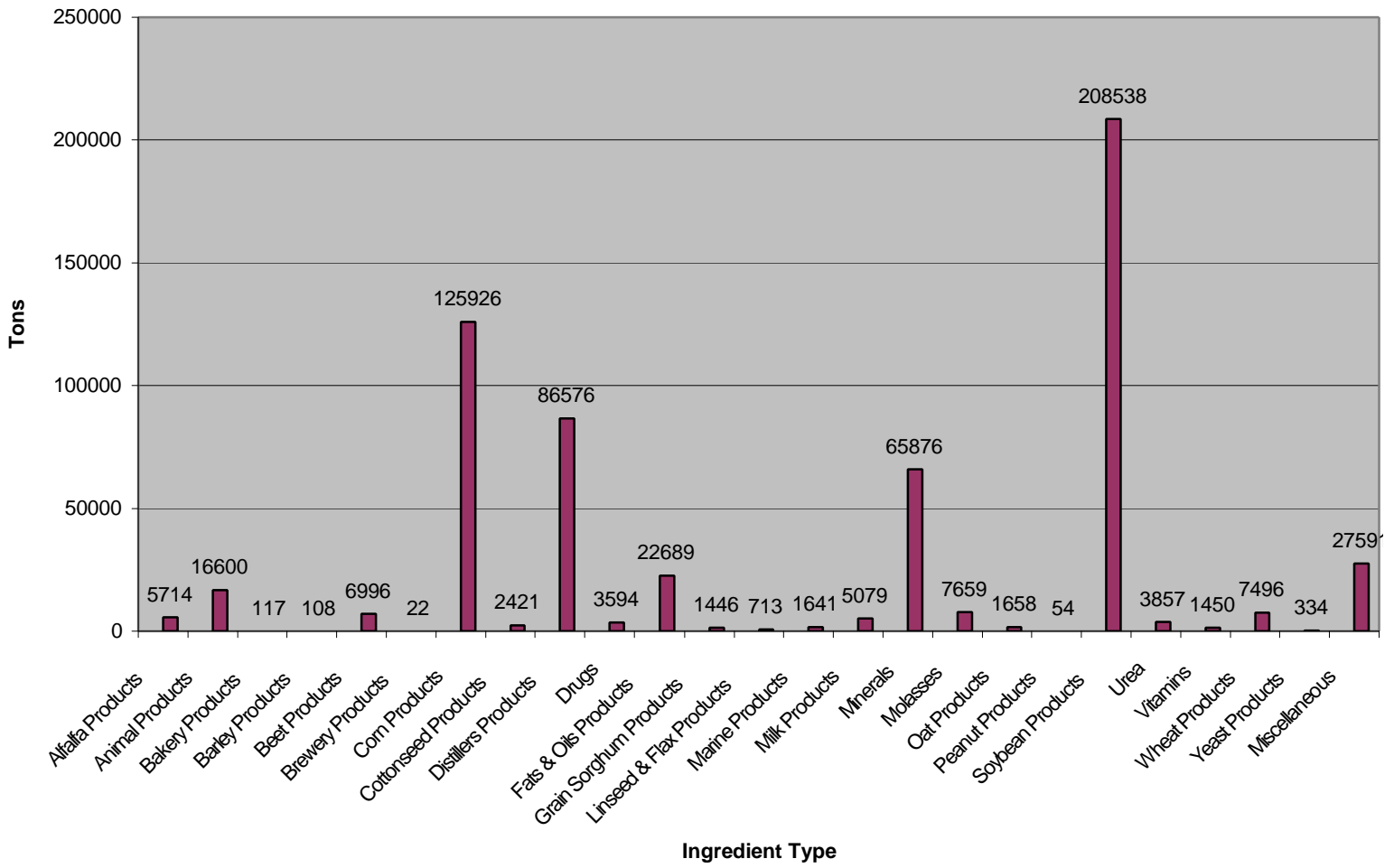
2001 SUPPLEMENT FEED 270,273 TONS



2001 COMPLETE FEED 145,332 TONS



2001 INGREDIENTS 609,647 TONS



Sample Count Report

Feeds Sampled From 01/01/2001 To 12/31/2001

Manufacturer and Location			Sample	Passed	Not
8 In 1 Pet Products, Inc.	Hauppauge	NY	2	1	1
ADM Animal Health & Nutrition	Des Moines	IA	2	2	0
Ag Partners	Albert City	IA	1	1	0
Ag Processing Inc	Omaha	NE	4	4	0
Agra Partners LTD	W Des Moines	IA	1	1	0
Agri-Energy	Luverne	MN	1	1	0
All Tech	Nicholasville	KY	1	1	0
Alpharma Inc	Fort Lee	NJ	2	2	0
American Agco	St Paul	MN	1	0	1
American Protein Corporation	Ames	IA	3	3	0
American Protein Corporation	Lytton	IA	1	0	1
Arco Dehydrating Company	Lake Park	IA	3	3	0
Arlington Farmers Elevator	Arlington	SD	1	1	0
Aspen Pet Products	Denver	CO	1	1	0
Babers Vis-Vita Sales	Sioux City	IA	1	1	0
Big Valley Milling Inc	Montevideo	MN	1	1	0
Biologic	West Point	MS	1	1	0
Bovine Basics	Orchard	NE	1	1	0
Burke Feed Mill	Burke	SD	1	1	0
BW Feeds	Wecota	SD	4	3	1
C & S Products Company	Fort Dodge	IA	3	3	0
Cabelas	Sidney	NE	1	1	0
Cammack Ranch Supply	Union Center	SD	3	2	1
Capstone	Cincinnati	OH	1	1	0
Cargill - Nutrena Feed Division	Minneapolis	MN	13	10	3
Cargill Inc	Sioux City	IA	1	1	0
Cattleman's Choice Loomix	Johnstown	CO	2	0	2
Cenex Service Center	Montrose	SD	1	1	0
Central Bi-Products	Redwood Falls	MN	2	2	0
Central Tractor Farm and Country	DesMoines	IA	1	0	1
Circle K Feed and Grain	Glen Ullin	ND	2	2	0
CK Processing Company	Muscatine	IA	1	1	0
Clark County Farmers Elevator	Clark	SD	1	1	0
Commodity Specialists	Minneapolis	MN	1	1	0
Con Agra	Hastings	MN	1	1	0
ConAgra Flour Milling	Omaha	NE	1	1	0
ConAgra Inc	Omaha	NE	3	2	1
Consolidated Nutrition L.C.	Omaha	NE	15	10	5
Consumers Supply Dist Company	Sioux City	IA	7	6	1
Cotton Oil Mill Inc.	Pine Bluff	AK	1	1	0
Country Pride Coop	Winner	SD	4	2	2
D & D Commodities	Stephen	MN	1	0	1
Dakota Mill and Grain	Sturgis	SD	3	2	1
Dakotaland Feeds	Huron	SD	7	5	2
Darby Creek Ag/Shur-Tone Feeds	Milford Center	OH	1	1	0
Diamond Pet Foods	Meta	MO	1	0	1
Doane Pet Care	Brentwood	TN	1	1	0
Douglas Feed Mill	Armour	SD	1	1	0
DPC Corp	Joplin	MO	2	1	1

Manufacturer and Location			Sample	Passed	Not
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East-Man Feeds	Sioux Falls	SD	2	1	1
Energy Savers Unlimited	Harbor City	CA	1	1	0
Essential Vitality Inc	Rapid City	SD	1	1	0
Evolved Habitats	New Roads	LA	2	2	0
EvSCO Pharmaceuticals	Buena	NJ	1	1	0
Exclusively Pet Inc.	Milwaukee	WI	1	1	0
F.M. Brown's Son's Inc.	Sinking Springs	PA	1	1	0
Farmers Coop	Gordon	NE	6	5	1
Farmers Elevator Co.	Mission Hill	SD	1	1	0
Farmland Industries	Kansas City	MO	18	13	5
Farnam Pet Products	Phoenix	AZ	1	1	0
Federal Beef Processors	Rapid City	SD	1	1	0
Feed Rite	Winnipeg Manitoba	CN	1	0	1
Fleming Companies Inc.	Oklahoma City	OK	1	1	0
Friskies Pet Care Products	Glendale	CA	5	5	0
Furst-McNess Company	Freeport	IL	1	1	0
Gold Eagle	Eagle Grove	IA	1	1	0
Golden Acres	Esterville	IA	3	3	0
Golden Sun Feeds Inc	Esterville	IA	25	20	5
Golden Sun Feeds Inc	Sioux Falls	SD	3	3	0
Gutwein and Co	Francesville	IN	3	1	2
Hartz Mountain Corp	Secaucus	NJ	9	8	1
Harvest Brands Inc	Pittsburg	KS	4	3	1
Harvest States Feeds	Gettysburg	SD	2	2	0
Harvest States Feeds	Sioux Falls	SD	9	8	1
Harvest States Feeds	Dickinson	ND	1	0	1
Heartland Grain Fuels	Aberdeen	SD	1	1	0
Heartland Inc	Bismarck	ND	1	1	0
Heinold Feeds	Kouts	IN	1	1	0
Heinz Pet Products	Pittsburgh	PA	3	3	0
Hergert Milling, Inc.	Scotts Bluff	NE	3	1	2
Hill's Pet Nutrition	Topeka	KS	12	12	0
Howard Farmers Coop Assn	Howard	SD	1	1	0
Hubbard Feed Inc.	Watertown	SD	7	4	3
Hubbard Feeds, Inc.	Mankato	MN	92	65	27
Hubbard Feeds, Inc.	Rapid City	SD	1	1	0
HyVee Inc.	DesMoines	IA	1	1	0
International Nutrition	Omaha	NE	1	1	0
J&R Distributing	Lake Norden	SD	18	10	8
John Morrell & Company	Sioux City	IA	1	1	0
K-Mart Corporation	Troy	MI	4	4	0
Kal Kan Foods Inc	Vernon	CA	6	6	0
Kay Dee Feed Company	Sioux City	IA	11	9	2
Kaylor Grain Co.	Kaylor	SD	1	1	0
Kaytee Products Inc	Chilton	WI	8	6	2
Kent Feeds Inc	Muscatine	IA	22	18	4
Kyorin Co. LTD	Himegi Japan		1	1	0
L/M Animal Farms	Pleasant Plain	OH	2	2	0
Land O Lakes Inc.	Fort Dodge	IA	69	47	22
Land O Lakes/Farmland Feeds	Sioux Falls	SD	2	2	0
Land O Lakes/Harvest States	Ft. Dodge	IA	19	16	3
Lesterville Feed & Grain	Lesterville	SD	1	0	1

Manufacturer and Location

Sample

Passed

Not

Manna Pro Corporation	St. Louis	MO	1	1	0
Manning Agricultural Center	Manning	IA	2	2	0
Marshall Pet Diets	Wolcott	NY	1	1	0
Mason City By-Products Inc	Mason City	IA	1	1	0
McFleeg Inc	Bowdle	SD	1	1	0
McFleeg Inc	Watertown	SD	2	0	2
Mid-States Distributing Company	St Paul	MN	5	2	3
Midwest Ag Supply	Watertown	SD	1	1	0
Midwest Agri-Commodities	Corte Madera	CA	1	1	0
Midwest PMS	Gering	NE	4	3	1
Mighty Deer Lick	Powers	MI	1	1	0
Milk Specialties Company	Dundee	IL	1	0	1
Millbrook Feed Mill	Mitchell	SD	3	3	0
Moorman Mfg Company	Quincy	IL	2	1	1
Morton International Inc	Chicago	IL	1	0	1
Muellers Feed Mill	Martin	SD	5	4	1
Nabisco Foods	E Hanover	NJ	4	4	0
Natura Pet Products	Santa Clara	CA	3	3	0
Nelson & Sons Inc	Murray	UT	4	4	0
New Generation Feeds	Belle Fourche	SD	2	1	1
North Dakota Mill	Grand Forks	ND	1	1	0
Nutra-Flo Company	Sioux City	IA	1	1	0
Nutritec Inc.	Vernon Hills	IL	1	0	1
Nutro Products Inc	City of Industry	CA	1	1	0
Occo Products	Omaha	NE	1	1	0
Old Mother Hubbard	Lowell	MA	2	1	1
Old West Feeds	Mitchell	SD	1	0	1
Omega Protein Inc	Hammond	LA	1	1	0
Ontario Dehy Inc.	Goderich Ontario	CN	1	0	1
Pedigree Inc	Vernon	CA	1	1	0
Pet Life	Cincinnati	OH	1	1	0
Petco Animal Supplies	San Diego	CA	1	1	0
Pfizer/Iowa Veterinary Supply	Iowa Falls	IA	2	2	0
PHF LTD	Sioux Falls	SD	1	0	1
PMI Nutrition Inc	Brentwood	MO	3	3	0
Prairie Pride	Mankato	MN	2	2	0
Premier Farmtech	Kansas City	MO	1	1	0
Pro Visions Pet Specialties	St. Louis	MO	1	1	0
Professional Pet Foods	St. Thomas	MO	1	1	0
Purina Mills	St. Louis	MO	23	21	2
Quality Liquid Feeds Inc	Dodgeville	WI	4	2	2
Quality Stores	Muskegon	MN	1	1	0
Ragland Mills Inc	Neosho	MO	5	4	1
Ralston Purina Company	St. Louis	MO	9	9	0
Ramona Warehouse	Ramona	SD	1	1	0
Rancher Feed & Seed	Buffalo Gap	SD	2	1	1
Ranchers Feed & Supply	Edgemont	SD	3	3	0
Rangen Inc.	Buhl	ID	6	6	0
Red River Commodities	Fargo	ND	1	1	0
Redbarn	Long Beach	CA	2	2	0
Rep-Cal Research	Los Gatos	CA	1	1	0
Ridley Block Operations	Whitewood	SD	1	0	1

Manufacturer and Location

Sample

Passed

Not

Robinson Labs Inc.	Cannon Falls	MN	1	1	0
Roche Vitamins & Fine Chemicals	Parsippany	NJ	1	1	0
Rolf Hagen	Mansfield	MA	1	1	0
Royal Canin USA, Inc.	St. Peters	MO	1	1	0
Schempp Liquifeeds Inc	Menno	SD	1	1	0
Scranton Equity Exchange	Scranton	ND	6	4	2
SD Soybean Processors	Volga	SD	7	7	0
SE Farmers Elevator	Elk Point	SD	1	1	0
SF Sulfur	Free Port	TX	1	1	0
Shurfine International	Northlake	IL	1	1	0
Southwest Grain	Belle Fourche	SD	1	1	0
St Aubrey Veterinary Labs	Hauppauge	NY	1	0	1
Stamina Plus	Cody	WY	1	0	1
Sterling Technology	Toronto	SD	3	2	1
Sun Seed Company Inc	Bowling Green	OH	2	1	1
Sweet Lix LLC	Salt Lake City	UT	1	1	0
Tetra Sales	Blacksburg	VA	1	1	0
The Iams Company	Dayton	OH	9	8	1
The Wardley Corporation	Secaucus	NJ	3	3	0
Tradition Feed Products Company	Mankato	MN	28	27	1
TSC Stores	Nashville	TN	1	1	0
US Commodities Inc	Wayzata	MN	1	1	0
Utica Grain & Feed	Utica	SD	1	1	0
Vigortone Ag Products Inc	Cedar Rapids	IA	4	4	0
Vitalix Inc.	Alliance	NE	1	1	0
Wagner Bros Feed Corp	Farmingdale	NY	1	1	0
Wal Mart Stores Inc	Bentonville	AR	3	3	0
Watertown Coop Elevator	Watertown	SD	3	2	1
Watertown Coop Feed Store	Webster	SD	1	1	0
West River Feed	Scranton	ND	1	1	0
Western Consolidated Coop	Sunburg	MN	1	1	0
Westway Feed Products	New Orleans	LA	11	10	1
Westway Trading Corp	South Omaha	NE	1	1	0
Whitetail Inst. of North America	Pintala	AL	2	1	1
Woody's Performance Horse Feed Products	Dickinson	ND	11	8	3
XFE Products	Hartford	TX	1	0	1
Yaggies Inc	Yankton	SD	2	2	0
	Totals:		765	606	159

Percent Passed: 79.2%

Percent Not

20.8%

**COMMERCIAL FEEDS SAMPLED -- 2001
LIST OF ANALYTES**

<u>NUTRIENT ANALYTES</u>	<u>NUMBER OF SAMPLES</u>
Crude Protein	581
Calcium	275
Vitamin A	233
Crude Fiber	203
Salt	192
Crude Fat	181
Moisture	166
Phosphorus	137
Selenium	85
Equivalent Crude Protein	76
Lysine	56
Ash	51
Potassium	42
Iodine	37
Acid Detergent Fiber (ADF)	29
Magnesium	28
Methionine	28
Total Sugars as Invert (TSI)	26
Sodium	21
Taurine	16
Zinc	10
Linoleic Acid	9
Glycine	4
Tryptophan	4
Arginine	3
Cystine	3
Histidine	3
Isoleucine	3
Leucine	3
Linolenic Acid	3
Phenylalanine	3
Sulfur	3
Threonine	3
Tyrosine	3
Valine	3
Amino Acids (complete screen)	2
Copper	2
Iron	1
 <u>DRUG ANALYTES</u>	
Chlortetracycline	48
Lasalocid	48
Monensin	35
Decoquinat	19
Tylosin	18
Amprolium	16
Oxytetracycline	13
Sulfamethazine	9
Carbadox	5
Sulfathiazole	3
Bacitracin Methylene Disalicylate	2
 <u>OTHER ANALYTES</u>	
Noxious Weed Seeds	32
Deoxynivalenol (vomitoxin)	2
Net Weight	1
Metabolizable Energy	1
Ammonia	1
Heat Damaged Protein	1
Nitrogen Free Extract	1
Total Nitrogen	1

Feed Summary Report

01-01-2001 to 12-31-2001

Manufacturer Location	Product	Analyte	Found	Claim	
8 In 1 Pet Products, Inc.					
Hauppauge, NY					
	** Ferret Vite		01F-12453		
		Taurine - Total, mg/ounce	126.	200	DEFICIENT
		Vitamin A, IU/ounce	14700.	1700	
	Ultra Blend Select for Ferrets		01F-12886		
		Arginine - Total, %	1.90	1.75	
		Ash, %	6.98	6.5	
		Cystine - Total, %	0.227	0.35	DEFICIENT
		Crude Fat, %	16.4	15	
		Glycine - Total, %	3.27	2.45	
		Histidine - Total, %	0.560	0.5	
		Isoleucine - Total, %	1.26	0.9	
		Leucine - Total, %	3.29	1.85	
		Lysine - Total, %	1.60	1.3	
		Methionine - Total, %	0.731	0.5	
		Oven Moisture, %	7.39	10	
		Phenylalanine-Total, %	1.31	1	
		Crude Protein, %	37.0	35	
		Taurine - Total, %	0.133	0.15	
		Threonine - Total, %	1.31	1	
		Tyrosine - Total, %	1.00	0.8	
		Valine - Total, %	1.60	1	
ADM Animal Health & Nutrition Division					
Des Moines, IA					
	Aureomycin 50G		01F-04537		
		Chlortetracycline, g/lb	54.7	50	
	Tylan 10 Type B		01F-05912		
		Calcium, %	9.99	9.5-11.4	
		Crude Fiber, %	24.5	35.5	
		Crude Protein, %	3.11	1.8	
		Tylosin, g/lb	8.01	10	
Ag Partners					
Albert City, IA					
	Wheat Middlings		01F-04588		
		Crude Protein, %	18.5	15	
Ag Processing Inc					
Omaha, NE					
	Soybean Hulls Pellets		01F-03838		
		Crude Fiber, %	33.7	40	
		Crude Protein, %	10.5	8	
	Soybean Meal		01F-04618		
		Ash, %	6.15	8	
		Crude Protein, %	47.3	46.5	
	Soybean Meal 46.5% Protein		01F-04907		
		Ash, %	6.30	8	
		Crude Protein, %	47.4	46.5	
	Soybean Meal 46.5% Protein		01F-05765		
		Ash, %	6.14	8	
		Crude Protein, %	46.3	46.5	
Agra Partners LTD					
West Des Moines, IA					
	Chlortetracycline 10 gram Crumbles		01F-04561		
		Chlortetracycline, g/lb	10.9	10	

** = Misbranded

Agri-Energy				
Luverne, MN				
	Dakota Gold Corn Distillers Dry Grain withsolubles	01F-00453		
	Crude Fiber, %	7.60	12	
	Crude Fat, %	10.2	10	
	Oven Moisture, %	12.9	12.5	
	Crude Protein, %	28.5	25	
Alltech				
Nicholasville, KY				
	Yea-Sacc 2X	01F-01001		
	Crude Protein, %	12.5	10	
Alpharma Inc				
Fort Lee, NJ				
	BMD 60	01F-04619		
	Bacitracin, g/lb	56.3	60	
	Chlormax 50	01F-05242		
	Chlortetracycline, g/lb	49.1	50	
American Agco				
St Paul, MN				
	# Cardinal Blend	01F-03100		
	Crude Fiber, %	13.8	26	
	Crude Fat, %	43.7	25	
	Crude Protein, %	18.6	20	DEFICIENT
American Protein Corporation				
Ames, IA				
	Lifeline Calf Nutritional Colostrum Supplement	01F-01292		
	Crude Protein, %	43.9	40	
	Lifeline Made with Bovine Serum Colostrum Supplement	01F-02663		
	Crude Protein, %	45.6	40	
	Colostrum Supplement	01F-12322		
	Crude Protein, %	46.2	40	
American Protein Corporation				
Lytton, IA				
	# American Protein Corp Steamed Bone Meal	01F-04579		
	Ash, %	64.6	65	
	Calcium, %	22.4	22-26	
	Crude Fat, %	13.9	12	
	Phosphorus, %	11.2	11	
	Crude Protein, %	14.4	15	DEFICIENT
Arco Dehydrating Company				
Lake Park, IA				
	Arco Dehydrated Alfalfa Pellets	01F-02506		
	Crude Fiber, %	31.0	30	
	Crude Protein, %	16.9	17	
	ARCO Dehydrated Alfalfa Pellets	01F-04909		
	Crude Fiber, %	26.7	30	
	Crude Protein, %	19.8	17	
	Alfalfa Pellets	01F-05404		
	Crude Fiber, %	28.2	30	
	Crude Protein, %	17.2	17	
Arlington Farmers Elevator				
Arlington, SD				
	Custom Blend Hog Feed 60g Tylan	01F-03993		
	Tylosin, g/ton	57.0	60	
Aspen Pet Products				
Denver, CO				
	Vita RX Dog Food Puppy	01F-03084		
	Fat: Acid Hydrolysis, %	15.3	16	
	Oven Moisture, %	5.78	10	
	Crude Protein, %	26.7	26	
Babers Vis-Vita Sales				
Sioux City, IA				
	60% Fish Meal	01F-07142		
	Crude Fat, %	7.07	6.5	
	Crude Protein, %	65.3	60	

**Big Valley Milling Inc
Montevideo, MN**

44% Soybean Meal	01F-05403	
Ash, %	5.95	8
Crude Protein, %	44.0	44

**Biologic
West Point, MS**

Biologic White Tail Addiction	01F-09105	
Salt (Sodium X 2.54), %	26.8	26-31
Sodium, %	10.5	10.5-12.5

**Bovine Basics
Orchard, NE**

Bovine Basics Dairy Mineral 2-1	01F-05764	
Calcium, %	20.7	21.5-23.5
Iodine, ppm	132.	140
Magnesium, %	5.90	6
Phosphorus, %	11.0	11.2
Selenium, ug/g (ppm)	25.8	27
Vitamin A, IU/ lb	429000.	360000

**BW Feeds
Wecota, SD**

Custom Breeder Mineral (Cow Mix)	01F-07133	
Calcium, %	10.1	10-11.5
Equiv Crude Protein, %	7.22	23
Phosphorus, %	12.3	13
Crude Protein, %	24.0	24
Selenium, ug/g (ppm)	24.0	26
Vitamin A, IU/ lb	313000.	300000
Zinc, %	1.12	1.2

Custom Breeder Mix	01F-07134	
Calcium, %	9.85	10-11.5
Phosphorus, %	12.6	13
Salt (Sodium X 2.54), %	7.28	7.5-9.5
Selenium, ug/g (ppm)	28.4	26
Vitamin A, IU/ lb	315000.	300000
Zinc, %	1.05	1.2

** Custom Gestation Mineral	01F-07135	
Calcium, %	11.9	12-14.5
Phosphorus, %	6.82	8
Salt (Sodium X 2.54), %	6.83	7.5-9.5
Selenium, ug/g (ppm)	22.9	26
Vitamin A, IU/ lb	272000.	270000
Zinc, %	0.89	1

Custom Gestation Mineral (Cow Mix)	01F-07136	
Calcium, %	12.8	12-13.5
Equiv Crude Protein, %	5.44	23
Magnesium, %	1.80	2.2
Phosphorus, %	7.50	8
Crude Protein, %	23.5	24
Selenium, ug/g (ppm)	21.8	26
Vitamin A, IU/ lb	265000.	300000
Zinc, %	0.94	1

**C & S Products Company
Fort Dodge, IA**

Wild Bird Suet Peanut Dough	01F-00423	
Crude Fat, %	30.3	20
Crude Protein, %	11.8	10

Pecan Delight Suet for Year Round Wild Bird Feeding	01F-04160	
Crude Fat, %	30.0	20
Crude Protein, %	12.8	12

Berry Treat - Bird Cake	01F-08785	
Crude Fiber, %	3.66	12
Crude Fat, %	36.0	25

**Cabelas
Sidney, NE**

Cabelas Premium Blend Dog Food	01F-09107	
Fat: Acid Hydrolysis, %	15.9	15
Oven Moisture, %	6.99	10

DEFICIENT

	Crude Protein, %	27.6	26	
Cammack Ranch Supply				
Union Center, SD				
** Flushing Meal #1		01F-06247		
	Crude Fat, %	6.74	9	DEFICIENT
	Crude Protein, %	23.9	18	
Sweet Chop		01F-06248		
	Crude Protein, %	13.6	12	
Extruded Soybean Meal		01F-06249		
	Crude Fat, %	19.2	18	
	Crude Protein, %	35.6	36	
Capstone				
Cincinnati, OH				
Carrot Crunchers		01F-09256		
	Crude Fiber, %	3.65	10	
	Crude Protein, %	11.5	10	
Cargill - Nutrena Feed Division				
Minneapolis, MN				
Nutrena Layer - 16 All Season (NS)		01F-03759		
	Crude Protein, %	16.9	16	
CLS Controlled Release 32 Liq Suppl		01F-00126		
	Equiv Crude Protein, %	21.5	22.4	
	Vacuum Moisture, %	31.3	32	
	Crude Protein, %	32.5	32	
	Total Sugars(Invert), %	30.4	29.5	
Nutrena CLS 32 Liq. Suppl.		01F-00127		
	Equiv Crude Protein, %	21.8	22.4	
	Vacuum Moisture, %	31.3	32	
	Crude Protein, %	32.9	32	
	Total Sugars(Invert), %	27.4	29.5	
41 Poultry Concentrate		01F-00129		
	Calcium, %	4.36	4	
	Lysine - Total, %	2.66	2	
	Methionine - Total, %	0.525	0.5	
	Crude Protein, %	40.5	41	
	Salt (Sodium X 2.54), %	2.49	1.75-2.25	
	Sodium, %	0.98	1-1.1	
Nutrena 40/50 Swine Concentrate		01F-00130		
	Calcium, %	4.26	4.65-4.75	
	Lysine - Total, %	3.50	3.12	
	Phosphorus, %	2.25	2.35	
	Crude Protein, %	41.0	40	
	Salt (Sodium X 2.54), %	2.70	2.5-3	
	Sodium, %	1.06	1-1.4	
** Horse Concentrate		01F-00131		
	Calcium, %	4.16	4.5-5	
	Crude Protein, %	33.5	34	
	Vitamin A, IU/ lb	17500.	40000	DEFICIENT
** Nutrena Right Now Bronze Plain Mineral		01F-00133		
	Calcium, %	11.0	11-13	
	Magnesium, %	3.88	3	
	Phosphorus, %	9.22	10	
	Potassium, %	2.16	2	
	Salt (ChlorideX1.65), %	5.56	11.5-12.5	DEFICIENT
	Salt (Sodium X 2.54), %	4.35	11.5-12.5	DEFICIENT
	Selenium, ug/g (ppm)	43.1	30	
	Sodium, %	1.72	4.5-5.5	DEFICIENT
	Vitamin A, IU/ lb	141000.	100000	
Pigs Only Starter Concentrate NS		01F-00203		
	Calcium, %	2.43	2-3	
	Crude Fat, %	8.10	7.5	
	Lysine - Total, %	2.66	3	
	Crude Protein, %	36.5	32	
	Salt (Sodium X 2.54), %	1.80	1.5-2	
	Sodium, %	0.71	0.6-1.2	
Cargill Urea Feed Grade		01F-07141		

	Total Nitrogen, %	46.4	46	
40/50 Swine Concentrate		01F-08597		
	Calcium, %	4.64	4.65-4.75	
	Lysine - Total, %	3.16	3.12	
	Phosphorus, %	2.40	2.35	
	Crude Protein, %	39.6	40	
	Sodium, %	1.11	1-1.4	
Pigs only Starter Concentrate		01F-08598		
	Calcium, %	2.60	2-3	
	Crude Fat, %	7.84	7.5	
	Lysine - Total, %	2.48	3	
	Crude Protein, %	34.7	32	
	Sodium, %	0.84	0.6-1.2	
** RT-Green Starter Feed		01F-08599		
	Chlortetracycline, g/ton	62.1	100	DEFICIENT
	Crude Protein, %	18.1	17	
	Sulfathiazole, %	0.006	0.011	DEFICIENT
Champions Choice Trace Mineral Salt		01F-09841		
	Salt (Sodium X 2.54), %	96.3	94-98.5	
	Sodium, %	37.9	37-38.75	
Cargill Inc				
Sioux City, IA				
Extracted Soybean Meal		01F-04843		
	Crude Protein, %	47.0	46.5	
Cattleman's Choice Loomix				
Johnstown, CO				
** Loomix MCS II		01F-03569		
	Equiv Crude Protein, %	10.3	13	
	Vacuum Moisture, %	51.2	49	
	Phosphorus, %	1.89	2	
	Crude Protein, %	23.9	25	DEFICIENT
	Vitamin A, IU/ lb	40100.	50000	
** Montana Stress Mix		01F-03570		
	Equiv Crude Protein, %	4.03	2	EXCESSIVE
	Vacuum Moisture, %	48.2	48	
	Crude Protein, %	10.8	10	
	Vitamin A, IU/ lb	125.	25000	DEFICIENT
Cenex Service Center				
Montrose, SD				
Hog Finisher		01F-12705		
	Tylosin, g/ton	34.8	40	
Central Bi-Products				
Redwood Falls, MN				
Gro-Mor Hydrolyzed Poultry Feathers		01F-03166		
	Ash, %	2.04	6	
	Crude Protein, %	86.9	80	
Gro Mor Hydrolyzed Poultry Feathers		01F-04844		
	Ash, %	1.60	6	
	Crude Protein, %	85.4	80	
Central Tractor Farm and Country Inc				
DesMoines, IA				
** DynaGro 28% Meat/Gamebird Starter		01F-01424		
	Crude Fat, %	3.74	5	DEFICIENT
	Lysine - Total, %	1.00	1.8	DEFICIENT
	Crude Protein, %	18.7	28	DEFICIENT
Circle K Feed and Grain				
Glen Ullin, ND				
West River 20% Cake		01F-04985		
	Crude Fiber, %	6.48	14	
	Crude Protein, %	19.7	20	
West River 30% Cake		01F-04988		
	Crude Fiber, %	11.6	19	
	Crude Protein, %	29.7	30	

**CK Processing Company
Muscatine, IA**

Econolass	01F-07140		
Crude Fiber, %	17.1	20	
Crude Protein, %	8.08	6	
Total Sugars(Invert), %	36.4	38	

**Clark County Farmers Elevator
Clark, SD**

Custom Mix Hog Feed	01F-01295		
Tylosin, g/ton	27.7	30	

**Commodity Specialists
Minneapolis, MN**

Corn Distillers Grain	01F-03839		
Ash, %	4.34	8	
Crude Fiber, %	6.21	15	
Crude Fat, %	11.2	10	
Crude Protein, %	25.4	25	

**Con Agra
Hastings, MN**

Wheat Midds	01F-05662		
Crude Fiber, %	10.0	9.5	
Crude Protein, %	17.8	14	

**ConAgra Flour Milling
Omaha, NE**

Wheat Midds	01F-09355		
Deoxynivalenol, ug/g (ppm)	2.70		
Crude Protein, %	17.3	14	

**ConAgra Inc
Omaha, NE**

** 50% Meat and Bone Meal	01F-03840			
Calcium, %	7.51	8.7-10.3		DEFICIENT
Crude Fat, %	10.6	8		
Phosphorus, %	4.02	4		
Crude Protein, %	56.1	50		
85% Dried Blood Meal	01F-03841			
Crude Protein, %	95.9	85		
0004073 MW Wheat Midds	01F-05240			
Crude Protein, %	16.4	14		

**Consolidated Nutrition L.C.
Omaha, NE**

Bova Gain G32 50052AAA	01F-02390			
Calcium, %	4.13	4.5-5.5		
Crude Fiber, %	4.53	10		
Crude Protein, %	33.8	32		
Salt (Sodium X 2.54), %	3.81	4-5		
Vitamin A, IU/ lb	32200.	35000		
CN Hog 40 Concentrate 10859AAA	01F-02391			
Calcium, %	2.93	3.2-4.2		
Lysine - Total, %	2.24	2		
Crude Protein, %	41.3	40		
Stress Fighter 6 50359AWP	01F-02392			
Crude Fiber, %	14.0	20		
Chlortetracycline, g/ton	122.	117		
Crude Protein, %	14.8	13		
Sulfamethazine, %	0.0106	0.0128		
Ultra Balance Calf Starter 30421ALT	01F-02393			
Acid Detergent Fiber, %	7.97	8		
Decoquinatate, %	0.00307	0.0033		
Crude Protein, %	17.4	17		
Bova Gain G32/13 50238CCP	01F-02394			
Calcium, %	4.70	4.5-5.5		
Crude Fiber, %	6.77	12		
Equiv Crude Protein, %	10.2	13		
Monensin, g/ton	382.	400		
Crude Protein, %	34.8	32		
Salt (Sodium X 2.54), %	5.03	4-5		
Vitamin A, IU/ lb	34600.	35000		

CTC 4G Crumbles (Alliance Animal Health)	01F-04908		
Calcium, %	6.73	5.5-6.5	
Crude Fiber, %	6.24	29	
Chlortetracycline, g/lb	4.06	4	
** 36% Horse Supplement 80026AA	01F-04910		
Calcium, %	3.46	3.3-4.3	
Crude Protein, %	33.9	36	DEFICIENT
Salt (Sodium X 2.54), %	3.14	3.2-4.2	
Vitamin A, IU/ lb	14500.	20000	
Select 38	01F-04911		
Acid Detergent Fiber, %	10.6	10	
Calcium, %	2.81	2.2-2.7	
Crude Protein, %	37.2	38	
Vitamin A, IU/ lb	21100.	20000	
Feedlot Supplement 40/30 50031BJE Medicated	01F-04912		
Calcium, %	9.04	9-10.8	
Crude Fiber, %	5.44	18	
Equiv Crude Protein, %	27.7	30	
Lasalocid, g/ton	554.	600	
Crude Protein, %	39.6	40	
Salt (Sodium X 2.54), %	5.15	5-6	
Vitamin A, IU/ lb	25900.	25000	
** Bova Gain G 40115	01F-04913		
Calcium, %	6.17	6-7.2	
Crude Fiber, %	4.73	12	
Equiv Crude Protein, %	13.5	15	
Lasalocid, g/ton	300.	400	
Crude Protein, %	38.5	40	DEFICIENT
Salt (Sodium X 2.54), %	4.89	5-6	
Vitamin A, IU/ lb	32000.	35000	
Ultra Balance Dairy Mineral System	01F-06258		
Calcium, %	15.2	14.5-17.4	
Phosphorus, %	14.7	16	
Selenium, ug/g (ppm)	29.5	24	
Vitamin A, IU/ lb	167000.	100000	
** Range Fortifier 37-18	01F-06266		
Acid Detergent Fiber, %	7.35	7	
Calcium, %	4.99	3-4	EXCESSIVE
Equiv Crude Protein, %	14.7	18	
Crude Protein, %	37.0	37	
Salt (Sodium X 2.54), %	14.0	15-17	
Selenium, ug/g (ppm)	6.03	4	
Vitamin A, IU/ lb	28000.	50000	DEFICIENT
Bova Gain G 38	01F-09843		
Calcium, %	5.85	6-7.2	
Crude Fiber, %	4.98	10	
Monensin, g/ton	512.	600	
Crude Protein, %	38.7	38	
Salt (Sodium X 2.54), %	4.88	5-6	
Vitamin A, IU/ lb	42900.	35000	
** Midwest 34% Sheep Concentrate	01F-09844		
Calcium, %	3.86	3-4	
Equiv Crude Protein, %	2.93	3.3	
Crude Protein, %	31.0	34	DEFICIENT
Salt (Sodium X 2.54), %	3.24	3-4	
** Rough - N - Ready 14	01F-09845		
Crude Fiber, %	21.5	22	
Lasalocid, g/ton	43.4	60	DEFICIENT
Crude Protein, %	15.4	14	
Consumers Supply Dist Company			
Sioux City, IA			
Dehydrated Alfalfa Pellets	01F-04589		
Crude Fiber, %	27.1	27	
Crude Protein, %	20.0	17	
85% Blood Meal	01F-04592		
Crude Protein, %	93.7	85	
Chlortetracycline - 4	01F-04627		
Chlortetracycline, g/lb	3.32	4	
Vitamin A, IU/ lb	202000.	250000	

44% Protein Solvent Extracted Soybean Meal	01F-05620		
Ash, %	5.97	7	
Oven Moisture, %	9.77	12.5	
Crude Protein, %	48.0	44	
50% Bone Meal Certified Pork	01F-05913		
Calcium, %	7.95	9-10.2	
Crude Fat, %	11.6	8	
Phosphorus, %	4.25	4.1	
Crude Protein, %	54.0	50	
** 50% Meat and Bone Meal Certified Pork	01F-05915		
Calcium, %	7.86	9-10.2	DEFICIENT
Crude Fat, %	10.1	8	
Phosphorus, %	4.20	4.1	
Crude Protein, %	54.5	50	
Dehydrated Alfalfa Pellets	01F-06270		
Crude Fiber, %	26.2	27	
Crude Protein, %	19.4	17	

**Cotton Oil Mill Inc.
Pine Bluff, AK**

Cottonseed Meal Solvent Extracted	01F-04837		
Crude Fiber, %	11.7	14	
Crude Protein, %	40.4	41	

**Country Pride Coop
Winner, SD**

** Beef Grower B1200	01F-00125		
Calcium, %	12.9	13-15	
Lasalocid, g/ton	917.	1200	
Phosphorus, %	2.07	2.5	DEFICIENT
Potassium, %	2.26	2.5	
Salt (ChlorideX1.65), %	13.3	13-15	
Salt (Sodium X 2.54), %	10.4	13-15	DEFICIENT
Vitamin A, IU/ lb	65600.	80000	
Customer Formula Medicated Beef	01F-03398		
Calcium, %	14.0	14-15	
Chlortetracycline, g/ton	3300.	3500	
Iodine, ppm	33.0	35	
Magnesium, %	10.5	10	
Phosphorus, %	5.57	6	
Salt (Sodium X 2.54), %	13.3	12.25-14.5	
Selenium, ug/g (ppm)	14.5	14.97	
Vitamin A, IU/ lb	84700.	85000	
** 6% Mag Mineral	01F-00304		
Calcium, %	13.7	14-15	
Iodine, ppm	24.0	35	
Magnesium, %	9.34	10	
Phosphorus, %	8.26	6	
Salt (ChlorideX1.65), %	9.52	12.25-14.5	DEFICIENT
Salt (Sodium X 2.54), %	10.6	12.25-14.5	DEFICIENT
Selenium, ug/g (ppm)	13.5	14.97	
Vitamin A, IU/ lb	25900.	85000	DEFICIENT
Triple 12 Beef Mineral	01F-00305		
Calcium, %	11.6	11-13	
Iodine, ppm	41.0	44	
Magnesium, %	2.09	2	
Phosphorus, %	12.4	12	
Salt (Sodium X 2.54), %	11.3	11.5-13.75	
Selenium, ug/g (ppm)	14.0	14.97	
Vitamin A, IU/ lb	143000.	171683	

**D & D Commodities
Stephen, MN**

** L'Avian Plus Premium Guinea Pig Food	01F-12888		
Crude Fiber, %	13.3	18	
Oven Moisture, %	9.69	12	
Crude Protein, %	16.1	20	DEFICIENT

**Dakota Mill and Grain
Sturgis, SD**

** Hen Scratch	01F-05140		
Crude Protein, %	9.53	10.5	DEFICIENT
Sweet Chop Feed	01F-05409		
Crude Protein, %	10.3	9	
Hen Scratch	01F-05638		
Crude Protein, %	10.2	10.5	

**Dakotaland Feeds
Huron, SD**

Soybean Meal 46.5% Protein	01F-00450		
Ash, %	5.63	8	
Crude Protein, %	46.8	46.5	
DLF Breeder 20 R300 Zn, Cu, A&E	01F-01428		
Monensin, g/ton	285.	300	
Crude Protein, %	20.7	20	
Vitamin A, IU/ lb	30900.	30000	
Soybean Meal 46.5% Protein	01F-02657		
Ash, %	5.96	8	
Crude Protein, %	48.0	46.5	
** DLF-Custom Liquid L12(0) R250	01F-03467		
Equiv Crude Protein, %	8.18	5.5	EXCESSIVE
Vacuum Moisture, %	31.0	29.5	
Monensin, g/ton	256.	250	
Crude Protein, %	13.1	12	
Vitamin A, IU/ lb	59600.	50000	
** IPS-Custom Liquid L50 (7) R400 + Zn, Cu X	01F-03468		
Calcium, %	6.79	7-7.25	
Equiv Crude Protein, %	41.8	49	
Vacuum Moisture, %	33.0	31	
Monensin, g/ton	380.	400	
Potassium, %	2.28	3	DEFICIENT
Crude Protein, %	47.2	50	DEFICIENT
Salt (Sodium X 2.54), %	4.58	3.5-4.5	
Vitamin A, IU/ lb	57800.	50000	
Pasture Liquid 37	01F-03470		
Equiv Crude Protein, %	30.9	32	
Vacuum Moisture, %	41.7	40	
Crude Protein, %	36.3	37	
Salt (Sodium X 2.54), %	5.38	4.5-5.5	
Vitamin A, IU/ lb	40200.	36000	
Soybean Meal 46.5	01F-06263		
Ash, %	6.05	8	
Crude Protein, %	45.7	46.5	

**Darby Creek Ag/Shur-Tone Feeds
Milford Center, OH**

Aureomycin 2G Crumbles	01F-09253		
Chlortetracycline, g/lb	1.84	2	
Crude Protein, %	17.1	9	

**Diamond Pet Foods
Meta, MO**

** Diamond Pet Food	01F-03099		
Ash, %	6.75	6.5	
Fat: Acid Hydrolysis, %	18.8	20	
Oven Moisture, %	6.34	10	
Omega-3 Fatty Acids, %	0.190	0.6	DEFICIENT
Omega-6 Fatty Acids, %	3.73	3.4	
Crude Protein, %	31.7	30	

**Doane Pet Care
Brentwood, TN**

Net Profit Fish Food 32% Surface	01F-03977		
Ash, %	8.64	9	
Crude Protein, %	33.1	32	

**DPC Corp
Joplin, MO**

Pet Lovers	01F-05769		
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	Crude Fat, %	5.26	5	
	Oven Moisture, %	29.1	30	
	Crude Protein, %	17.1	14	
**	Field and Show Horse Treats (made with Apple and Carrots)	01F-10980		
	Crude Fat, %	4.11	5	DEFICIENT
	Crude Protein, %	16.2	10	
	Vitamin A, IU/ lb	20200.	3000	
East-Man Feeds				
Sioux Falls, SD				
	Phase 1 SEW Pig Starter	01F-01000		
	Carbadox, %	0.00522	0.0055	
	Crude Fat, %	11.0	12	
	Crude Protein, %	24.6	23.25	
**	Pig Starter Premix	01F-01002		
	Calcium, %	20.6	22-23	
	Iron, %	1.13	4	DEFICIENT
	Phosphorus, %	8.81	10	DEFICIENT
	Salt (ChlorideX1.65), %	9.94	10-11	
	Salt (Sodium X 2.54), %	9.01	10-11	
	Vitamin A, IU/ lb	272000.	100000	
Energy Savers Unlimited				
Harbor City, CA				
	ESU Reptile Gut Load Insect Food	01F-03069		
	Calcium, %	1.24	1.2-2	
	Oven Moisture, %	7.40	10	
	Crude Protein, %	22.1	20	
Essential Vitality Inc				
Rapid City, SD				
	EquiPhase	01F-10206		
	Crude Fiber, %	18.7	25	
	Crude Protein, %	14.1	14	
Evolved Habitats				
New Roads, LA				
	Deer Co-Cain	01F-03066		
	Sodium, %	42.0	40	
	Block Topper Powder Portion	01F-03067		
	Sodium, %	41.4	40-45	
Evsco Pharmaceuticals				
Buena, NJ				
	Evsco Nutri-Cal	01F-12450		
	Fat: Roese Gottlieb, %	49.5	34.5	
	Linoleic Acid 18:2, mg/6g	1300.	990	
	Linolenic Acid 18:3, mg/6g	155.	138	
	Oven Moisture, %	13.2	14	
	Vitamin A, IU/6g	1370.	1045	
Exclusively Pet Inc.				
Milwaukee, WI				
	Bark Avenue Dog Cookies	01F-03223		
	Crude Fat, %	20.2	18	
	Vacuum Moisture, %	5.07	5	
	Crude Protein, %	4.85	5	
F.M. Brown's Son's Inc.				
Sinking Springs, PA				
	Fruit Bites	01F-10691		
	Oven Moisture, %	8.58	8.5	
Farmers Coop				
Gordon, NE				
	20% Lay Feed	01F-00418		
	Calcium, %	3.43	3.5-4	
	Crude Protein, %	21.3	20	
	17% Dehydrated Alfalfa	01F-03367		
	Crude Fiber, %	28.1	27	
	Crude Protein, %	19.6	17	

Ranchway Hen Scratch		01F-03743			
Crude Protein, %		9.35	9.5		
3 Way Grain Mix		01F-03756			
Crude Protein, %		11.2	9		
** 17% Dehydrated Alfalfa		01F-11497			
Crude Fiber, %		29.7	27		EXCESSIVE
Crude Protein, %		18.0	17		
ProChoice Sweet Mix		01F-11829			
Crude Protein, %		10.9	10		
Farmers Elevator Co.					
Mission Hill, SD					
Custom Corn and Baby Beef		01F-04625			
Monensin, g/ton		22.0	25.4		
Farmland Industries Inc.					
Kansas City, MO					
** Envirolean 2.5 Swine Concentrate		01F-00124			
Calcium, %		3.98	2.5-3.5		EXCESSIVE
Lysine - Total, %		2.91	2.5		
Crude Protein, %		40.5	40		
Salt (Sodium X 2.54), %	1.53	1.6-2.1			
** 50% Meat and Bone Meal		01F-01429			
Calcium, %		7.64	8.7-10.3		DEFICIENT
Crude Fat, %		12.0	8		
Phosphorus, %		4.12	4		
Crude Protein, %		53.9	50		
Rabbit Grower Feed		01F-03455			
Crude Fiber, %		14.6	14-18		
Crude Protein, %		19.3	16		
** Coop Pro-Phos 16 Mineral for Past. Cattle		01F-03578			
Calcium, %		13.5	13-16		
Iodine, ppm		59.0	88		
Phosphorus, %		15.9	16		
Salt (Sodium X 2.54), %		7.42	7-9		
Selenium, ug/g (ppm)		23.6	22		
Vitamin A, IU/ lb		82400.	190000		DEFICIENT
** Stock Block 37		01F-04209			
Calcium, %		2.13	2.4-2.9		
Equiv Crude Protein, %		13.4	16		
Crude Protein, %		40.1	37		
Salt (ChlorideX1.65), %		13.7	15-17		
Salt (Sodium X 2.54), %		13.0	15-17		DEFICIENT
Vitamin A, IU/ lb		14200.	40000		DEFICIENT
Game Bird Starter-Breeder		01F-04210			
Lysine - Total, %		1.49	1.5		
Methionine - Total, %		0.564	0.6		
Crude Protein, %		29.4	28		
Broiler Finisher Complete		01F-04212			
Amprolium, %		0.0108	0.0125		
Lysine - Total, %		0.969	1		
Methionine - Total, %		0.461	0.4		
Crude Protein, %		20.8	19		
Meat and Bone Meal		01F-04559			
Calcium, %		8.04	9-10.2		
Crude Fat, %		10.6	8		
Phosphorus, %		4.14	4.1		
Crude Protein, %		52.6	50		
Hi-Ratio Mineral		01F-04564			
Calcium, %		19.0	19-22.5		
Phosphorus, %		4.01	4		
Salt (Sodium X 2.54), %		18.6	19-22.5		
Vitamin A, IU/ lb		76000.	100000		
Meat and Bone Meal		01F-04740			
Calcium, %		8.32	9-10.2		
Crude Fat, %		11.1	8		
Phosphorus, %		4.41	4.1		
Crude Protein, %		53.4	50		
50% Meat and Bone Meal		01F-05686			
Calcium, %		7.97	9-10.2		

	Crude Fat, %	11.8	8	
	Phosphorus, %	4.18	4.1	
	Crude Protein, %	56.5	50	
Golden Triangle Mineral		01F-06259		
	Calcium, %	11.3	11.5-13.5	
	Phosphorus, %	11.8	12	
	Salt (Sodium X 2.54), %	12.0	11-13	
	Selenium, ug/g (ppm)	17.7	22	
	Vitamin A, IU/ lb	316000.	190000	
Game Bird Starter Feed		01F-06260		
	Lysine - Total, %	1.43	1.5	
	Methionine - Total, %	0.559	0.6	
	Crude Protein, %	28.0	28	
Environomics Swine Feed		01F-06261		
	Calcium, %	3.85	2.5-3.5	
	Lysine - Total, %	2.75	2.5	
	Crude Protein, %	39.6	40	
** Beef Feed Range Cubes 20-6		01F-06262		
	Crude Fiber, %	13.4	11	EXCESSIVE
	Equiv Crude Protein, %	5.24	6	
	Crude Protein, %	20.5	20	
	Vitamin A, IU/ lb	10200.	20000	DEFICIENT
Beef Crumbles AS700		01F-07145		
	Calcium, %	5.55	4-5	
	Crude Fiber, %	20.1	29	
	Chlortetracycline, g/ton	1210.	1400	
	Crude Protein, %	15.7	10	
	Sulfamethazine, g/ton	1260.	1400	
Feedlot 40-20 Concentrate BK-500		01F-10956		
	Calcium, %	7.44	6-7	
	Crude Fiber, %	8.92	17	
	Equiv Crude Protein, %	18.7	20	
	Lasalocid, g/ton	424.	500	
	Potassium, %	2.13	2	
	Crude Protein, %	39.6	40	
	Salt (Sodium X 2.54), %	4.88	4-5	
	Vitamin A, IU/ lb	28400.	30000	
Rabbit Feed		01F-10958		
	Crude Fiber, %	13.3	14-18	
	Crude Protein, %	18.6	17	
Farnam Pet Products				
Phoenix, AZ				
Just Born Milk Replacer for Puppies		02F-00109		
	Ash, %	1.71	2.5	
	Fat: Roese Gottlieb, %	7.09	6.5	
	Oven Moisture, %	76.9	78	
	Crude Protein, %	7.38	6.5	
Federal Beef Processors				
Rapid City, SD				
Meat and Bone Meal		01F-03363		
	Calcium, %	12.6	10-12	
	Crude Fat, %	7.60	6	
	Phosphorus, %	6.39	4.5	
	Crude Protein, %	46.2	46	
Feed Rite				
Winnipeg Manitoba, CN				
** Feed Right Premium 2000 20%		01F-03075		
	Decoquinatate, mg/lb	24.4	22.7	
	Crude Protein, %	18.8	20	DEFICIENT
Fleming Companies Inc.				
Oklahoma City, OK				
Best Yet Multiflavored Dog Biscuits		02F-00196		
	Crude Fat, %	6.87	5	
	Oven Moisture, %	7.38	12	
	Crude Protein, %	23.0	15	

**Friskies Pet Care Products
Glendale, CA**

Alpo Healthy Snacks with Real Beef and Rice	01F-00424	
Crude Fat, %	10.8	6
Oven Moisture, %	5.07	12
Crude Protein, %	28.7	20
Alpo Prime Treats Beef Steaks	01F-00425	
Fat: Acid Hydrolysis, %	5.54	5
Oven Moisture, %	34.1	32
Crude Protein, %	15.9	15
Friskies Alpo Prime Cuts with Chicken for Dogs	01F-03768	
Oven Moisture, %	79.5	82
Crude Protein, %	8.83	8
Friskies Cat Food Sea Captains Choice	01F-11130	
Ash, %	2.57	3.5
Oven Moisture, %	77.6	78
Crude Protein, %	11.5	11
Taurine - Total, %	0.071	0.05
Friskies Cat Beef Flavor Treats	01F-11336	
Fat: Acid Hydrolysis, %	8.79	9
Oven Moisture, %	27.4	34
Crude Protein, %	20.0	19

**Furst-McNess Company
Freeport, IL**

Milk Replacer	01F-04552	
Fat: Roese Gottlieb, %	20.0	20
Crude Protein, %	21.1	20

**Gold Eagle
Eagle Grove, IA**

Stock Block 37	01F-04741	
Calcium, %	2.37	2.5-2.75
Equiv Crude Protein, %	14.7	16
Crude Protein, %	38.3	37
Salt (Sodium X 2.54), %	14.6	15-17
Vitamin A, IU/ lb	34100.	40000

**Golden Acres
Esterville, IA**

Golden Acres Premium Kennel Formula Dog Food	01F-04633	
Fat: Acid Hydrolysis, %	17.7	18
Crude Protein, %	28.1	26
Golden Acres Game Bird Feed	01F-08971	
Amprolium, %	0.0149	0.0175
Crude Fat, %	5.95	6
Lysine - Total, %	1.72	1.65
Methionine - Total, %	0.497	0.55
Crude Protein, %	32.0	30
Golden Acres Rabbit Food	01F-08972	
Crude Fiber, %	14.4	13-18
Crude Protein, %	17.0	16

**Golden Sun Feeds Inc
Esterville, IA**

Golden Lean 40	01F-00137	
Calcium, %	3.51	3-4
Lysine - Total, %	2.99	2.5
Crude Protein, %	42.2	40
Salt (Sodium X 2.54), %	2.28	2-2.5
Golden Sun Hi Plains Breeder Mineral Hi Mag	01F-00138	
Calcium, %	12.6	11-13
Iodine, ppm	62.0	60
Magnesium, %	7.87	8
Phosphorus, %	8.86	9
Selenium, ug/g (ppm)	28.0	30
Vitamin A, IU/ lb	358000.	400000
Broiler Mix	01F-00141	
Amprolium, %	0.0275	0.0325
Calcium, %	2.85	2.5-3
Crude Protein, %	41.7	40
Hi Plains Mineral	01F-00208	
Calcium, %	12.6	11-13

	Iodine, ppm	62.6	60	
	Phosphorus, %	9.07	9	
	Selenium, ug/g (ppm)	22.6	22.2	
	Vitamin A, IU/ lb	433000.	400000	
Dairy Flex Hi-Phos		01F-00209		
	Calcium, %	8.76	7-9	
	Iodine, ppm	151.	60	
	Magnesium, %	3.78	3.5	
	Phosphorus, %	15.4	16	
	Selenium, ug/g (ppm)	20.5	20	
	Vitamin A, IU/ lb	291000.	200000	
Hi Plains Breeder Mineral CTC-3733		01F-00210		
	Calcium, %	12.2	11-13	
	Chlortetracycline, g/ton	3280.	3733	
	Iodine, ppm	71.9	60	
	Phosphorus, %	8.71	9	
	Selenium, ug/g (ppm)	32.3	30	
	Vitamin A, IU/ lb	474000.	400000	
Hi Plains Stocker Mineral		01F-00211		
	Calcium, %	13.4	13-14	
	Iodine, ppm	63.8	60	
	Lasalocid, g/ton	1320.	1440	
	Phosphorus, %	6.93	7	
	Salt (Sodium X 2.54), %	19.1	20-22	
	Selenium, ug/g (ppm)	21.7	22	
	Vitamin A, IU/ lb	235000.	300000	
Hi Plains Breeder Mineral		01F-01009		
	Calcium, %	12.2	11-13	
	Iodine, ppm	82.0	60	
	Phosphorus, %	8.49	9	
	Selenium, ug/g (ppm)	30.2	30	
	Vitamin A, IU/ lb	475000.	400000	
*** No. 1 Conditioner		01F-01010		
	Calcium, %	1.84	2.25-3.25	DEFICIENT
	Iodine, ppm	52.0	30	
Calf Max 13 90 Bov		01F-01011		
	Crude Fiber, %	19.8	22	
	Lasalocid, g/ton	79.7	90	
	Crude Protein, %	13.3	13	
Lamb Starter Dec 22.7		01F-01012		
	Decoquate, %	0.00264	0.0025	
	Crude Protein, %	20.7	20	
28% Range Block 250 Bov		01F-02395		
	Calcium, %	1.83	2-2.5	
	Crude Fiber, %	3.76	10	
	Lasalocid, g/ton	217.	250	
	Crude Protein, %	27.5	28	
	Salt (Sodium X 2.54), %	18.2	18.5-20.5	
	Vitamin A, IU/ lb	73000.	100000	
41% Beef Finisher 500R		01F-02913		
	Calcium, %	7.13	7-8	
	Crude Fiber, %	9.01	10	
	Equiv Crude Protein, %	27.0	29	
	Monensin, g/ton	468.	500	
	Crude Protein, %	40.1	41	
	Vitamin A, IU/ lb	39300.	40000	
1400 Den+		01F-02914		
	Chlortetracycline, g/ton	321.	400	
	Crude Fat, %	6.97	5.5	
	Crude Protein, %	21.6	21	
Golden Sun Feeds Hi-Plains Breeder Mineral Hi-Mag		01F-04631		
	Calcium, %	12.3	11-13	
	Iodine, ppm	66.0	60	
	Magnesium, %	7.72	8	
	Phosphorus, %	8.69	9	
	Selenium, ug/g (ppm)	31.4	30	
	Vitamin A, IU/ lb	384000.	400000	
*** Buff Aide		01F-04632		
	Acid Detergent Fiber, %	12.9	9	EXCESSIVE
	Calcium, %	5.50	5.5-6.5	
	Crude Protein, %	10.7	10	
	Salt (ChlorideX1.65), %	4.42	4.5-5.5	

Sodium, %	9.49	9-10	
** Bettr'n N Birds Cat Food	01F-04634		
Crude Fat, %	7.87	8	
Crude Protein, %	29.1	30	DEFICIENT
Selenium Mineral + E	01F-05401		
Calcium, %	12.6	11-13	
Phosphorus, %	12.1	12	
Salt (Sodium X 2.54), %	20.4	19-22	
Selenium, ug/g (ppm)	17.4	20	
Vitamin A, IU/ lb	193000.	200000	
Broiler Starter	01F-05402		
Amprolium, %	0.0121	0.0125	
Lysine - Total, %	1.10	1.1	
Methionine - Total, %	0.491	0.5	
Crude Protein, %	23.0	22	
Hi-Plains Stocker Mineral	01F-08970		
Calcium, %	13.6	13-14	
Lasalocid, g/ton	1340.	1440	
Phosphorus, %	6.73	7	
Salt (Sodium X 2.54), %	21.0	20-22	
Selenium, ug/g (ppm)	20.1	22	
Vitamin A, IU/ lb	364000.	300000	
Golden Lean 40	01F-09851		
Calcium, %	3.27	3-4	
Lysine - Total, %	2.39	2.5	
Crude Protein, %	40.4	40	
Texturized Horse Feed	01F-10221		
Crude Protein, %	11.8	12	
Golden - Aide CTC 10g	01F-10222		
Chlortetracycline, g/lb	10.9	10	
** High Plains Breeder Mineral CTC 3733	01F-10223		
Calcium, %	10.5	11-13	
Chlortetracycline, g/ton	3690.	3733	
Phosphorus, %	8.40	9	
Selenium, ug/g (ppm)	23.0	30	
Vitamin A, IU/ lb	263000.	400000	DEFICIENT
** Lamb'N Bulk 100 Bov	01F-10955		
Calcium, %	2.08	1.75-2.25	
Crude Fiber, %	14.8	10	EXCESSIVE
Equiv Crude Protein, %	8.33	8	
Lasalocid, g/ton	99.0	100	
Crude Protein, %	26.1	24.5	
Vitamin A, IU/ lb	24800.	20000	
Golden Sun Feeds Inc			
Sioux Falls, SD			
First Formula W/Den 35-CTC 400	01F-05914		
Chlortetracycline, g/ton	283.	400	
Crude Protein, %	23.0	22	
Terra-Aide "OTC" 4G Medicated	01F-06252		
Oxytetracycline, g/lb	3.24	4	
Golden Sun AS 700 4G Medicated	01F-06253		
Calcium, %	6.55	5-6	
Crude Fiber, %	8.67	28	
Chlortetracycline, g/lb	1.60	2	
Crude Protein, %	11.5	5	
Salt (Sodium X 2.54), %	3.71	3.8-4.3	
Sulfamethazine, g/lb	1.82	2	
Gutwein and Co			
Francesville, IN			
Morning Song Wild Bird Food	01F-01426		
Crude Fiber, %	4.86	12	
Oven Moisture, %	12.1	12	
Crude Protein, %	10.3	8	
** Morning Song Wild Finch Food	01F-06560		
Crude Fiber, %	6.69	12	
Crude Fat, %	8.49	10	DEFICIENT
Oven Moisture, %	9.18	12	

	Crude Protein, %	12.0	14	DEFICIENT
** Morning Song Golden Ear Corn		01F-10979		
	Crude Fiber, %	6.47	14	
	Crude Fat, %	3.05	19.5	DEFICIENT
	Oven Moisture, %	13.1	12	
	Crude Protein, %	7.40	13	DEFICIENT
Hartz Mountain Corp				
Secaucus, NJ				
	Canary Bird Seed	01F-02733		
	Crude Fat, %	9.56	10	
	Oven Moisture, %	9.62	10	
	Crude Protein, %	16.7	17	
	Hartz Hamster and Gerbil Diet	01F-05693		
	Alanine - Total, %	0.791	0.7	
	Arginine - Total, %	0.734	0.5	
	Aspartic Acid-Total, %	1.08	0.9	
	Cystine - Total, %	0.273	0.2	
	Glutamic Acid-Total, %	2.33	2	
	Glycine - Total, %	0.531	0.45	
	Histidine - Total, %	0.296	0.3	
	Isoleucine - Total, %	0.452	0.35	
	Leucine - Total, %	1.21	1	
	Lysine - Total, %	0.544	0.35	
	Methionine - Total, %	0.200	0.18	
	Oven Moisture, %	12.0	12	
	Phenylalanine-Total, %	0.583	0.5	
	Proline - Total, %	0.782	0.7	
	Crude Protein, %	12.8	13	
	Serine - Total, %	0.571	0.5	
	Threonine - Total, %	0.410	0.4	
	Tryptophan - Total, %	0.148	0.12	
	Tyrosine - Total, %	0.447	0.2	
	Valine - Total, %	0.563	0.5	
	Rabbit Food	01F-05771		
	Crude Fiber, %	15.7	15	
	Oven Moisture, %	10.5	12	
	Crude Protein, %	18.4	17	
	Goldfish Flakes	01F-10689		
	Oven Moisture, %	4.07	9	
	Crude Protein, %	35.0	34	
	Hamster and Gerbil Food	01F-10690		
	Oven Moisture, %	4.90	12	
	Crude Protein, %	30.6	25.1	
	Hartz Yum Yum Cat Treats	01F-11335		
	Crude Fat, %	9.68	9	
	Oven Moisture, %	26.0	34	
	Crude Protein, %	21.6	20	
	Wardley Brine Shrimp	01F-12454		
	Oven Moisture, %	6.79	8	
	Crude Protein, %	50.1	50	
	** Wardley Tubifex Worms	02F-00110		
	Crude Fat, %	4.95	5	
	Oven Moisture, %	6.23	5	EXCESSIVE
	Crude Protein, %	58.0	50	
	Wardley Pond Ten Floating Food Pellets for allPondfish	02F-00194		
	Oven Moisture, %	7.87	10	
	Crude Protein, %	36.0	33	
Harvest Brands Inc				
Pittsburg, KS				
	** Stock-O-Lass Block	01F-02396		
	Calcium, %	3.62	2-3	EXCESSIVE
	Crude Fiber, %	7.84	10	
	Phosphorus, %	2.51	2	
	Potassium, %	2.31	2	
	Salt (Sodium X 2.54), %	20.6	18.5-22	
	Selenium, ug/g (ppm)	7.86	7.2	
	Total Sugars(Invert), %	13.9	20	DEFICIENT
	Vitamin A, IU/ lb	58200.	50000	
	Sheep and Goat Protein Block	01F-04059		
	Calcium, %	5.46	4-5	

	Crude Protein, %	23.0	18	
	Salt (Sodium X 2.54), %	20.1	17-20	
	Vitamin A, IU/ lb	60100.	50000	
	Kaptin Kid Dried Molasses Product	01F-08449		
	Crude Fiber, %	16.1	20	
	Crude Protein, %	9.48	6	
	Total Sugars(Invert), %	32.6	36	
	Stockade 37% Range Block	01F-10977		
	Calcium, %	5.22	4.5-5.5	
	Equiv Crude Protein, %	17.7	18.5	
	Crude Protein, %	38.7	37	
	Salt (Sodium X 2.54), %	21.7	17-20	
	Vitamin A, IU/ lb	29500.	30000	
Harvest States Feeds				
Gettysburg, SD				
	Custom Sow Cubes	01F-03172		
	Crude Protein, %	14.6	14	
	TN Calf Creep	01F-10209		
	Crude Fiber, %	12.9	18	
	Crude Protein, %	15.1	14	
Harvest States Feeds				
Sioux Falls, SD				
	Dekade Krumbles Medicated	01F-00297		
	Decoquinatate, %	0.124	0.125	
	Million - Ade	01F-05187		
	Crude Fiber, %	10.2	13	
	Crude Protein, %	13.5	10	
	Vitamin A, IU/ lb	946000.	1000000	
	Ratite Grower/Maintenance Ration	01F-06558		
	Crude Protein, %	16.1	15	
	Calf Creep B68	01F-10213		
	Crude Fiber, %	14.4	18	
	Lasalocid, g/ton	65.0	68	
	Crude Protein, %	15.2	14	
	Sweet Chop	01F-10214		
	Crude Fiber, %	6.65	8	
	Crude Fat, %	3.77	2	
	Crude Protein, %	10.1	10	
	Head Start OTC 200	01F-10215		
	Crude Fiber, %	16.9	22	
	Oxytetracycline, g/ton	158.	200	
	Crude Protein, %	12.8	12	
	** Head Start OTC 200 Med.	01F-10717		
	Crude Fiber, %	16.8	22	
	Oxytetracycline, g/ton	130.	200	DEFICIENT
	Crude Protein, %	14.0	12	
	Six in One	01F-10718		
	Calcium, %	3.43	3.5-4.5	
	Lysine - Total, %	2.42	2.75	
	Crude Protein, %	40.1	38	
	Rabbit Crunchies	01F-11330		
	Crude Fiber, %	19.5	19-22	
	Crude Protein, %	18.2	15	
Harvest States Feeds				
Dickinson, ND				
	** Liquid feed	01F-05635		
	Equiv Crude Protein, %	26.7	30	
	Vacuum Moisture, %	34.3	36	
	Potassium, %	2.11	3	DEFICIENT
	Crude Protein, %	32.9	33	
	Vitamin A, IU/ lb	32800.	45000	
Heartland Grain Fuels				
Aberdeen, SD				
	Dried Distillers Grain (DDG)	01F-02840		
	Crude Fiber, %	7.25	11	
	Crude Fat, %	9.92	11	

	Oven Moisture, %	9.99	12.5	
	Crude Protein, %	29.4	28	
Heartland Inc				
Bismarck, ND				
	Aureomycin 4-Gm Crumbles	01F-10714		
	Chlortetracycline, g/lb	3.58	4	
Heinold Feeds				
Kouts, IN				
	Heinold Rabbit Pellets	01F-03096		
	Crude Fiber, %	17.2	17.5	
	Crude Protein, %	16.9	15	
Heinz Pet Products				
Pittsburgh, PA				
	9 Lives Flaked Tuna and Egg Bits in Sauce	01F-03157		
	Ash, %	1.49	3	
	Oven Moisture, %	77.8	78	
	Crude Protein, %	16.7	14	
	Taurine - Total, %	0.266	0.05	
	Pupperoni Nawsomes Beef and Cheese	01F-09277		
	Oven Moisture, %	17.6	25	
	Kibbles and Bits Original Chicken and Beef	02F-00201		
	Fat: Acid Hydrolysis, %	9.56	8-12	
	Oven Moisture, %	14.0	18	
	Crude Protein, %	19.1	19	
Hergert Milling, Inc.				
Scotts Bluff, NE				
	** Wyo 10-10 ZC Mineral	01F-04582		
	Calcium, %	11.2	10-10.7	
	Magnesium, %	2.46	3	
	Phosphorus, %	10.7	10	
	Salt (ChlorideX1.65), %	12.6	10.5	EXCESSIVE
	Salt (Sodium X 2.54), %	11.8	10.5	EXCESSIVE
	Vitamin A, IU/ lb	223000.	250000	
	** Wyo 10-6-10 Hi Mg ZC	01F-04583		
	Calcium, %	10.4	10-10.7	
	Magnesium, %	8.94	10	
	Phosphorus, %	5.69	6	
	Salt (ChlorideX1.65), %	16.5	10.5	EXCESSIVE
	Salt (Sodium X 2.54), %	16.1	10.5	EXCESSIVE
	Vitamin A, IU/ lb	159000.	120000	
	20% Range Cake	01F-04595		
	Crude Protein, %	21.4	20	
Hill's Pet Nutrition				
Topeka, KS				
	Hills Prescription Diet Canine i/d	01F-01293		
	Oven Moisture, %	70.0	74	
	Crude Protein, %	7.44	6.5	
	Science Diet Light Cat Food	01F-03081		
	Crude Fiber, %	6.36	10	
	Fat: Acid Hydrolysis, %	7.85	7	
	Oven Moisture, %	9.52	10	
	Crude Protein, %	33.9	32	
	Hills Science Diet Canine Maintenance Adult Dogs Beef	01F-03763		
	Oven Moisture, %	76.1	78	
	Crude Protein, %	5.39	5.5	
	Science Diet "Liver and Chicken" Cat Food	01F-03965		
	Ash, %	1.32	2	
	Crude Fat, %	6.06	5	
	Oven Moisture, %	75.6	77	
	Crude Protein, %	10.7	9.5	
	Taurine - Total, %	0.084	0.05	
	Science Diet Treats with Real Chicken	01F-08454		
	Fat: Acid Hydrolysis, %	8.82	8.5	
	Oven Moisture, %	7.37	10	
	Crude Protein, %	20.2	19	
	Hills Science Diet Light	01F-08959		
	Crude Fiber, %	12.8	18.5	

Fat: Acid Hydrolysis, %	5.51	6	
Oven Moisture, %	8.88	11	
Crude Protein, %	22.8	14	
Science Diet Canine Growth Chicken Recipe	01F-10975		
Crude Fat, %	7.51	5	
Oven Moisture, %	69.6	74	
Crude Protein, %	7.76	8	
Science Diet Large Breed	01F-12445		
Crude Fat, %	14.8	13	
Oven Moisture, %	8.08	10	
Crude Protein, %	23.7	21.5	
Science Diet Senior	01F-12446		
Crude Fiber, %	0.80	1	
Oven Moisture, %	76.1	78	
Total Fat, %	2.450	2.5	
Crude Protein, %	4.30	4	
Hills Prescription Diet ND	01F-12447		
Crude Fat, %	9.39	8	
Oven Moisture, %	70.0	75	
Crude Protein, %	12.0	9.5	
Science Diet Hairball Control	01F-12456		
Ash, %	5.30	7	
Crude Fat, %	14.8	13	
Oven Moisture, %	8.71	10.5	
Crude Protein, %	31.8	29	
Taurine - Total, %	0.111	0.05	
Hills Science Diet Sensitive Stomach	01F-12890		
Crude Fat, %	13.3	12	
Oven Moisture, %	8.15	10	
Crude Protein, %	23.3	21	
Howard Farmers Coop Assn			
Howard, SD			
Custom formula	01F-05398		
Tylosin, g/ton	59.7	60	
Hubbard Feed Inc.			
Watertown, SD			
Hubbard Lean Start 22-60 CZP250	01F-02907		
Chlortetracycline, g/ton	91.4	100	
Crude Fat, %	5.88	5	
Crude Protein, %	21.1	18.5	
Sulfathiazole, g/ton	110.	100	
** MinTech Cattle Prep Min + Mang, Copper, E Custom Mix	01F-05650		
Calcium, %	12.5	12.4-14.8	
Phosphorus, %	11.2	12	
Salt (Sodium X 2.54), %	12.4	11.2-13.4	
Selenium, ug/g (ppm)	13.2	20	DEFICIENT
Vitamin A, IU/ lb	315000.	300000	
14% Calf Creep B60 Medicated	01F-08795		
Crude Fiber, %	10.2	15	
Lasalocid, g/ton	60.0	60	
Crude Protein, %	15.1	14	
** Custom Mix Complemix	01F-08796		
Acid Detergent Fiber, %	10.2	8.3	EXCESSIVE
Calcium, %	2.49	2-2.5	
Crude Fat, %	10.1	12.3	DEFICIENT
Crude Protein, %	32.7	30.2	
Vitamin A, IU/ lb	17900.	24450	
** Hubbard Hi-Fat Dairy 36%	01F-08797		
Acid Detergent Fiber, %	9.00	10	
Calcium, %	3.17	3-4	
Crude Fat, %	8.88	10	DEFICIENT
Crude Protein, %	38.2	36	
Vitamin A, IU/ lb	24300.	27000	
Hubbard Min-Tech Sweet Phos 15 Mineral	01F-08798		
Calcium, %	13.8	12.3-14.7	
Phosphorus, %	14.3	15	
Salt (Sodium X 2.54), %	8.45	8.9-10.7	
Selenium, ug/g (ppm)	15.8	20	
Vitamin A, IU/ lb	233000.	180000	
Hubbard Express Finisher 60:40 R400 Medicated	01F-08799		

Calcium, %	8.73	9-10.8	
Crude Fiber, %	6.30	10	
Equiv Crude Protein, %	41.0	40	
Monensin, g/ton	420.	400	
Potassium, %	2.79	3	
Crude Protein, %	58.8	60	
Salt (Sodium X 2.54), %	4.82	3.5-4.5	
Selenium, ug/g (ppm)	5.60	5	
Vitamin A, IU/ lb	39800.	45000	
Hubbard Gregory Beef Pak	01F-00128		
Calcium, %	12.3	12-14.1	
Lasalocid, g/ton	1220.	1440	
Phosphorus, %	3.68	4	
Salt (Sodium X 2.54), %	12.4	11.5-13.7	
Selenium, ug/g (ppm)	15.3	16	
Vitamin A, IU/ lb	129000.	150000	
** Min Tech Sweet Phos 12 Mineral	01F-00139		
Calcium, %	13.2	12.3-14.7	
Chlortetracycline, g/ton	16.2	2800	DEFICIENT
Iodine, ppm	62.0	50	
Phosphorus, %	11.1	12	
Salt (Sodium X 2.54), %	12.1	12.1-14.5	
Selenium, ug/g (ppm)	20.9	20	
Vitamin A, IU/ lb	198000.	180000	
Soybean Meal 48%	01F-00205		
Oven Moisture, %	12.0	13	
Crude Protein, %	48.4	48	
Hubbard Lean Start Pig Premix	01F-00206		
Calcium, %	4.98	3.5-4.5	
Crude Fat, %	7.36	8	
Lysine - Total, %	2.22	2.4	
Phosphorus, %	2.66	2.3	
Crude Protein, %	24.4	20	
Salt (Sodium X 2.54), %	3.00	2.4-2.9	
Zinc, ppm	13700.	17118.8	
** MultuM Premier	01F-00207		
Calcium, %	13.9	11.5-13.8	
Iodine, ppm	88.0	88	
Phosphorus, %	15.1	16.3	
Salt (ChlorideX1.65), %	12.1	8.5-10.2	EXCESSIVE
Salt (Sodium X 2.54), %	11.3	8.5-10.2	EXCESSIVE
Selenium, ug/g (ppm)	22.1	26.4	
Vitamin A, IU/ lb	24100.	300000	DEFICIENT
Hubbard Western Sweet	01F-00308		
Crude Protein, %	11.4	9	
** Hubbard Corn Feedlot 40-16 B500	01F-00310		
Calcium, %	4.92	5.4-6.4	
Crude Fiber, %	7.40	14	
Equiv Crude Protein, %	15.0	15	
Lasalocid, g/ton	347.	500	DEFICIENT
Crude Protein, %	39.8	40	
Salt (Sodium X 2.54), %	3.11	2.8-3.8	
Vitamin A, IU/ lb	20400.	44000	DEFICIENT
Hubbard Soybean Meal 46%	01F-00414		
Oven Moisture, %	11.5	13	
Crude Protein, %	47.7	46	
Hubbard 16% Bison Starter	01F-00415		
Crude Fiber, %	5.78	11	
Crude Protein, %	16.8	16	
** Select Custom 50 Feedlot Susp. 4.5 CA R600	01F-02385		
Calcium, %	4.19	4.5-5.5	
Equiv Crude Protein, %	47.4	48	
Vacuum Moisture, %	36.7	37	
Monensin, g/ton	536.	600	
Potassium, %	2.78	3	
Crude Protein, %	53.3	50	
Salt (ChlorideX1.65), %	6.07	4-5	EXCESSIVE
Salt (Sodium X 2.54), %	5.79	4-5	EXCESSIVE
Vitamin A, IU/ lb	48100.	40000	
Hi-Fat Dairy 36%	01F-02386		
Acid Detergent Fiber, %	8.39	7.8	

Calcium, %	3.13	2.9-3.9	
Crude Fat, %	9.62	10	
Crude Protein, %	36.3	36	
Vitamin A, IU/ lb	18100.	22000	
Soybean Meal	01F-02387		
Crude Protein, %	46.5	46.5	
Blood Meal	01F-02388		
Crude Protein, %	87.3	86	
Meat and Bone Meal	01F-02389		
Crude Fat, %	12.5	8	
Crude Protein, %	54.1	50	
Hubbard Lean Cut Plus	01F-02660		
Calcium, %	3.49	3.1-4.1	
Lysine - Total, %	2.63	2.6	
Phosphorus, %	2.08	2	
Crude Protein, %	41.9	41	
Hubbard SuperGain 14	01F-02661		
Crude Fiber, %	8.48	15	
Crude Protein, %	15.5	14	
*## Calf Beginner DC Calf Milk Replacer Medicated	01F-02912		
Decoquinatate, g/ton	46.3	45.4	
Fat: Reese Gottlieb, %	19.5	20	
Crude Protein, %	21.2	20	
Vitamin A, IU/ lb	17300.	30000	DEFICIENT
Hubbard OTC 4 Pellets	01F-02915		
Calcium, %	5.12	4.4-5.4	
Crude Fiber, %	10.6	29	
Oxytetracycline, g/ lb	3.52	4	
Crude Protein, %	12.3	5	
*## Zip Lo-Pro B-1200 003	01F-02916		
Calcium, %	7.46	7.2-8.6	
Crude Fiber, %	10.7	10	
Potassium, %	2.12	2	
Crude Protein, %	10.9	10	
Salt (Sodium X 2.54), %	5.17	4.7-5.7	
Vitamin A, IU/ lb	24400.	80000	DEFICIENT
*## Hubbard Liquid Supplement 30%	01F-02917		
Equiv Crude Protein, %	25.8	22	EXCESSIVE
Oven Moisture, %	41.1	45	
Potassium, %	1.90	3.2	DEFICIENT
Crude Protein, %	31.6	30	
Salt (Chloride X 1.65), %	3.52	3.5-4.5	
Salt (Sodium X 2.54), %	7.82	3.5-4.5	EXCESSIVE
Vitamin A, IU/ lb	55400.	40000	
Pork Builder 40%	01F-03072		
Calcium, %	3.20	2.6-3.6	
Crude Protein, %	41.1	40	
Range and Grow Receiver	01F-03171		
Crude Fiber, %	14.5	19.5	
Crude Protein, %	13.6	12	
Lamb Starter 20% B90	01F-03365		
Crude Fiber, %	5.93	10	
Lasalocid, g/ton	79.6	90	
Crude Protein, %	20.8	20	
Vitamin A, IU/ lb	18700.	20000	
Sweet Lassy 20% Natural Block	01F-03368		
Crude Protein, %	20.6	20	
Salt (Sodium X 2.54), %	19.9	17-20	
Hubbard 16% Hog Grower	01F-03744		
Crude Protein, %	16.1	16	
SuperGain 14 C50 Medicated	01F-03745		
Crude Fiber, %	8.35	15	
Chlortetracycline, g/ton	50.4	50	
Crude Protein, %	17.2	14	
Hubbard 16% Lamb Creep C50	01F-03746		
Chlortetracycline, g/ton	50.6	50	
Crude Protein, %	16.6	16	
Hubbard Beef Tech Sweet Phos 12 Mineral N-SE	01F-03747		

Calcium, %	13.1	12-14.4	
Phosphorus, %	12.9	12	
Salt (Sodium X 2.54), %	13.0	12-14.4	
Hubbard Min-Tech Sweet Mag 14	01F-03754		
Calcium, %	8.13	7.5-9	
Magnesium, %	13.5	14	
Phosphorus, %	4.19	4	
Salt (Sodium X 2.54), %	25.6	21-25.2	
Hubbard Super Gain 14	01F-03760		
Crude Fiber, %	7.95	15	
Crude Protein, %	16.6	14	
Hubbard 30% Cottonseed Cake	01F-03968		
Crude Fiber, %	11.0	12	
Crude Protein, %	30.6	30	
Vitamin A, IU/ lb	28300.	30000	
** N. Plains Sheep Mineral Block	01F-03969		
Calcium, %	11.8	11.7-14	
Iodine, ppm	81.0	100	
Phosphorus, %	10.3	10	
Salt (Sodium X 2.54), %	14.7	14-16.8	
Selenium, ug/g (ppm)	49.2	50	
Vitamin A, IU/ lb	62300.	300000	DEFICIENT
Hubbard Regulator R150 (Medicated)	01F-03971		
Calcium, %	2.51	2.2-2.7	
Crude Fiber, %	6.17	10	
Equiv Crude Protein, %	6.10	10.5	
Crude Fat, %	11.1	10	
Monensin, g/ton	118.	150	
Crude Protein, %	33.2	30	
Salt (Sodium X 2.54), %	4.87	5.5-6.5	
** Perfecta 12-12-12 Mineral Block	01F-03972		
Calcium, %	12.9	12-14.4	
Iodine, ppm	35.0	50	
Phosphorus, %	12.2	12	
Salt (Sodium X 2.54), %	13.4	12-14.4	
Selenium, ug/g (ppm)	11.4	20	DEFICIENT
Vitamin A, IU/ lb	109000.	180000	DEFICIENT
MultuM Cattle Prep - NSE	01F-03973		
Calcium, %	13.2	12-14.4	
Iodine, ppm	165.	185	
Phosphorus, %	12.1	12	
Salt (Sodium X 2.54), %	11.9	12-14.4	
Vitamin A, IU/ lb	324000.	300000	
** Hubbard Min-Tech Cattle Prep Mineral Block Custom Mix	01F-03974		
Calcium, %	12.6	11.8-14.1	
Iodine, ppm	114.	100	
Phosphorus, %	11.5	12	
Salt (Sodium X 2.54), %	3.67	3-4	
Vitamin A, IU/ lb	122000.	300000	DEFICIENT
Hubbard Sheep Nat-Pro Block 24%	01F-03975		
Crude Protein, %	23.8	24	
Salt (Sodium X 2.54), %	11.7	10.7-12.8	
Vitamin A, IU/ lb	64000.	50000	
Hubbard Soybean Meal 46%	01F-03976		
Oven Moisture, %	11.6	13	
Crude Protein, %	47.3	46	
Hubbard Western Sweet	01F-04155		
Crude Protein, %	10.5	9	
Super Gain 14 C50	01F-04584		
Crude Fiber, %	7.85	15	
Chlortetracycline, g/ton	49.1	50	
Crude Protein, %	14.9	14	
Hubbard Soybean Meal 46%	01F-04587		
Crude Protein, %	47.4	46	
536 Tend-R-Leen Ultra Finisher R240 T120	01F-04615		
Acid Detergent Fiber, %	14.0	16	
Calcium, %	6.18	6.5-7.5	
Crude Fiber, %	8.83	13	
Equiv Crude Protein, %	11.2	12	
Monensin, g/ton	264.	240	

Potassium, %	3.56	3.2	
Crude Protein, %	36.1	36	
Sodium, %	1.29	1-1.5	
Tylosin, g/ton	110.	120	
Vitamin A, IU/ lb	29000.	40000	
Lamb Weaner 17% B30	01F-04617		
Lasalocid, g/ton	34.2	30	
Crude Protein, %	16.8	17	
Supergain 14C50	01F-04838		
Crude Fiber, %	8.46	15	
Chlortetracycline, g/ton	48.8	50	
Crude Protein, %	14.7	14	
Stockmaster Sweet Mag 14	01F-04839		
Calcium, %	10.1	9.6-11.5	
Magnesium, %	13.3	14	
Phosphorus, %	3.86	4	
Salt (Sodium X 2.54), %	19.7	18.2-21.8	
Selenium, ug/g (ppm)	17.5	20	
Vitamin A, IU/ lb	56700.	50000	
** Multu M Cattle Prep	01F-04840		
Calcium, %	13.6	12-14.4	
Iodine, ppm	183.	185	
Phosphorus, %	11.9	12	
Salt (Sodium X 2.54), %	11.6	12-14.4	
Selenium, ug/g (ppm)	23.6	35	DEFICIENT
Vitamin A, IU/ lb	336000.	300000	
Custom Supplement #163.1	01F-04841		
Calcium, %	8.17	8.1-9.7	
Magnesium, %	9.86	10.5	
Phosphorus, %	3.43	3.6	
Salt (Sodium X 2.54), %	37.1	31.8-36.8	
Vitamin A, IU/ lb	142000.	72700	
** 20% Hi Plains Cake - Custom Medicated	01F-04842		
Calcium, %	2.21	2-2.5	
Crude Fiber, %	9.88	11	
Lasalocid, g/ton	151.	150	
Crude Protein, %	18.5	20	DEFICIENT
Vitamin A, IU/ lb	20800.	22000	
** Hubbard Min-Tech Sweet Mag 14	01F-05128		
Calcium, %	7.84	7.5-9	
Phosphorus, %	3.36	4	DEFICIENT
Salt (Sodium X 2.54), %	21.7	21-25.2	
Hubbard Supergain 14C50	01F-05131		
Crude Fiber, %	7.90	15	
Chlortetracycline, g/ton	51.5	50	
Crude Protein, %	15.2	14	
Custom Super Lamb 14 B27.2	01F-05135		
Crude Fiber, %	7.41	15	
Lasalocid, g/ton	24.5	27.2	
Crude Protein, %	15.5	14	
Hubbard 14% Stress Relief	01F-05136		
Crude Fiber, %	8.68	10	
Crude Protein, %	15.3	14	
** Custom Super 14 B27.2 and Distillers Grain CM7293	01F-05137		
Crude Fiber, %	8.01	15	
Lasalocid, g/ton	18.2	27.2	DEFICIENT
Crude Protein, %	17.7	14	
** Hubbard 20% Western Cake	01F-05138		
Calcium, %	2.83	2.1-2.6	
Crude Fiber, %	5.87	10	
Equiv Crude Protein, %	6.32	6	
Crude Protein, %	20.9	20	
Vitamin A, IU/ lb	12400.	30000	DEFICIENT
Hubbard Lean Cut Plus	01F-05139		
Calcium, %	3.38	3.1-4.1	
Phosphorus, %	2.09	2	
Crude Protein, %	41.9	41	
Hi-G Lamb 30% Finisher B 150 Medicated	01F-05219		

Calcium, %	3.21	3.5-4.5	
Crude Fiber, %	10.4	12	
Equiv Crude Protein, %	2.33	2.5	
Lasalocid, g/ton	158.	150	
Crude Protein, %	31.1	30	
Salt (Sodium X 2.54), %	5.46	6-7.2	
** Multu M R Perfecta - NSE	01F-05410		
Calcium, %	14.7	12-14.4	
Phosphorus, %	11.5	12	
Salt (Sodium X 2.54), %	11.6	12-14.4	
Vitamin A, IU/ lb	88100.	150000	DEFICIENT
** T-Bone 32	01F-05411		
Calcium, %	3.23	4-5	DEFICIENT
Crude Fiber, %	8.23	14	
Crude Protein, %	34.9	32	
Salt (Sodium X 2.54), %	3.33	3-4	
Vitamin A, IU/ lb	32900.	40000	
Hubbard 16% Rangeland Cake	01F-05413		
Calcium, %	2.54	1.9-2.4	
Crude Fiber, %	7.54	10	
Crude Protein, %	16.4	16	
Vitamin A, IU/ lb	24500.	30000	
Hubbard Super Gain 14	01F-05414		
Crude Fiber, %	9.23	15	
Crude Protein, %	14.9	14	
Hubbard Range-N-Grow Feedlot	01F-05636		
Crude Fiber, %	13.4	19.5	
Chlortetracycline, mg/ lb	57.2	70	
Crude Protein, %	14.4	12	
Sulfamethazine, mg/lb	68.8	70	
** Hubbard Hi-Weigh 45 Swine Concentrate	01F-05640		
Calcium, %	6.63	5.8-6.9	
Phosphorus, %	2.61	2.7	
Crude Protein, %	43.0	45	DEFICIENT
Mol-Mix Prime Liquid Feed Supplement #634	01F-06256		
Equiv Crude Protein, %	21.1	25	
Vacuum Moisture, %	37.1	34	
Phosphorus, %	0.933	1	
Potassium, %	2.35	2	
Crude Protein, %	32.2	32	
Total Sugars(Invert), %	29.6	31	
Vitamin A, IU/ lb	32100.	40000	
Hubbard Western Sweet	01F-08587		
Crude Protein, %	10.2	9	
** MultuM Legacy NSE	01F-08589		
Calcium, %	19.8	17-20.4	
Phosphorus, %	8.65	9	
Salt (Sodium X 2.54), %	15.5	15-18	
Vitamin A, IU/ lb	23700.	150000	DEFICIENT
Soybean Meal 46%	01F-08691		
Oven Moisture, %	11.1	13	
Crude Protein, %	47.4	46	
T-Bone 40/22 M 4b500	01F-08695		
Calcium, %	6.12	6.5-7.5	
Crude Fiber, %	9.95	14	
Equiv Crude Protein, %	20.1	22	
Lasalocid, g/ton	483.	500	
Potassium, %	2.18	2	
Crude Protein, %	39.9	40	
Salt (Sodium X 2.54), %	4.06	4-5	
Vitamin A, IU/ lb	28800.	40000	
** Hubbard Purple Ribbon Mineral Pellets	01F-09528		
Calcium, %	9.67	10-12	
Phosphorus, %	9.65	10	
Salt (Sodium X 2.54), %	13.4	12.5-15	
Selenium, ug/g (ppm)	31.7	35	
Vitamin A, IU/ lb	30000.	100000	DEFICIENT
** Zip Northern Plains Super	01F-09529		
Calcium, %	15.1	13-15.1	

Phosphorus, %	15.6	15	
Salt (Sodium X 2.54), %	10.1	9.5-11.4	
Selenium, ug/g (ppm)	29.9	35	
Vitamin A, IU/ lb	1670.	100000	DEFICIENT
** Lean Start 3MX 50	01F-09838		
Carbadox, g/ton	23.2	50	DEFICIENT
Crude Fat, %	5.14	5	
Lysine - Total, %	0.966	1.4	DEFICIENT
Crude Protein, %	16.4	19.5	DEFICIENT
** Calf Crunch 18%	01F-09839		
Acid Detergent Fiber, %	8.05	7	EXCESSIVE
Crude Protein, %	22.7	18	
One Step Calf Starter D22.7	01F-09840		
Acid Detergent Fiber, %	13.6	17	
Crude Fiber, %	10.2	15	
Decoquinat, mg/lb	22.6	22.7	
Crude Protein, %	21.3	20	
** Express Grower 40:16 B500	01F-09842		
Calcium, %	5.76	5.5-6.5	
Crude Fiber, %	7.11	15	
Equiv Crude Protein, %	15.6	16	
Lasalocid, g/ton	391.	500	
Crude Protein, %	40.1	40	
Salt (Sodium X 2.54), %	4.33	3.5-4.5	
Vitamin A, IU/ lb	22000.	45000	DEFICIENT
14% Calf Creep B60	01F-09846		
Crude Fiber, %	11.0	15	
Lasalocid, g/ton	63.4	60	
Crude Protein, %	16.3	14	
Min Tech Sweet Phos 12	01F-09847		
Calcium, %	12.6	12.3-14.7	
Phosphorus, %	11.3	12	
Salt (Sodium X 2.54), %	12.8	12.1-14.5	
Selenium, ug/g (ppm)	17.3	20	
Vitamin A, IU/ lb	153000.	180000	
Sweet Bits D22.7	01F-09849		
Acid Detergent Fiber, %	7.24	10	
Decoquinat, %	0.00544	0.005	
Crude Protein, %	20.3	18	
Multu Mineral Cattle Prep	01F-10719		
Calcium, %	13.9	12-14.4	
Phosphorus, %	11.4	12	
Salt (Sodium X 2.54), %	13.6	12-14.4	
Selenium, ug/g (ppm)	34.9	35	
Vitamin A, IU/ lb	642000.	300000	
Range-N-Grower AS70	01F-10720		
Crude Fiber, %	12.3	19.5	
Chlortetracycline, mg/ lb	55.8	70	
Crude Protein, %	14.4	12	
Sulfamethazine, mg/lb	75.2	70	
Super Lamb 14B60	01F-10721		
Crude Fiber, %	7.60	15	
Lasalocid, g/ton	61.2	60	
Crude Protein, %	15.3	14	
** Prime Cattle Supplement	01F-10954		
Calcium, %	4.76	4.4-5.4	
Crude Fiber, %	9.31	10	
Crude Protein, %	34.4	34	
Vitamin A, IU/ lb	20000.	40000	DEFICIENT
** Calf Beginner - NT	01F-10957		
Fat: Roese Gottlieb, %	19.8	20	
Oxytetracycline, g/ton	177.	200	
Crude Protein, %	20.9	20	
Vitamin A, IU/ lb	18700.	30000	DEFICIENT
Lean Start Pack	01F-10962		
Crude Fat, %	5.45	5.7	
Lysine - Total, %	2.57	2.9	
Crude Protein, %	36.6	35	

Tradition Cat Stars	01F-10963		
Fat: Acid Hydrolysis, %	11.4	11	
Oven Moisture, %	7.59	12	
Crude Protein, %	33.4	31.5	
Taurine - Total, %	0.111	0.1	
Lamb Grow 40% B166	01F-10964		
Calcium, %	3.65	3.5-4.5	
Lasalocid, g/ton	160.	166	
Crude Protein, %	42.1	40	
Salt (Sodium X 2.54), %	3.15	3.5-4.5	
Tradition Homestead 17% Egg Layer Granules	01F-11331		
Calcium, %	3.43	2.9-3.9	
Crude Protein, %	17.1	17	
Super Phos 15 Mineral	01F-11332		
Calcium, %	14.3	13-15.1	
Phosphorus, %	15.4	15	
Salt (Sodium X 2.54), %	10.2	9.5-11.4	
T-Bone 32	01F-11333		
Calcium, %	4.25	4	
Crude Fiber, %	7.42	14	
Crude Protein, %	31.3	32	
Hubbard 20% Rangeland Cake	01F-11502		
Calcium, %	2.17	1.9-2.4	
Crude Fiber, %	7.76	10	
Crude Protein, %	19.8	20	
Vitamin A, IU/ lb	26400.	30000	
** Pro Gold 12 PHF Texturized Phase 3	01F-11823		
Crude Fat, %	4.21	5	DEFICIENT
Crude Protein, %	14.8	12	
Hubbard 16% Hog Grower	01F-11824		
Crude Protein, %	16.1	16	
Supergain 14 C50	01F-11828		
Crude Fiber, %	8.44	15	
Chlortetracycline, g/ton	51.2	50	
Crude Protein, %	15.2	14	
Tradition Complete Horse Power Cube	01F-11830		
Crude Fiber, %	14.4	20	
Crude Protein, %	13.7	12.5	
Hubbard Feeds, Inc.			
Rapid City, SD			
Hubbard 30% Cottonseed	01F-00309		
Calcium, %	1.56	1.25-2.25	
Crude Fiber, %	11.3	12	
Crude Protein, %	29.2	30	
Salt (Sodium X 2.54), %	1.58	1-2	
Vitamin A, IU/ lb	25200.	30000	
HyVee Inc.			
DesMoines, IA			
Hy-Vee Wild Bird Food	01F-12711		
Crude Fiber, %	4.75	10	
Oven Moisture, %	11.3	12	
Crude Protein, %	11.5	9	
International Nutrition			
Omaha, NE			
Mecadox 2.5 Type B	01F-05910		
Carbodox, g/lb	2.42	2.5	
J&R Distributing			
Lake Norden, SD			
** J and R 14% Mineral L/V	01F-02918		
Calcium, %	12.2	13.5-14.5	
Magnesium, %	3.82	3	
Phosphorus, %	13.2	14	
Potassium, %	2.40	2	
Salt (Sodium X 2.54), %	10.1	9.25-9.75	

Selenium, %	1.00	0.003	
Vitamin A, IU/ lb	5950.	120000	DEFICIENT
J and R Hi-Cal 26 Feedlot Mineral	01F-02919		
Calcium, %	25.4	25-27	
Iodine, ppm	23.0	10	
Potassium, %	2.12	2	
Salt (Sodium X 2.54), %	11.7	12.5-13.5	
Selenium, ug/g (ppm)	6.59	6.6	
Vitamin A, IU/ lb	50000.	35000	
## Champion Sweet Calf Starter 18% Medicated	01F-03076		
Decoquinat, g/ton	46.8	50	
Crude Protein, %	15.9	18	DEFICIENT
Hi Phos 16% Mineral	01F-03077		
Phosphorus, %	17.6	16	
Salt (ChlorideX1.65), %	6.98	6.5	
Salt (Sodium X 2.54), %	35.6	6.5	EXCESSIVE
Vitamin A, IU/ lb	148000.	200000	
Dakota Breeder Mineral	01F-03078		
Calcium, %	13.9	13	
Phosphorus, %	10.6	10	
Salt (Sodium X 2.54), %	9.27	9.5	
Vitamin A, IU/ lb	206000.	240000	
15-7 Livestock Mineral	01F-03079		
Calcium, %	12.8	13-15	
Phosphorus, %	7.33	7	
Salt (Sodium X 2.54), %	9.99	9-10	
Vitamin A, IU/ lb	159000.	120000	
J & R 45/66 Feedlot Custom	01F-04892		
Equiv Crude Protein, %	35.5	37	
Vacuum Moisture, %	34.4	34	
Potassium, %	2.48	2.5	
Crude Protein, %	46.6	45	
Vitamin A, IU/ lb	36200.	40000	
## J & R Beef Starter Concentrate	01F-04895		
Calcium, %	2.57	2.5-3.25	
Crude Fiber, %	2.47	12	
Phosphorus, %	1.83	2	
Crude Protein, %	30.1	32	DEFICIENT
Vitamin A, IU/ lb	35200.	50000	
J & R Aureo Pellets 24G	01F-04896		
Crude Fiber, %	13.3	16	
Chlortetracycline, g/ton	46200.	48000	
Crude Protein, %	20.9	10	
## J & R 15-7 Livestock Mineral	01F-04897		
Calcium, %	12.9	13-15	
Magnesium, %	1.03	4	DEFICIENT
Phosphorus, %	7.56	7	
Salt (Sodium X 2.54), %	9.28	9-10	
Selenium, %	0.0012	0.001	
Vitamin A, IU/ lb	173000.	120000	
J & R Pig Starter	01F-04939		
Calcium, %	2.89	2.5-3.5	
Crude Fat, %	8.99	8	
Lysine - Total, %	3.32	3.5	
Crude Protein, %	44.8	38	
J & R Swine Finisher	01F-04940		
Calcium, %	2.52	2.7-3.4	
Lysine - Total, %	3.21	3.3	
Crude Protein, %	45.8	41	
J and R Pheasant Breeder	01F-06250		
Calcium, %	2.64	2.9-2.9	
Crude Protein, %	17.4	17.1	
## J and R 38% Calf Grower B450 Medicated	01F-06251		
Calcium, %	2.87	2.5-3	
Lasalocid, g/ton	314.	450	DEFICIENT
Crude Protein, %	39.3	38	
Vitamin A, IU/ lb	35200.	75000	DEFICIENT
## J & R Phase 2 Pig Starter	01F-10138		

	Carbadox, g/ton	45.8	50	
	Crude Fat, %	4.93	6	DEFICIENT
	Crude Protein, %	22.4	21	
**	Champion Sweet Calf Starter 18%	01F-10139		
	Decoquinatate, g/ton	43.9	50	
	Crude Protein, %	16.1	18	DEFICIENT
**	J and R Hy-Lean Beef Finisher	01F-10226		
	Calcium, %	7.18	7.5-8	
	Crude Fiber, %	5.41	10	
	Equiv Crude Protein, %	13.8	15.5	
	Monensin, g/ton	293.	320	
	Crude Protein, %	40.0	41	
	Salt (Sodium X 2.54), %	3.85	3.9-4.3	
	Tylosin, g/ton	89.8	130	DEFICIENT
	J & R 14/14 Premier Mineral	01F-10227		
	Calcium, %	12.1	12-14	
	Phosphorus, %	14.4	14	
	Salt (Sodium X 2.54), %	9.42	9.5-10.5	
	Selenium, %	0.0038	0.003	
	Vitamin A, IU/ lb	284000.	200000	
John Morrell & Company				
Sioux City, IA				
	Porcine 50% Meat and Bone Meal	01F-03165		
	Calcium, %	8.32	8.4-10	
	Crude Fat, %	11.9	6	
	Phosphorus, %	4.55	4	
	Crude Protein, %	53.7	50	
K-Mart Corporation				
Troy, MI				
	American Fare Snack Sticks - Dog Treats Beef	01F-03222		
	Crude Fat, %	6.17	5	
	Oven Moisture, %	27.7	27	
	Crude Protein, %	24.2	24	
	American Fare Training Biscuits	01F-03224		
	Fat: Acid Hydrolysis, %	7.55	7	
	Oven Moisture, %	6.55	12	
	Crude Protein, %	22.8	20	
	American Fare Wavy Bacon Dog Treats	01F-03225		
	Oven Moisture, %	29.6	30	
	Crude Protein, %	16.7	14	
	American Fare Dog Food With Chicken	01F-09522		
	Crude Fat, %	6.17	6	
	Oven Moisture, %	75.5	78	
	Crude Protein, %	8.67	8	
Kal Kan Foods Inc				
Vernon, CA				
	Whiskas Home Style Favorites w/ Beef in Gravy	01F-03158		
	Ash, %	2.92	3	
	Oven Moisture, %	81.2	82	
	Crude Protein, %	9.28	8	
	Taurine - Total, %	0.063	0.05	
	Pedigree Little Champions Casserole Dinner	01F-03159		
	Oven Moisture, %	81.1	82	
	Crude Protein, %	8.96	8	
	Pedigree Multi Biscuit - Dogs	01F-03764		
	Fat: Acid Hydrolysis, %	7.20	6	
	Linoleic Acid 18:2, %	2.40	1.5	
	Oven Moisture, %	7.26	12	
	Crude Protein, %	15.7	15	
	Whiskas Beef and Chicken	01F-08782		
	Ash, %	1.89	3	
	Oven Moisture, %	82.8	82	
	Crude Protein, %	8.52	8	
	Taurine - Total, %	0.047	0.05	
	Ceasar Select Dinners	01F-09525		
	Oven Moisture, %	80.8	82	
	Crude Protein, %	11.1	8	
	Pedigree Little Champions Chunks in Gravy w/chicken	01F-11127		
	Oven Moisture, %	81.3	82	
	Crude Protein, %	8.01	8	

**Kay Dee Feed Company
Sioux City, IA**

A'n'Dee	01F-00204		
Calcium, %	9.72	8-9.6	
Crude Fiber, %	2.85	11	
Crude Protein, %	10.4	10	
Salt (Sodium X 2.54), %	1.05	1-2	
Vitamin A, IU/ lb	2030000.	2000000	
Kaydets 8.2 w/CTC Medicated	01F-00416		
Calcium, %	20.6	19-22.55	
Chlortetracycline, g/lb	1.45	1.4	
Phosphorus, %	8.19	8.2	
Salt (Sodium X 2.54), %	8.86	9-10.8	
Selenium, ug/g (ppm)	25.4	28	
Vitamin A, IU/ lb	202000.	150000	
Candy Apple Deer Block	01F-03104		
Crude Fiber, %	8.08	12	
Iodine, ppm	78.0	35	
Salt (ChlorideX1.65), %	41.2	45-50	
Salt (Sodium X 2.54), %	41.4	45-50	
Total Sugars(Invert), %	18.9	16	
K32 Kay Dee 32% "All Natural" Protein Block	01F-03167		
Calcium, %	1.84	1.5-2	
Iodine, ppm	140.	18	
Crude Protein, %	35.2	32	
Salt (Sodium X 2.54), %	15.1	16-19.2	
Vitamin A, IU/ lb	59200.	60000	
Super Ranger Kaydets	01F-03364		
Calcium, %	14.4	12.5-15	
Iodine, ppm	115.	100	
Phosphorus, %	11.3	12	
Salt (Sodium X 2.54), %	15.2	15-18	
Selenium, ug/g (ppm)	37.8	28	
Vitamin A, IU/ lb	528000.	350000	
Kaydee Range Grazer 20	01F-05133		
Crude Protein, %	20.5	20	
Salt (Sodium X 2.54), %	15.4	14.25-17	
Vitamin A, IU/ lb	38500.	20000	
A'N'Dee Feed	01F-06264		
Calcium, %	9.43	8-9.6	
Crude Fiber, %	2.68	11	
Crude Protein, %	10.8	10	
Vitamin A, IU/ lb	2530000.	2000000	
*## Kay Dee 12	01F-08592		
Calcium, %	14.9	16-19.2	
Phosphorus, %	9.98	12	DEFICIENT
Salt (ChlorideX1.65), %	21.9	15-18	EXCESSIVE
Salt (Sodium X 2.54), %	21.6	15-18	EXCESSIVE
Selenium, ug/g (ppm)	24.9	28	
Vitamin A, IU/ lb	111000.	220000	DEFICIENT
Sheep Mineral	01F-10715		
Calcium, %	20.8	20-24	
Phosphorus, %	7.46	8	
Salt (Sodium X 2.54), %	17.3	15-18	
Vitamin A, IU/ lb	362000.	200000	
Super Ranger Kaydets 12	01F-11499		
Calcium, %	15.2	12.5-15	
Phosphorus, %	12.0	12	
Salt (Sodium X 2.54), %	19.6	15-18	
Vitamin A, IU/ lb	303000.	250000	
*## Super Ranger Mineral	01F-12319		
Calcium, %	15.0	12.5-15	
Chlortetracycline, g/ton	1490.	2800	DEFICIENT
Phosphorus, %	11.4	12	
Salt (Sodium X 2.54), %	14.8	15-18	
Selenium, ug/g (ppm)	23.9	28	
Vitamin A, IU/ lb	158000.	250000	DEFICIENT
Kaylor Grain Co. Kaylor, SD			
Custom Gestation Ration	01F-05241		
Tylosin, g/ton	64.0	80	

**Kaytee Products Inc
Chilton, WI**

Kaytee Forti-Diet Canary Food	01F-03071		
Crude Fat, %	13.1	14	
Oven Moisture, %	5.36	12	
Crude Protein, %	19.7	17	
** Fruit & Veggie Fortified Fruit & Vegetable Treat for Parakeets	01F-03089		
Crude Fiber, %	5.69	10	
Crude Fat, %	10.1	12	DEFICIENT
Oven Moisture, %	8.54	12	
Crude Protein, %	14.8	15	
Kaytee - Wild Finches	01F-03681		
Crude Fiber, %	7.92	12	
Crude Fat, %	29.2	15	
Oven Moisture, %	6.72	12	
Crude Protein, %	18.1	15	
Kaytee Wild Bird Food Fortified with Vitamin	01F-05692		
Crude Fiber, %	4.14	12	
Crude Fat, %	7.76	5	
Oven Moisture, %	11.0	12	
Crude Protein, %	10.5	10	
Wild Bird Food	01F-10140		
Crude Fiber, %	11.0	12	
Crude Fat, %	8.08	5	
Oven Moisture, %	10.2	12	
Crude Protein, %	10.3	10	
Supreme Natural Blend Finch Food	01F-12712		
Crude Fiber, %	7.02	10	
Oven Moisture, %	9.91	12	
Crude Protein, %	13.9	12	
KayTee Fiesta	02F-00111		
Crude Fiber, %	6.24	10	
Crude Fat, %	13.8	6	
Oven Moisture, %	8.25	12	
Crude Protein, %	16.2	15	
** KayTee Forti-Diet Rabbit Lapin	02F-00200		
Crude Fiber, %	10.9	14-18	
Oven Moisture, %	9.37	12	
Crude Protein, %	19.8	17	

**Kent Feeds Inc
Muscatine, IA**

Swine Key Mix	01F-03230		
Calcium, %	14.2	14.2-17	
Crude Fat, %	6.59	5	
Phosphorus, %	6.66	6.6	
Crude Protein, %	25.6	26	
Salt (Chloride X 1.65), %	5.97	6.3-7.5	
Salt (Sodium X 2.54), %	7.24	6.3-7.5	
Vitamin A, IU/ lb	59600.	72000	
** NRB 250R-90T Medicated	01F-03231		
Calcium, %	4.13	4-5	
Crude Fiber, %	6.17	16	
Equiv Crude Protein, %	0.44	18	
Monensin, g/ton	2.20	250	DEFICIENT
Potassium, %	1.37	2	DEFICIENT
Crude Protein, %	32.4	30	
Sodium, %	0.83	1.3-1.8	DEFICIENT
Tylosin, g/ton	8.24	90	DEFICIENT
Kent: CTC Western Breeder AFC Medicated	01F-03232		
Calcium, %	13.2	12-14.4	
Chlortetracycline, g/ lb	1.85	1.87	
Phosphorus, %	8.27	8.5	
Selenium, ug/g (ppm)	35.5	33	
Vitamin A, IU/ lb	495000.	400000	
ADE Mineral	01F-03233		
Calcium, %	14.6	15-18	
Phosphorus, %	8.05	8	
Salt (Sodium X 2.54), %	19.4	17-20.4	
Selenium, ug/g (ppm)	27.2	28	
Vitamin A, IU/ lb	434000.	400000	

Golden Nugget Concentrate	01F-03234		
Calcium, %	1.65	1.65-2.15	
Lysine - Total, %	3.73	3.6	
Crude Protein, %	41.1	40	
No Roughage Calf 100R	01F-03235		
Calcium, %	1.93	1.8-2.3	
Crude Fiber, %	12.4	16	
Monensin, g/ton	88.7	100	
Crude Protein, %	28.1	27	
Vitamin A, IU/ lb	24300.	25000	
Baby Beef 44 500R	01F-04626		
Calcium, %	6.14	6-7.2	
Equiv Crude Protein, %	16.8	18	
Monensin, g/ton	456.	500	
Crude Protein, %	44.3	44	
Vitamin A, IU/ lb	37900.	40000	
ADE Mineral	01F-04628		
Calcium, %	15.5	15-18	
Phosphorus, %	8.66	8	
Salt (Sodium X 2.54), %	18.6	17-20.4	
Selenium, ug/g (ppm)	25.9	28	
Vitamin A, IU/ lb	472000.	400000	
GM Base Supplement	01F-04629		
Calcium, %	3.54	3-4	
Lysine - Total, %	2.37	2.45	
Crude Protein, %	40.8	40	
*** Kent Liq-N-Gain 32	01F-04635		
Equiv Crude Protein, %	21.7	25	
Vacuum Moisture, %	40.9	40	
Potassium, %	2.94	2.4	
Crude Protein, %	31.5	32	
Total Sugars(Invert), %	17.0	21	DEFICIENT
Vitamin A, IU/ lb	39700.	30000	
20% Pig Nuggets ASP250	01F-04637		
Chlortetracycline, g/ton	79.2	100	
Crude Fat, %	5.91	6	
Crude Protein, %	21.1	20	
Sulfamethazine, %	0.0113	0.011	
Baby Beef 44 500B	01F-04638		
Calcium, %	6.67	6-7.2	
Equiv Crude Protein, %	17.0	18	
Lasalocid, g/ton	492.	500	
Crude Protein, %	43.9	44	
Vitamin A, IU/ lb	41100.	40000	
Chick-Go 20	01F-04639		
Amprolium, %	0.0118	0.0125	
Lysine - Total, %	1.00	1.05	
Methionine - Total, %	0.427	0.42	
Crude Protein, %	20.8	20	
High Protein 27 Dog Food	01F-05095		
Fat: Acid Hydrolysis, %	9.81	10	
Oven Moisture, %	6.68	12	
Crude Protein, %	28.7	27	
Kit and Cat Cat Food	01F-05096		
Crude Fat, %	9.37	8	
Oven Moisture, %	7.93	12	
Crude Protein, %	35.3	31	
Western Range Cow Mineral	01F-08692		
Calcium, %	13.0	12-14.4	
Phosphorus, %	8.08	8.5	
Selenium, ug/g (ppm)	23.9	25	
Vitamin A, IU/ lb	445000.	400000	
Active Starter 18 DQ45	01F-08693		
Acid Detergent Fiber, %	7.07	9	
Decoquinatate, %	0.00412	0.00496	
Crude Protein, %	19.7	18	
*** Fescue Pasture CTC Mineral	01F-08694		

Calcium, %	16.4	15-18	
Chlortetracycline, g/lb	1.74	1.87	
Magnesium, %	4.15	4	
Phosphorus, %	7.15	8	DEFICIENT
Salt (Sodium X 2.54), %	16.0	14-16.5	
Selenium, ug/g (ppm)	30.8	28	
Vitamin A, IU/ lb	470000.	400000	
Cattle 32AN 400B	01F-08696		
Calcium, %	4.35	4-5	
Crude Fiber, %	10.8	14	
Lasalocid, g/ton	349.	400	
Crude Protein, %	31.5	32	
Vitamin A, IU/ lb	24100.	25000	
*# * Ulti-Lact 369 NT	01F-09485		
Calcium, %	3.54	2.7-3.7	
Crude Fat, %	9.20	9	
Lysine - Total, %	1.85	2.5	DEFICIENT
Oxytetracycline, g/ton	409.	480	
Phosphorus, %	2.05	2	
Crude Protein, %	35.6	36	
First Rate Show Lamb Diet 18DQ	01F-09486		
Decoquinatate, %	0.00174	0.00198	
Equiv Crude Protein, %	1.00	1.3	
Crude Protein, %	18.7	18	
Provider 38 Dairy Feed	01F-09487		
Acid Detergent Fiber, %	6.35	8	
Calcium, %	2.92	2.3-2.8	
Crude Protein, %	37.8	38	
Vitamin A, IU/ lb	24100.	20000	
Kyorin Co. LTD			
Himegi Japan,			
Hikari Cichild Gold Fish Food	01F-03090		
Ash, %	12.3	12	
Oven Moisture, %	7.36	9	
Crude Protein, %	45.4	40	
L/M Animal Farms			
Pleasant Plain, OH			
L/M Alfalfa Hay - Kob	01F-10978		
Crude Fiber, %	14.9	30	
Oven Moisture, %	5.99	15	
Crude Protein, %	24.9	17	
Vita-Vittles Gold for Chichillas	01F-12887		
Crude Fiber, %	13.1	18	
Oven Moisture, %	9.88	12	
Crude Protein, %	18.2	17	
Land O Lakes Inc.			
Fort Dodge, IA			
Land O Lakes CTC 4G	01F-00289		
Crude Fiber, %	11.7	15	
Chlortetracycline, g/lb	4.00	4	
Crude Protein, %	16.4	12.5	
Vitamin A, IU/ lb	90300.	100000	
Land O Lakes Triple 12 Cattle Min	01F-00290		
Calcium, %	12.3	12-14	
Iodine, ppm	102.	113	
Magnesium, %	2.73	2.75	
Phosphorus, %	11.8	12	
Salt (Sodium X 2.54), %	12.4	12-14	
Vitamin A, IU/ lb	213000.	150000	
# Ranger 20N Block	01F-00295		
Crude Protein, %	19.5	20	
Salt (ChlorideX1.65), %	9.11	11-13	DEFICIENT
Salt (Sodium X 2.54), %	9.32	11-13	DEFICIENT
Vitamin A, IU/ lb	15500.	20000	
# Instant Maxi Care NT Medicated	01F-00296		
Fat: Roese Gottlieb, %	19.5	20	
Oxytetracycline, g/ton	98.1	125	
Crude Protein, %	21.8	22	
Vitamin A, IU/ lb	3480.	20000	DEFICIENT

Custom 6-6 Cattle Min. R1200	01F-00299		
Calcium, %	5.81	6	
Monensin, g/ton	1140.	1200	
Phosphorus, %	6.09	6	
Crude Protein, %	5.98	6	
Salt (Sodium X 2.54), %	36.6	40	
12-6 Cattle Mineral	01F-00300		
Calcium, %	10.4	10-12	
Iodine, ppm	114.	113	
Magnesium, %	2.52	2.5	
Phosphorus, %	6.67	6	
Salt (Sodium X 2.54), %	17.0	18-20	
Vitamin A, IU/ lb	169000.	150000	
Ranger 20N Pellets	01F-00301		
Crude Fiber, %	9.44	12	
Crude Protein, %	21.2	20	
Salt (Sodium X 2.54), %	1.58	1.5-2	
Vitamin A, IU/ lb	22000.	20000	
TM Crumbles - Medicated	01F-00451		
Crude Fiber, %	9.83	36	
Oxytetracycline, g/ lb	2.91	4	
Crude Protein, %	16.1	7	
Vitamin A, IU/ lb	176000.	200000	
** High Molasses Calf Starter	01F-00454		
Acid Detergent Fiber, %	4.55	5.5	
Decoquinat, %	0.00300	0.005	DEFICIENT
Crude Protein, %	16.5	18	DEFICIENT
Vitamin A, IU/ lb	13700.	20000	DEFICIENT
Ranger 20N	01F-00455		
Crude Fiber, %	8.33	12	
Crude Protein, %	20.3	20	
Salt (Sodium X 2.54), %	1.28	1.5-2	
Vitamin A, IU/ lb	14900.	20000	
** Feedlot Mix Bov 4000	01F-00456		
Crude Fiber, %	24.8	32.5	
Lasalocid, g/ton	2140.	4000	DEFICIENT
Crude Protein, %	12.5	8	
Dairy 35 Hi Fat	01F-01015		
Acid Detergent Fiber, %	6.28	10.5	
Calcium, %	1.58	1.6-2.1	
Crude Fat, %	9.48	8.5	
Crude Protein, %	35.9	35	
Vitamin A, IU/ lb	20000.	25000	
Dairy Supreme Premix	01F-01016		
Calcium, %	16.4	14.5-17.4	
Iodine, ppm	58.5	85	
Magnesium, %	2.47	3	
Phosphorus, %	13.7	14	
Selenium, ug/g (ppm)	26.6	30	
Sulfur, %	2.44	1.5	
Vitamin A, IU/ lb	579000.	400000	
Future Cow, Starter Bov	01F-01017		
Acid Detergent Fiber, %	7.61	9.5	
Lasalocid, g/ton	91.1	90	
Crude Protein, %	19.0	18	
Vitamin A, IU/ lb	20800.	20000	
** Dakotaland 38-13 Grower R300	01F-01427		
Calcium, %	3.41	4-5	DEFICIENT
Crude Fiber, %	9.92	15	
Equiv Crude Protein, %	13.1	13	
Monensin, g/ton	248.	300	
Crude Protein, %	38.8	38	
Salt (Sodium X 2.54), %	3.38	3.5-4	
Vitamin A, IU/ lb	36700.	40000	
** Corn Distillers Dried Grain	01F-01430		
Crude Fiber, %	6.52	10	
Crude Fat, %	8.65	9	
Oven Moisture, %	10.8	12	
Crude Protein, %	25.1	27	DEFICIENT
Country Choice Egg Maker BMD	01F-03102		

	Calcium, %	3.28	3.1	
	Crude Protein, %	18.0	18	
** Lamb Concentrate 32 B-100		01F-04211		
	Calcium, %	3.00	3.5-4.5	DEFICIENT
	Crude Fiber, %	5.05	12	
	Equiv Crude Protein, %	3.66	5	
	Lasalocid, g/ton	106.	100	
	Crude Protein, %	32.3	32	
Tylan 10		01F-04534		
	Calcium, %	9.30	9.5-11.4	
	Crude Fiber, %	29.8	35.5	
	Tylosin, g/lb	9.75	10	
Medi-Flex A		01F-04535		
	Amprolium, g/lb	9.95	11.35	
Lamb Starter Krums B90		01F-04538		
	Crude Fiber, %	13.9	15	
	Lasalocid, g/ton	85.6	90	
	Crude Protein, %	20.1	20	
Pork 50% Meat and Bone Meal		01F-04539		
	Calcium, %	8.46	8-9.6	
	Crude Fat, %	11.5	6	
	Phosphorus, %	4.43	4	
	Crude Protein, %	51.6	50	
** Bos Builder S Mineral Block		01F-04541		
	Calcium, %	14.6	14.6-17.4	
	Phosphorus, %	8.28	8	
	Salt (Sodium X 2.54), %	14.5	14.6-17.4	
	Selenium, ug/g (ppm)	35.8	35.2	
	Vitamin A, IU/ lb	137000.	200000	DEFICIENT
Sheep Mineral Se Block		01F-04542		
	Calcium, %	13.9	12.8-15.3	
	Iodine, ppm	32.0	25	
	Phosphorus, %	11.2	11.4	
	Salt (Sodium X 2.54), %	10.9	10.2-12.2	
	Selenium, ug/g (ppm)	34.8	37.3	
	Vitamin A, IU/ lb	245000.	300000	
Rabbit Crunchies		01F-04551		
	Crude Fiber, %	17.7	19	
	Crude Protein, %	17.9	15	
OTC 4G Medicated		01F-04553		
	Crude Fiber, %	11.3	15	
	Oxytetracycline, g/lb	3.16	4	
	Crude Protein, %	13.7	12	
Lamb Concentrate - 32 B-100		01F-04560		
	Calcium, %	3.49	3.5-4.5	
	Crude Fiber, %	4.93	12	
	Equiv Crude Protein, %	3.99	5	
	Lasalocid, g/ton	103.	100	
	Crude Protein, %	32.0	32	
** Pork Muscle Pak		01F-04623		
	Calcium, %	8.89	6.1-7.3	EXCESSIVE
	Lysine - Total, %	16.4	16	
	Methionine - Total, %	0.073	0.22	DEFICIENT
	Selenium, ug/g (ppm)	12.2	15	
	Tryptophan - Total, %	0.374	0.56	DEFICIENT
Pro Leader LG		01F-04624		
	Calcium, %	4.12	3.8-4.8	
	Lysine - Total, %	2.47	2.56	
	Phosphorus, %	2.09	2	
	Crude Protein, %	42.1	40	
Sweet Start R Supreme DC Medicated		01F-04993		
	Acid Detergent Fiber, %	4.13	5.5	
	Decoquinatate, %	0.00475	0.005	
	Crude Protein, %	17.6	18	
	Vitamin A, IU/ lb	18900.	20000	
Land O Lakes Provide Performance Horse		01F-04994		
	Crude Fiber, %	3.75	16.5	
	Crude Protein, %	14.6	14	
Triple 12 Cattle Mineral Plus CTC 5600 Medicated		01F-05646		

Calcium, %	13.3	12-13.5	
Chlortetracycline, g/lb	2.85	2.8	
Iodine, ppm	91.0	113	
Magnesium, %	2.38	2.75	
Phosphorus, %	12.4	12	
Salt (Sodium X 2.54), %	12.4	12-13.5	
Selenium, ug/g (ppm)	42.7	36	
Vitamin A, IU/ lb	182000.	150000	
Aureomycin 4G Crumbles (NV) Medicated	01F-05647		
Crude Fiber, %	7.45	25	
Chlortetracycline, g/lb	3.11	4	
Crude Protein, %	14.5	9	
Head Start S-70	01F-05663		
Crude Fiber, %	21.2	22	
Chlortetracycline, g/ton	73.0	70	
Crude Protein, %	13.8	12	
Sulfamethazine, %	0.00895	0.0077	
Heifer Edge Supplement BOV	01F-05664		
Acid Detergent Fiber, %	6.18	8	
Calcium, %	2.04	2-2.5	
Lasalocid, g/ton	293.	275	
Crude Protein, %	38.2	38	
Vitamin A, IU/ lb	53900.	61500	
** Poultry Concentrate 42	01F-05665		
Calcium, %	3.51	4.5-5.5	DEFICIENT
Lysine - Total, %	2.27	2.35	
Methionine - Total, %	0.689	0.69	
Phosphorus, %	1.83	2	
Crude Protein, %	42.4	42	
Pig Starter Mixer	01F-05666		
Calcium, %	2.12	2.1-2.6	
Crude Fat, %	8.29	7	
Lysine - Total, %	3.02	3.13	
Crude Protein, %	41.4	41	
Bos Builder G Mineral	01F-05667		
Calcium, %	13.1	13.4-16.1	
Phosphorus, %	11.6	12.5	
Salt (Sodium X 2.54), %	15.6	15.6-18.7	
Selenium, ug/g (ppm)	29.0	35.2	
Vitamin A, IU/ lb	233000.	300000	
** Dairy 38 AV	01F-05668		
Acid Detergent Fiber, %	10.7	10	
Calcium, %	1.67	1.6-2.1	
Crude Protein, %	36.8	38	DEFICIENT
Vitamin A, IU/ lb	23100.	25000	
** Dairy Feedlot Finisher R250T	01F-05669		
Calcium, %	4.00	4.6-5.5	DEFICIENT
Crude Fiber, %	14.1	18	
Equiv Crude Protein, %	12.2	15	
Monensin, g/ton	244.	250	
Potassium, %	2.43	2.5	
Crude Protein, %	32.2	35	DEFICIENT
Tylosin, g/ton	55.8	90	DEFICIENT
Vitamin A, IU/ lb	22600.	20000	
Beef Finisher 40-28 B550	01F-05670		
Calcium, %	8.19	7.8-9.3	
Crude Fiber, %	11.4	15	
Equiv Crude Protein, %	26.7	28	
Lasalocid, g/ton	563.	550	
Potassium, %	2.67	2.5	
Crude Protein, %	41.0	40	
Salt (Sodium X 2.54), %	4.13	3.5-4.5	
Vitamin A, IU/ lb	41800.	40000	
Beef Finisher 40-28	01F-05671		
Calcium, %	8.38	7.8-9.3	

	Crude Fiber, %	12.0	15	
	Equiv Crude Protein, %	22.6	28	
	Potassium, %	2.41	2.5	
	Crude Protein, %	39.4	40	
	Salt (Sodium X 2.54), %	3.50	3.5-4.5	
	Vitamin A, IU/ lb	40500.	40000	
** Dairy 35 Hi Fat		01F-05672		
	Acid Detergent Fiber, %	10.7	10.5	
	Calcium, %	1.89	1.6-2.1	
	Crude Fat, %	9.66	8.5	
	Crude Protein, %	33.5	35	DEFICIENT
	Vitamin A, IU/ lb	25600.	25000	
Beef Finisher 40-20 B550		01F-05675		
	Calcium, %	8.21	7.8-9.3	
	Crude Fiber, %	9.25	15	
	Equiv Crude Protein, %	16.2	20	
	Lasalocid, g/ton	510.	550	
	Potassium, %	2.63	2.5	
	Crude Protein, %	39.8	40	
	Salt (Sodium X 2.54), %	4.01	3.5-4.5	
	Vitamin A, IU/ lb	30200.	40000	
Commercial Lamb Balancer AN B200		01F-05676		
	Calcium, %	5.20	5-6	
	Crude Fiber, %	6.25	11.5	
	Equiv Crude Protein, %	5.17	5.25	
	Lasalocid, g/ton	196.	200	
	Crude Protein, %	35.5	36	
	Salt (Sodium X 2.54), %	3.68	3.5-4.5	
	Vitamin A, IU/ lb	15300.	20000	
Custom Phase 2 D Gard/CTC		01F-05677		
	Chlortetracycline, g/ton	359.	400	
	Crude Fat, %	7.74	7.35	
	Crude Protein, %	23.5	23.35	
** Beef Grower 38N		01F-05678		
	Calcium, %	4.90	4.1-5.1	
	Crude Fiber, %	6.95	15	
	Crude Protein, %	35.2	38	DEFICIENT
	Salt (Sodium X 2.54), %	3.92	3.5-4.5	
	Vitamin A, IU/ lb	46700.	40000	
Beef Grower 38-13 R500		01F-05679		
	Calcium, %	4.71	4.1-5.1	
	Crude Fiber, %	11.7	15	
	Equiv Crude Protein, %	13.5	13	
	Monensin, g/ton	555.	500	
	Crude Protein, %	38.7	38	
	Salt (Sodium X 2.54), %	3.59	3.5-4.5	
	Vitamin A, IU/ lb	48700.	40000	
PDF Am Dairy (9.5#)		01F-05680		
	Acid Detergent Fiber, %	8.61	10	
	Calcium, %	2.97	2.5-3	
	Equiv Crude Protein, %	7.94	7.4	
	Crude Fat, %	7.21	7.1	
	Crude Protein, %	38.2	37.7	
	Vitamin A, IU/ lb	19300.	21000	
** Beef Finisher 40-28 R500		01F-05681		
	Calcium, %	10.4	7.8-9.3	
	Crude Fiber, %	10.7	15	
	Equiv Crude Protein, %	20.2	28	
	Monensin, g/ton	462.	500	
	Potassium, %	2.44	2.5	
	Crude Protein, %	36.1	40	DEFICIENT
	Salt (Sodium X 2.54), %	3.95	3.5-4.5	
	Vitamin A, IU/ lb	46300.	40000	
** Pork Supreme Starter Premix		01F-05682		
	Calcium, %	8.41	8.5-10.2	
	Lysine - Total, %	3.76	3.14	
	Phosphorus, %	4.38	4.86	DEFICIENT
	Salt (ChlorideX1.65), %	5.54	4.8-5.8	
	Salt (Sodium X 2.54), %	6.66	4.8-5.8	EXCESSIVE
	Selenium, ug/g (ppm)	3.40	4	
	Vitamin A, IU/ lb	60100.	66667	
	Zinc, %	2.32	2.66	

** Pro Leader		01F-05683		
	Calcium, %	3.09	3.8-4.8	DEFICIENT
	Lysine - Total, %	2.58	2.56	
	Phosphorus, %	1.71	2	DEFICIENT
	Crude Protein, %	43.4	40	
Llama Feed		01F-05900		
	Crude Fiber, %	15.4	18	
	Crude Protein, %	17.1	11	
	Vitamin A, IU/ lb	113000.	125000	
Performance Horse		01F-05901		
	Crude Fiber, %	4.43	10	
	Crude Protein, %	14.3	14	
** Turkey and Pheasant Starter A		01F-05902		
	Amprolium, %	0.0134	0.0175	DEFICIENT
	Lysine - Total, %	1.54	1.65	
	Methionine - Total, %	0.473	0.52	
	Crude Protein, %	27.9	28	
Maxi Care Milk Calf Milk Replacer		01F-06265		
	Fat: Roese Gottlieb, %	20.3	20	
	Oxytetracycline, g/ton	103.	125	
	Crude Protein, %	23.0	22	
	Vitamin A, IU/ lb	18500.	20000	
Pork 50% Meat and Bone Meal		01F-06271		
	Calcium, %	8.45	8-9.6	
	Crude Fat, %	10.8	6	
	Phosphorus, %	4.22	4	
	Crude Protein, %	50.6	50	
Soybean Meal		01F-07143		
	Ash, %	5.78	8	
	Crude Protein, %	46.8	46.5	
Sweet Start Supreme DC		01F-07144		
	Acid Detergent Fiber, %	3.92	5.5	
	Decoquinatate, %	0.00430	0.005	
	Crude Protein, %	18.8	18	
	Vitamin A, IU/ lb	18600.	20000	
Beef Concentrate 35-0		01F-08590		
	Calcium, %	5.96	5.5-6.5	
	Crude Fiber, %	6.79	12	
	Crude Protein, %	35.6	35	
	Salt (Sodium X 2.54), %	3.14	3-4	
	Vitamin A, IU/ lb	22300.	30000	
** Holstein Beef Finisher RF400		01F-08591		
	Calcium, %	6.87	7.5-9	
	Crude Fiber, %	8.85	15	
	Equiv Crude Protein, %	18.9	19	
	Monensin, g/ton	378.	400	
	Potassium, %	3.15	3.5	
	Crude Protein, %	35.0	34	
	Tylosin, g/ton	110.	144	
	Vitamin A, IU/ lb	17600.	30000	DEFICIENT
Nursery Grower #20 ASP		01F-08697		
	Chlortetracycline, g/ton	94.5	100	
	Crude Fat, %	7.16	6	
	Crude Protein, %	21.9	20.5	
	Sulfamethazine, g/ton	97.2	100	
** Land O Lakes Pork Muscle Pak		01F-09483		
	Calcium, %	7.32	6.1-7.3	
	Lysine - Total, %	16.5	16	
	Methionine - Total, %	0.093	0.22	DEFICIENT
	Selenium, ug/g (ppm)	15.9	15	
	Tryptophan - Total, %	0.526	0.56	
BosBuilder S Mineral Block		01F-09484		
	Calcium, %	15.2	14.6-17.4	
	Phosphorus, %	7.79	8	
	Salt (Sodium X 2.54), %	15.6	14.6-17.4	

	Selenium, ug/g (ppm)	33.5	35.2	
	Vitamin A, IU/ lb	153000.	200000	
** Beef Grower		01F-10716		
	Calcium, %	4.35	4-5	
	Crude Fiber, %	5.27	15	
	Equiv Crude Protein, %	13.6	13	
	Lasalocid, g/ton	392.	500	
	Crude Protein, %	41.2	38	
	Salt (Sodium X 2.54), %	3.97	3.5-4.5	
	Vitamin A, IU/ lb	20200.	40000	DEFICIENT
Meat Maker Started		01F-12320		
	Amprolium, %	0.0118	0.0125	
	Lysine - Total, %	1.09	1.1	
	Methionine - Total, %	0.387	0.45	
	Crude Protein, %	23.1	22	
** Country Choice Chick Starter A		01F-12706		
	Amprolium, %	0.0091	0.0125	DEFICIENT
	Lysine - Total, %	0.915	0.85	
	Methionine - Total, %	0.356	0.36	
	Crude Protein, %	19.4	19	
Country Choice Duck and Goose		01F-12707		
	Crude Protein, %	20.1	20	
SteakMaker 40-28 R500 H-0.4		01F-12708		
	Calcium, %	8.52	9-10	
	Crude Fiber, %	4.16	12	
	Equiv Crude Protein, %	27.4	28	
	Monensin, g/ton	484.	500	
	Potassium, %	2.77	3	
	Crude Protein, %	39.2	40	
	Salt (Sodium X 2.54), %	4.49	3.5-4.5	
	Selenium, ug/g (ppm)	5.08	4.1	
	Vitamin A, IU/ lb	32700.	40000	

**Land O Lakes/Farmland Feeds
Sioux Falls, SD**

Custom SLP 50 R600		01F-05673		
	Calcium, %	7.31	7.5-8.5	
	Equiv Crude Protein, %	42.3	49	
	Vacuum Moisture, %	32.4	35	
	Monensin, g/ton	591.	600	
	Potassium, %	1.83	2	
	Crude Protein, %	50.6	50	
	Salt (Sodium X 2.54), %	4.72	4-5	
	Vitamin A, IU/ lb	41600.	45000	
Custom 38.5% Liq Finisher R392 T120		01F-05674		
	Calcium, %	6.90	6.75-7.25	
	Equiv Crude Protein, %	32.2	32	
	Vacuum Moisture, %	32.3	30	
	Monensin, g/ton	388.	392	
	Crude Protein, %	39.9	38.5	
	Salt (Chloride X 1.65), %	4.09	3.75-4.25	
	Salt (Sodium X 2.54), %	5.05	3.75-4.25	EXCESSIVE
	Tylosin, g/ton	97.3	120	
	Vitamin A, IU/ lb	34300.	37000	

**Land O Lakes/Harvest States
Ft. Dodge, IA**

** Country Choice Chick Grower A		01F-01013		
	Amprolium, %	0.0066	0.0095	DEFICIENT
	Lysine - Total, %	0.567	0.6	
	Crude Protein, %	16.2	16	
Triple 12 Cattle Mineral Plus		01F-01014		
	Calcium, %	12.0	12-14	
	Iodine, ppm	103.	113	

	Magnesium, %	2.68	2.75	
	Phosphorus, %	12.2	12	
	Salt (Sodium X 2.54), %	13.2	12-14	
	Selenium, ug/g (ppm)	35.4	36	
	Vitamin A, IU/ lb	187000.	150000	
Hi-Mag Mineral		01F-02504		
	Calcium, %	10.8	10-12	
	Iodine, ppm	72.0	61	
	Magnesium, %	12.8	13	
	Phosphorus, %	5.94	6	
	Salt (Sodium X 2.54), %	12.4	12-14	
	Selenium, ug/g (ppm)	18.2	17	
	Vitamin A, IU/ lb	177000.	150000	
Ranger 20N		01F-02508		
	Crude Fiber, %	9.79	12	
	Crude Protein, %	19.7	20	
	Vitamin A, IU/ lb	16100.	20000	
Bull Challenger R-40		01F-02509		
	Crude Fiber, %	13.1	16	
	Equiv Crude Protein, %	1.77	1.5	
	Monensin, g/ton	35.3	40	
	Crude Protein, %	15.2	14	
** Beef Grower 38-13 B500		01F-02510		
	Calcium, %	4.19	4.1-5.1	
	Crude Fiber, %	5.99	15	
	Equiv Crude Protein, %	13.3	13	
	Lasalocid, g/ton	355.	500	DEFICIENT
	Crude Protein, %	40.3	38	
	Salt (Sodium X 2.54), %	3.74	3.5-4.5	
	Vitamin A, IU/ lb	24700.	40000	DEFICIENT
** Beef Balancer B1440		01F-02511		
	Calcium, %	13.9	8-9	EXCESSIVE
	Crude Fiber, %	4.48	11	
	Lasalocid, g/ton	747.	1440	DEFICIENT
	Crude Protein, %	9.62	8	
	Salt (Sodium X 2.54), %	5.92	5-6	
	Vitamin A, IU/ lb	31800.	80000	DEFICIENT
Triple 12 Cattle Mineral Plus		01F-02839		
	Calcium, %	12.9	12-14	
	Iodine, ppm	90.0	113	
	Magnesium, %	2.57	2.75	
	Phosphorus, %	12.2	12	
	Salt (Sodium X 2.54), %	12.8	12-14	
	Selenium, ug/g (ppm)	36.8	36	
	Vitamin A, IU/ lb	167000.	150000	
Provide Complete Horse		01F-03168		
	Crude Fiber, %	19.4	24.5	
	Phosphorus, %	0.550	0.5	
	Crude Protein, %	16.5	11	
Country Choice Egg Maker BMD		01F-03169		
	Calcium, %	3.23	3.1-4.1	
	Lysine - Total, %	0.811	0.77	
	Methionine - Total, %	0.324	0.33	
	Crude Protein, %	18.7	18	
	Salt (Sodium X 2.54), %	0.36	0.1-0.6	
Ranger 20N Block		01F-03173		
	Crude Protein, %	21.7	20	
	Salt (Sodium X 2.54), %	10.7	11-13	
	Vitamin A, IU/ lb	21300.	20000	
Land O Lakes Country Choice Chick Grower A Med.		01F-04992		
	Amprolium, %	0.0088	0.0095	
	Lysine - Total, %	0.645	0.6	
	Methionine - Total, %	0.298	0.28	
	Crude Protein, %	17.0	16	
Million - ADE (Vitamin Premix)		01F-04995		
	Crude Fiber, %	8.85	15	

	Crude Protein, %	12.4	10	
	Vitamin A, IU/ lb	1140000.	1000000	
Dekade Krumbles		01F-05185		
	Crude Fiber, %	5.86	15	
	Decoquinatate, %	0.107	0.125	
	Crude Protein, %	13.9	12	
Triple 12 Cattle Mineral		01F-05186		
	Calcium, %	13.0	12-14	
	Phosphorus, %	11.9	12	
	Salt (Sodium X 2.54), %	14.8	12-14	
	Vitamin A, IU/ lb	152000.	150000	
Soybean Meal Solvent Dehulled		01F-05188		
	Ash, %	5.75	8	
	Crude Protein, %	48.0	46.5	
Lean Grow 93 BMD		01F-06559		
	Crude Protein, %	17.8	16	
Land O Lakes Pork Supreme Starter Premix		01F-09481		
	Calcium, %	9.83	8.5-10.2	
	Lysine - Total, %	3.34	3.14	
	Phosphorus, %	4.80	4.86	
	Salt (Sodium X 2.54), %	5.37	4.8-5.8	
	Selenium, ug/g (ppm)	4.00	4	
	Vitamin A, IU/ lb	60500.	66667	
	Zinc, %	2.35	2.66	
Triple 12 Cattle Mineral		01F-10208		
	Calcium, %	12.4	12-14	
	Phosphorus, %	11.5	12	
	Salt (Sodium X 2.54), %	12.1	12-14	
	Vitamin A, IU/ lb	123000.	150000	
Lesterville Feed & Grain				
Lesterville, SD				
	** Custom Beef Popper Concentrate 500B	01F-04636		
	Calcium, %	3.16	3-4	
	Crude Fat, %	6.77	6	
	Lasalocid, g/ton	428.	500	
	Crude Protein, %	39.2	37	
	Vitamin A, IU/ lb	23000.	40000	DEFICIENT
Manna Pro Corporation				
St. Louis, MO				
	Deer Block	01F-08718		
	Calcium, %	14.1	14-16.8	
	Crude Protein, %	6.85	6	
	Salt (Sodium X 2.54), %	11.2	10-12	
Manning Agricultural Center				
Manning, IA				
	Pro Pac Beet Pulp Pellets	01F-04554		
	Crude Fiber, %	20.3	22	
	Crude Protein, %	7.78	6	
	ProPac Beet Pulp Pellets	01F-11825		
	Crude Fiber, %	19.7	22	
	Crude Protein, %	7.75	6	
Marshall Pet Diets				
Wolcott, NY				
	Marshall Premium Ferret Diet	01F-12451		
	Fat: Acid Hydrolysis, %	20.7	18	
	Oven Moisture, %	4.80	10	
	Crude Protein, %	38.7	38	
Mason City By-Products Inc				
Mason City, IA				
	Mason City By Products Inc - 50% Meat and Bone Meal	01F-04578		
	Calcium, %	8.74	8-9.6	
	Crude Fat, %	10.7	6	
	Phosphorus, %	4.61	4	
	Crude Protein, %	52.6	50	
McFleeg Inc				
Bowdle, SD				
	Mc Fleeg's Electro-Stat	01F-09656		
	Potassium, %	4.62	4	

**McFleeg Inc
Watertown, SD**

** McFleeg XL-3 Range Mineral	01F-05648		
Calcium, %	10.2	9-10.8	
Phosphorus, %	5.36	6	DEFICIENT
Potassium, %	4.13	4	
Salt (ChlorideX1.65), %	13.9	11-13	
Vitamin A, IU/ lb	537000.	400000	
** Custom Focus First Bite/CSP Medicated	01F-05649		
Chlortetracycline, g/ton	66.3	100	DEFICIENT
Crude Fat, %	7.31	8	
Crude Protein, %	22.6	23	
Sulfathiazole, g/ton	51.9	100	DEFICIENT

**Mid-States Distributing Company
St Paul, MN**

** Dura-Life Beef Chunks Dog Dinner	01F-04543		
Crude Fat, %	8.14	5	
Oven Moisture, %	77.6	78	
Crude Protein, %	8.96	10	DEFICIENT

Duralife Mineral Block	01F-09258		
Calcium, %	21.1	23-27	
Phosphorus, %	3.87	4	
Salt (Sodium X 2.54), %	16.9	18-21	
Sodium, %	6.66	6-8	
Vitamin A, IU/ lb	65400.	79000	

** Duralife 37% Block	01F-09259		
Calcium, %	5.67	6-7	
Equiv Crude Protein, %	17.1	18.5	
Crude Protein, %	36.4	37	
Salt (Sodium X 2.54), %	15.7	16-19	
Sodium, %	6.18	5-7	
Vitamin A, IU/ lb	18600.	29000	DEFICIENT

** Duralife 16% Layer/Poultry Feed	01F-09260		
Calcium, %	2.95	3.5-3.7	DEFICIENT
Lysine - Total, %	0.625	0.6	
Methionine - Total, %	0.270	0.25	
Crude Protein, %	16.0	16	

14% Performance Horse Feed	01F-09261		
Crude Protein, %	14.8	14	

**Midwest Ag Supply
Watertown, SD**

Midwest Ag Supply Free Choice Cattle Mineral	01F-02908		
Calcium, %	17.4	15-16	
Lasalocid, g/ton	1310.	1440	
Phosphorus, %	6.81	6.7	
Potassium, %	1.88	2	
Salt (Sodium X 2.54), %	17.1	18-19	
Selenium, ug/g (ppm)	22.8	24	
Vitamin A, IU/ lb	413000.	300000	

**Midwest Agri-Commodities
Corte Madera, CA**

Beet Molasses (Product #810473)	01F-03469		
Total Sugars(Invert), %	59.6	48	

**Midwest PMS
Gering, NE**

CM 149	01F-04580		
Calcium, %	7.91	8.25-8.75	
Equiv Crude Protein, %	40.1	44	
Vacuum Moisture, %	31.5	33	
Monensin, g/ton	372.	365	
Crude Protein, %	47.2	48	
Tylosin, g/ton	95.8	105	
Vitamin A, IU/ lb	25700.	20000	
** CM 236	01F-04581		
Equiv Crude Protein, %	8.83	4	EXCESSIVE
Vacuum Moisture, %	36.4	39	

	Crude Protein, %	16.6	12	
	Vitamin A, IU/ lb	46100.	40000	
CM 149		01F-11504		
	Calcium, %	8.14	8.5-9	
	Crude Protein, %	54.6	55	
CM 236		01F-11505		
	Crude Protein, %	16.0	14	
Mighty Deer Lick				
Powers, MI				
	Mighty Deer Lick Sweet Apple	01F-09106		
	Salt (Sodium X 2.54), %	93.4	93-98	
Milk Specialties Company				
Dundee, IL				
	** Calf Medic	01F-08722		
	Ash, %	10.6	10	
	Fat: Roese Gottlieb, %	24.9	25	
	Oxytetracycline, g/ton	744.	800	
	Crude Protein, %	20.7	20	
	Sodium, %	1.65	1	EXCESSIVE
	Vitamin A, IU/ lb	56700.	100000	DEFICIENT
Millbrook Feed Mill				
Mitchell, SD				
	Feed Tech High Demand Calf Creep 14	01F-08448		
	Calcium, %	2.58	1-2.5	
	Crude Fiber, %	7.92	18	
	Crude Protein, %	17.0	14	
	Feed Tech Pheasant Starter	01F-08450		
	Lysine - Total, %	1.72	1.61	
	Methionine - Total, %	0.706	0.62	
	Crude Protein, %	31.5	30	
	Feed Tech Greyhound Crunch Dog food	01F-08451		
	Crude Protein, %	25.5	25	
Moorman Mfg Company				
Quincy, IL				
	Morman's Maxlean Pack Swine Feed	01F-04213		
	Lysine - Total, %	5.59	5.4	
	Crude Protein, %	51.3	50	
	** Moorman's Cow Power Dairy Mineral ALNS	01F-04547		
	Calcium, %	12.2	12.7-15.2	
	Magnesium, %	16.2	14.3	
	Phosphorus, %	8.26	9.5	DEFICIENT
Morton International Inc				
Chicago, IL				
	** Morton Iofixt T-M Trace Mineralized Salt Brick	01F-03749		
	Salt (Sodium X 2.54), %	96.7	97-98.5	
Muellers Feed Mill				
Martin, SD				
	Mueller Feed Range Mineral	01F-00212		
	Calcium, %	12.2	12-14.5	
	Iodine, %	0.021	0.02	
	Phosphorus, %	12.6	12	
	Salt (Sodium X 2.54), %	14.1	15-16	
	Vitamin A, IU/ lb	44900.	50000	
	Mueller Feed Prime	01F-00213		
	Crude Protein, %	13.4	13	
	** Mueller Feed Ranger 30	01F-00214		
	Crude Fiber, %	14.3	12	EXCESSIVE
	Crude Protein, %	30.0	30	
	Vitamin A, IU/ lb	31800.	30000	
	13 Hi-Energy Cube	01F-04585		
	Crude Fiber, %	4.76	12	
	Crude Protein, %	14.8	13	

Calf Creep		01F-04591		
	Crude Fiber, %	6.31	12	
	Crude Protein, %	13.2	13	
Nabisco Foods				
E Hanover, NJ				
Milk Bone Flavor Snacks		01F-00220		
	Crude Fat, %	5.79	5	
	Oven Moisture, %	6.74	12	
	Crude Protein, %	19.4	15	
Soft N Chewy Milk Bone Chicken Drumstix		01F-03472		
	Crude Fat, %	12.7	10	
	Oven Moisture, %	16.1	22	
	Crude Protein, %	24.5	18	
Original Milk Bone Basted Gravy Bones		01F-11128		
	Crude Fat, %	7.49	6	
	Oven Moisture, %	6.55	10	
	Crude Protein, %	20.3	15	
Milk Bone Soft and Chewy Beef Steak Treats		02F-00197		
	Crude Fat, %	11.2	11	
	Oven Moisture, %	18.3	22	
	Crude Protein, %	24.7	18	
Natura Pet Products				
Santa Clara, CA				
Innova Dog Food		01F-03097		
	Crude Fat, %	8.81	8	
	Oven Moisture, %	6.64	10	
	Crude Protein, %	20.8	18	
Everyone's Best Friend Premium Quality Cookies		01F-08453		
	Fat: Acid Hydrolysis, %	10.6	11	
	Oven Moisture, %	8.99	9	
	Crude Protein, %	28.1	20	
Innova Dog Food		01F-12889		
	Crude Fat, %	15.2	14	
	Oven Moisture, %	7.58	10	
	Crude Protein, %	24.9	24	
Nelson & Sons Inc				
Murray, UT				
Silver Cup Trout 3.5		01F-03997		
	Ash, %	7.24	12	
	Crude Fat, %	12.0	10	
	Crude Protein, %	40.5	40	
	Sodium, %	0.61	0-2	
Silver Cup Steelhead 1.5		01F-03998		
	Ash, %	8.93	12	
	Crude Fat, %	15.7	16	
	Crude Protein, %	45.0	45	
	Sodium, %	0.34	0-2	
Silver Cup Trout 4.5		01F-03999		
	Ash, %	7.43	12	
	Crude Fat, %	12.1	10	
	Crude Protein, %	40.4	40	
	Sodium, %	0.58	0-2	
Silver Cup Steelhead 2.5		01F-10212		
	Ash, %	7.95	12	
	Crude Fat, %	16.0	16	
	Crude Protein, %	45.4	45	
New Generation Feeds				
Belle Fourche, SD				
** Smart Lic-Supplement NE-12		01F-03979		
	Calcium, %	1.93	2.3-2.8	DEFICIENT
	Fat: Roese Gottlieb, %	6.22	5	
	Phosphorus, %	1.73	2	DEFICIENT
	Potassium, %	2.66	2.5	
	Crude Protein, %	10.4	12	DEFICIENT
	Selenium, ug/g (ppm)	7.86	6.6	
	Vitamin A, IU/ lb	79000.	80000	
Horse Lic		01F-03980		

	Calcium, %	1.81	1.5-2	
	Fat: Roese Gottlieb, %	5.90	6	
	Potassium, %	2.72	3	
	Crude Protein, %	12.4	12	
	Vitamin A, IU/ lb	33000.	30000	
North Dakota Mill				
Grand Forks, ND				
	Wheat Midds & Ground Grain Screenings	01F-09356		
	Ash, %	5.03	6.5	
	Deoxynivalenol, ug/g (ppm)	3.20		
	Crude Protein, %	18.0	14.5	
Nutra-Flo Company				
Sioux City, IA				
	Monodicalcium Phosphate 18 1/2 Plus	01F-04593		
	Calcium, %	18.2	19-22.8	
	Phosphorus, %	19.4	18.5	
Nutrítec Inc.				
Vernon Hills, IL				
	# Licorice Flavored VitaTreats Vitamin Fortified Horse Treats	01F-01425		
	Ash, %	5.18	6	
	Crude Protein, %	15.3	14.4	
Nutro Products Inc				
City of Industry, CA				
	Natural Choice Hairball Management	01F-12884		
	Ash, %	2.07	2.5	
	Linoleic Acid 18:2, %	1.05	1	
	Oven Moisture, %	76.8	77	
	Total Fat, %	6.690	5	
	Crude Protein, %	9.35	9	
	Taurine - Total, %	0.059	0.05	
Occo Products				
Omaha, NE				
	Mol Oil 95:5	01F-02397		
	Fat: Roese Gottlieb, %	5.48	5	
	Linoleic Acid 18:2, %	2.89	2.5	
	Total Sugars(Invert), %	41.5	42	
Old Mother Hubbard				
Lowell, MA				
	Neura Meats 95% Lamb and Brown Rice	01F-12885		
	Oven Moisture, %	75.9	78	
	Total Fat, %	7.220	6	
	Crude Protein, %	8.73	7	
	# Neura Special Diet Formula 200 Reduced Sodium Food	02F-00106		
	Ash, %	2.11	2	
	Crude Fat, %	4.95	5.5	
	Oven Moisture, %	66.6	74	
	Sodium, %	0.07	0-0.03	EXCESSIVE
Old West Feeds				
Mitchell, SD				
	# 10-6 Mineral	01F-02802		
	Calcium, %	6.76	5-7	
	Iodine, ppm	129.	100	
	Phosphorus, %	10.2	10	
	Potassium, %	2.23	2	
	Salt (ChlorideX1.65), %	11.9	11-13	
	Salt (Sodium X 2.54), %	15.1	11-13	EXCESSIVE
	Selenium, ug/g (ppm)	61.8	100	DEFICIENT
	Vitamin A, IU/ lb	258000.	200000	
Omega Protein Inc				
Hammond, LA				
	Special Select Premium Quality Menhaden Fish Meal	01F-05911		
	Crude Fat, %	8.16	6	
	Crude Protein, %	64.1	60	

Ontario Dehy Inc.				
Goderich Ontario, CN				
	** Alfalfa Cubes	01F-03456		
	Crude Fiber, %	28.3	30	
	Oven Moisture, %	3.85	12	
	Crude Protein, %	14.7	16	DEFICIENT
Pedigree Inc				
Vernon, CA				
	Pedigree Beef and Liver	01F-09110		
	Oven Moisture, %	81.5	82	
	Crude Protein, %	8.36	8	
Pet Life				
Cincinnati, OH				
	Pet Life 4 Flavors (Large) Dog Biscuits	01F-03161		
	Fat: Acid Hydrolysis, %	7.88	7.5	
	Oven Moisture, %	7.61	12	
	Crude Protein, %	21.3	20	
Petco Animal Supplies				
San Diego, CA				
	Pet Gold Chicken and Rice Cat Food	01F-03080		
	Ash, %	6.30	6	
	Fat: Acid Hydrolysis, %	19.6	21	
	Oven Moisture, %	6.40	10	
	Crude Protein, %	35.3	32	
Pfizer/Iowa Veterinary Supply				
Iowa Falls, IA				
	MX Ton Pak	01F-04563		
	Carbodox, g/lb	2.22	2.5	
	Tylan 10 Type B	01F-04620		
	Calcium, %	9.31	9.5-11.4	
	Crude Fiber, %	30.7	35.5	
	Tylosin, g/lb	9.21	10	
PHF LTD				
Sioux Falls, SD				
	** PBT 4-Way	01F-03095		
	Calcium, %	2.47	3-4	DEFICIENT
	Crude Fat, %	27.9	15	
	Crude Protein, %	25.3	22	
PMI Nutrition Inc				
Brentwood, MO				
	PMI Nutrition High Protein Formula	01F-04904		
	Fat: Acid Hydrolysis, %	13.4	12	
	Crude Protein, %	26.7	27	
	Mazuri Mini Pig Elder	01F-06561		
	Crude Fiber, %	10.4	12	
	Crude Protein, %	12.4	12	
	Mazuri Exotic Llama Diet HF	01F-06562		
	Crude Fiber, %	12.6	25	
	Crude Protein, %	15.0	14	
Prairie Pride				
Mankato, MN				
	Prairie Pride Dakotah Cake 20%	01F-02658		
	Calcium, %	2.04	2-2.5	
	Crude Fiber, %	9.01	12	
	Crude Protein, %	19.9	20	
	Vitamin A, IU/ lb	18800.	25000	
	Prairie Pride 10:10 Sheep Mineral	01F-02659		
	Calcium, %	11.7	10-12	
	Iodine, ppm	89.0	100	
	Phosphorus, %	9.83	10	
	Salt (Sodium X 2.54), %	14.8	13-15.6	
	Selenium, ug/g (ppm)	30.4	35	

	Vitamin A, IU/ lb	70200.	50000
Premier Farmtech			
Kansas City, MO			
	Neo-TM 10/10	01F-04562	
	Oxytetracycline, g/ lb	8.83	10
Pro Visions Pet Specialties			
St. Louis, MO			
	Pro Plan Chicken	02F-00107	
	Crude Fat, %	5.83	4
	Linoleic Acid 18:2, %		0.25
	Oven Moisture, %	81.1	82
	Crude Protein, %	8.03	8
	Taurine - Total, %	0.073	0.05
Professional Pet Foods			
St. Thomas, MO			
	Professional Dog Food Rice and Chicken	01F-03098	
	Fat: Acid Hydrolysis, %	8.44	8-9
	Oven Moisture, %	7.32	10
	Omega-3 Fatty Acids, %	0.392	0.3
	Omega-6 Fatty Acids, %	1.71	1.7
	Crude Protein, %	17.4	16
Purina Mills			
St. Louis, MO			
	Purina Special Care Cat Food	01F-00302	
	Ash, %	5.86	6.2
	Fat: Acid Hydrolysis, %	13.6	13
	Oven Moisture, %	6.28	10
	Crude Protein, %	35.2	31
	Taurine - Total, %	0.159	0.125
	Purina Sup-R-Lix 2 HL	01F-01291	
	Calcium, %	2.20	1.75-2.25
	Equiv Crude Protein, %	27.7	31
	Fat: Roese Gottlieb, %	5.54	5
	Oven Moisture, %	32.3	30
	Monensin, g/ton	0.00	0
	Crude Protein, %	32.0	32
	Purina Strategy Professional Formula GX	01F-03359	
	Crude Fat, %	6.55	6
	Crude Protein, %	15.6	14
	Selenium, ug/g (ppm)	1.29	0.6
	Purina Duck Starter	01F-03360	
	Crude Protein, %	21.3	20
	Purina Mills Layers Crumbles	01F-03361	
	Calcium, %	3.53	3.6-4.6
	Crude Protein, %	16.4	16
	Animax	01F-03753	
	Crude Protein, %	28.2	28
	Purina Horse Feed Sweet Feed	01F-03757	
	Crude Fiber, %	8.11	15
	Crude Protein, %	12.2	12
	Purina Mills Layena Crumbles	01F-03758	
	Crude Protein, %	16.1	16
	Purina Game Fish Chow	01F-03761	
	Crude Protein, %	32.5	32
	Equine Senior Purina	01F-04153	
	Crude Fiber, %	15.1	16
	Crude Protein, %	14.4	14
	Purina Accuration 2HL Rm 130	01F-04902	
	Calcium, %	2.07	1.5-2
	Equiv Crude Protein, %	17.2	16
	Crude Fat, %	9.77	9
	Monensin, g/ton	133.	130
	Crude Protein, %	33.4	32
	Salt (Sodium X 2.54), %	4.70	4.5-5.5
	Purina CTC - 10Gm Checkers	01F-04903	
	Acid Detergent Fiber, %	11.2	20
	Calcium, %	4.68	3.5-4.5
	Crude Fiber, %	7.33	15

Chlortetracycline, g/lb	10.1	10	
Crude Protein, %	13.9	5	
Purina Cattle Mineral 12:12	01F-04905		
Calcium, %	13.3	12-14	
Iodine, ppm	83.0	85	
Phosphorus, %	11.8	12	
Salt (Sodium X 2.54), %	3.01	3-4	
Selenium, ug/g (ppm)	52.4	54	
Vitamin A, IU/ lb	209000.	150000	
Lamb Balancer BVT 200	01F-04906		
Calcium, %	4.30	4.5-5.5	
Crude Fiber, %	7.90	12	
Equiv Crude Protein, %	11.0	10	
Lasalocid, g/ton	190.	200	
Crude Protein, %	33.4	32	
Salt (Sodium X 2.54), %	3.70	3-4	
Purina Tuff-Stuff 40 FRM 400-MA .35	01F-05243		
Calcium, %	5.63	5-6	
Crude Fiber, %	10.1	14.5	
Equiv Crude Protein, %	31.6	32	
Monensin, g/ton	396.	400	
Crude Protein, %	41.3	40	
Vitamin A, IU/ lb	38000.	30000	
Impact 44 Rm 227 T90	01F-05766		
Calcium, %	5.48	5.5-6.5	
Crude Fiber, %	9.35	20	
Equiv Crude Protein, %	26.3	26	
Monensin, g/ton	198.	227	
Potassium, %	2.64	2.5	
Crude Protein, %	44.6	44	
Tylosin, g/ton	72.7	90	
Purina Tuff-Stuff 40 G and F Rm 267 Brand	01F-05767		
Calcium, %	5.24	5-6	
Crude Fiber, %	9.91	14.5	
Equiv Crude Protein, %	24.4	23	
Monensin, g/ton	263.	267	
Crude Protein, %	43.7	40	
Vitamin A, IU/ lb	40200.	40000	
** Purina Impact 44 Rm 227 - T90	01F-06246		
Calcium, %	6.15	5.5-6.5	
Crude Fiber, %	8.97	20	
Equiv Crude Protein, %	25.2	26	
Crude Fat, %	4.37	1.5	
Monensin, g/ton	214.	227	
Phosphorus, %	1.06	0.9	
Potassium, %	2.74	2.5	
Crude Protein, %	43.0	44	
Salt (Sodium X 2.54), %	3.17	2.5-3.5	
Tylosin, g/ton	58.8	90	DEFICIENT
Vitamin A, IU/ lb	14800.	17000	
Strategy-Professional Formula GX	01F-06563		
Crude Fat, %	7.12	6	
Crude Protein, %	15.0	14	
Purina Accuration 2HL RM130	01F-08969		
Calcium, %	1.92	1.5-2	
Equiv Crude Protein, %	16.3	16	
Fat: Acid Hydrolysis, %	8.42	9	
Monensin, g/ton	117.	130	
Crude Protein, %	32.6	32	
Salt (Sodium X 2.54), %	4.66	4.5-5.5	
Purina Creep Chow N	01F-10973		
Crude Protein, %	14.7	13	
** Purina Deccox 1X Checkers	01F-10974		
Acid Detergent Fiber, %	9.99	37	
Calcium, %	3.81	5.1-6.5	DEFICIENT
Crude Fiber, %	8.42	27.2	
Decoquinatate, mg/lb	224.	226.9	
Salt (ChlorideX1.65), %	2.34	3.8-4.2	DEFICIENT
Salt (Sodium X 2.54), %	2.55	3.8-4.2	DEFICIENT
Purina Equine Junior	01F-11831		
Crude Fiber, %	13.8	15	

	Crude Protein, %	15.5	14.5	
Quality Liquid Feeds Inc				
Dodgeville, WI				
	QLF Mill Pro 5-5	01F-02507		
	Fat: Roese Gottlieb, %	7.54	5	
	Vacuum Moisture, %	33.3	35	
	Potassium, %	2.62	2.5	
	Crude Protein, %	12.1	5	
	Total Sugars(Invert), %	31.1	28.3-30	
	** Rumensin and MGA R500-H0.4	01F-04540		
	Calcium, %	7.51	7.3-8.7	
	Equiv Crude Protein, %	48.5	46	EXCESSIVE
	Vacuum Moisture, %	33.3	32	
	Monensin, g/ton	437.	500	
	Potassium, %	3.95	3.5	
	Crude Protein, %	52.2	50	
	Selenium, ug/g (ppm)	5.80	4	
	Total Sugars(Invert), %	10.7	7	
	Vitamin A, IU/ lb	42300.	40000	
	Liquid 4-19	01F-04622		
	Fat: Roese Gottlieb, %	19.9	19	
	Vacuum Moisture, %	30.1	32	
	Total Sugars(Invert), %	23.9	24	
	** Suprcoat 65-5	01F-05184		
	Fat: Roese Gottlieb, %	0.46	5	DEFICIENT
	Vacuum Moisture, %	36.0	35	
	Net Weight, g	11.0	10	
	Total Sugars(Invert), %	32.7	34	
Quality Stores				
Muskegon, MN				
	Quality Country Large Beef Based Dog Biscuits	01F-05235		
	Fat: Acid Hydrolysis, %	7.08	7	
	Oven Moisture, %	9.20	12	
	Crude Protein, %	21.0	20	
Ragland Mills Inc				
Neosho, MO				
	Ragland High Performance Horse Block	01F-06254		
	Calcium, %	4.86	4-5	
	Crude Protein, %	18.6	16	
	Salt (Sodium X 2.54), %	15.7	14-16	
	Vitamin A, IU/ lb	26100.	20000	
	Dumor 37% Range Block	01F-06255		
	Acid Detergent Fiber, %	5.14	6	
	Calcium, %	6.08	5-6	
	Equiv Crude Protein, %	18.5	18.5	
	Crude Protein, %	37.6	37	
	Salt (Sodium X 2.54), %	16.5	15-17	
	Vitamin A, IU/ lb	42500.	30000	
	All Stock 4% Phosphorus Mineral Block	01F-09249		
	Calcium, %	16.9	15-18	
	Phosphorus, %	4.22	4	
	Salt (Sodium X 2.54), %	28.4	25-30	
	Special Sheep and Goat Supplement Block	01F-09250		
	Calcium, %	4.17	3.5-4.5	
	Crude Protein, %	17.7	18	
	Salt (Sodium X 2.54), %	18.5	17-20	
	Vitamin A, IU/ lb	78100.	50000	
	** 12% Hy-Phos Mineral W/15ppm Selenium	01F-09251		
	Calcium, %	14.5	12.5-15	
	Phosphorus, %	13.0	12	
	Salt (Sodium X 2.54), %	11.9	10.5-12.6	
	Selenium, ug/g (ppm)	13.8	15	
	Vitamin A, IU/ lb	9810.	40000	DEFICIENT
Ralston Purina Company				
St. Louis, MO				

Purina Cat Chow	01F-03160		
Fat: Acid Hydrolysis, %	12.2	11	
Oven Moisture, %	7.27	12	
Crude Protein, %	33.0	31.5	
Ham Flavor Bonz	01F-03471		
Fat: Acid Hydrolysis, %	8.40	4-7	
Oven Moisture, %	19.8	26	
Crude Protein, %	15.2	12	
Meow Mix Original Chicken, Turkey Salmon and Ocean Food	01F-03473		
Ash, %	7.56		
Crude Fiber, %	1.44	4	
Fat: Acid Hydrolysis, %	10.8	8	
Metabolizable Energy, Kcal/kg	3649.	3610	
Oven Moisture, %	2.23	12	
Nitrogen Free Extract, %	44.0		
Crude Protein, %	34.0	31	
Alley Cat Food	01F-10688		
Crude Fat, %	9.17	8	
Oven Moisture, %	6.28	12	
Crude Protein, %	31.2	30	
Beggin Strips Dog Food	01F-10692		
Oven Moisture, %	20.7	24	
Crude Protein, %	17.7	15	
Tender Vittles	01F-11129		
Fat: Acid Hydrolysis, %	9.39	8.5	
Oven Moisture, %	37.5	39	
Crude Protein, %	25.3	24	
Purina Beneful Dog Food	01F-12710		
Crude Fat, %	12.4	10	
Oven Moisture, %	11.3	14	
Crude Protein, %	27.7	25	
Purina One Biscuits Beef and Rice Flavor	02F-00193		
Crude Fat, %	6.09	6	
Oven Moisture, %	7.40	12	
Crude Protein, %	24.5	20	
Purina Special Care UT Cat Food	02F-00199		
Ash, %	5.22	6.2	
Fat: Acid Hydrolysis, %	12.6	13	
Oven Moisture, %	5.85	10	
Crude Protein, %	35.3	31	
Taurine - Total, %	0.156	0.125	
Ramona Warehouse			
Ramona, SD			
Dry Whole Extruded Soybeans No. 9019	01F-05641		
Crude Fat, %	20.7	18	
Crude Protein, %	35.7	36	
Rancher Feed & Seed			
Buffalo Gap, SD			
Custom mix Hen Feed	01F-04586		
Crude Protein, %	11.0	10	
** Corn and Oats and Decox Pellets and Dry Molasses	01F-11334		
Decoquinatate, g/ton	24.9	67.3	DEFICIENT
Rangen Inc.			
Buhl, ID			
Extr 400 w/1 1/2 # Red Rangen For Cultured Fish 4.0	01F-03994		
Ash, %	7.27	10	
Fat: Acid Hydrolysis, %	12.3	12	
Crude Protein, %	43.5	41	
Rangen Extra 400 for Cultured Fish 1.6	01F-03995		
Ash, %	8.78	10	
Fat: Acid Hydrolysis, %	11.1	12	
Crude Protein, %	42.9	41	
Rangen Extra 400 for Cultured Fish 3.2	01F-03996		
Ash, %	6.95	10	
Fat: Acid Hydrolysis, %	11.8	12	
Crude Protein, %	41.3	41	
Rangen Extr 400 W/1-1/2 # Red 4.0MM	01F-10204		
Ash, %	6.86	10	
Crude Fat, %	12.8	12	

	Crude Protein, %	44.0	41	
Rangen Extr 400 3.2 MM		01F-10205		
	Ash, %	6.80	10	
	Crude Fat, %	15.4	12	
	Crude Protein, %	41.6	41	
Rangen Extr 400 W/1-1/2 # Red 4.0MM		01F-10211		
	Ash, %	8.53	10	
	Crude Fat, %	14.5	12	
	Crude Protein, %	43.6	41	
Redbarn				
Long Beach, CA				
Barnburger		01F-03082		
	Crude Fat, %	10.2	8	
	Oven Moisture, %	14.6	30	
	Crude Protein, %	32.0	24	
Filled Rawhide Bone		01F-03087		
	Oven Moisture, %	11.3	24	
	Crude Protein, %	73.2	50	
Rep-Cal Research				
Los Gatos, CA				
Rep-Cal Juvenile Iguana Food		01F-03070		
	Crude Fiber, %	10.3	16	
	Oven Moisture, %	6.69	12	
	Crude Protein, %	29.4	24	
Ridley Block Operations				
Whitewood, SD				
# Brigade Stress Fighting Formula		01F-05141		
	Calcium, %	3.08	2-2.5	EXCESSIVE
	Iodine, ppm	61.0	25	
	Phosphorus, %	2.43	2	
	Potassium, %	3.13	2.5	
	Crude Protein, %	18.4	16	
	Selenium, ug/g (ppm)	8.82	8.8	
	Vitamin A, IU/ lb	84600.	80000	
Robinson Labs Inc.				
Cannon Falls, MN				
Buck Science Bi-Agra		01F-03068		
	Calcium, %	16.9	16.5	
	Phosphorus, %	7.83	8	
	Salt (Sodium X 2.54), %	29.2	28.5	
	Vitamin A, IU/ lb	49600.	50000	
Roche Vitamins & Fine Chemicals				
Parsippany, NJ				
Bovatec 68		01F-04845		
	Lasalocid, g/lb	69.6	68	
Rolf Hagen				
Mansfield, MA				
Nutra Fin Max Spirulina Flakes		01F-03088		
	Fat: Acid Hydrolysis, %	7.14	5	
	Oven Moisture, %	6.03	7	
	Crude Protein, %	49.3	44	
Royal Canin USA, Inc.				
St. Peters, MO				
Excel Lamb Formula Dog Food		02F-00104		
	Crude Fat, %	9.92	6	
	Oven Moisture, %	75.6	78	
	Crude Protein, %	9.89	9	
Schempp Liquifeeds Inc				
Menno, SD				
Sun Drop Liquifeed		01F-05763		
	Ash, %	4.77	10	
	Karl Fisher Moisture, %	45.4	43	
	Vacuum Moisture, %	53.5	43	EXCESSIVE
	Crude Protein, %	29.3	30	
	Total Sugars(Invert), %	23.0	25	
Scranton Equity Exchange				

Scranton, ND

# Coop Beef Crumbles Medicated AS-700 2+2	01F-03575		
Calcium, %	3.87	4-5	
Crude Fiber, %	10.2	29	
Chlortetracycline, g/lb	1.37	2	DEFICIENT
Crude Protein, %	13.8	10	
47% Solvent Extracted Coop Soybean Meal	01F-03576		
Crude Protein, %	47.5	47	
# Custom Bison Mineral	01F-03577		
Calcium, %	5.95	8-10	DEFICIENT
Phosphorus, %	8.45	8	
Vitamin A, IU/ lb	207000.	200000	
20% Wheat/Barley Range Cube	01F-03579		
Crude Protein, %	21.0	20	
Vitamin A, IU/ lb	24000.	20000	
All Stock Feed	01F-03580		
Crude Protein, %	14.3	12	
14% Wheat/Barley Range Cube	01F-03581		
Crude Protein, %	15.7	14	
Vitamin A, IU/ lb	23700.	20000	

**SD Soybean Processors
Volga, SD**

Soybean Meal 44%	01F-00452		
Crude Protein, %	43.6	44	
Soybean Meal 46%	01F-00999		
Crude Protein, %	47.4	46	
46% Soybean Meal	01F-04207		
Crude Protein, %	45.8	46	
Soybean Meal	01F-04536		
Crude Protein, %	46.6	46	
Soybean Meal 44%	01F-05129		
Crude Protein, %	43.4	44	
Hi Pro Soybean Meal	01F-05661		
Crude Protein, %	47.3	46.5	
Soybean Meal 46%	01F-08793		
Crude Protein, %	47.0	46	

**SE Farmers Elevator
Elk Point, SD**

Lean Grow Ration #72 13% Finisher with .72 Lysine with 30	01F-04621		
Bacitracin, g/ton	28.7	30	
Lysine - Total, %	0.771	0.72	
Crude Protein, %	13.9	13	

**SF Sulfur
Freeport, TX**

Sulfur 99.5%	01F-04590		
Sulfur, %	98.4	99.5	

**Shurfine International
Northlake, IL**

Niger Thistle Seed	01F-08595		
Crude Fiber, %	15.3	22	
Crude Fat, %	38.1	27	
Crude Protein, %	22.1	18	

**Southwest Grain
Belle Fourche, SD**

Hen Scratch	01F-04996		
Crude Protein, %	12.6	12.5	

**St Aubrey Veterinary Labs
Hauppauge, NY**

# Premium Brewers Yeast and Garlic Tablets	01F-04158		
Alanine - Total, %	2.23		
Ammonia - Total, %	0.53		
Arginine - Total, %	2.02	2.1	
Aspartic Acid-Total, %	2.73		
Cystine - Total, %	0.376	0.5	DEFICIENT
Glutamic Acid-Total, %	4.74		
Glycine - Total, %	1.54	1.6	

Histidine - Total, %	0.761	1	DEFICIENT
Isoleucine - Total, %	1.33	2.1	DEFICIENT
Leucine - Total, %	2.29	3.1	DEFICIENT
Lysine - Total, %	2.22	3	DEFICIENT
Methionine - Total, %	0.470	0.7	DEFICIENT
Phenylalanine-Total, %	1.36	1.7	
Proline - Total, %	1.55		
Crude Protein, %	35.2	41	DEFICIENT
Serine - Total, %	1.83	1.9	
Threonine - Total, %	1.38	2	DEFICIENT
Tryptophan - Total, %	0.463	0.4	
Tyrosine - Total, %	1.14	1.4	
Valine - Total, %	1.70	2.3	DEFICIENT

Stamina Plus
Cody, WY

** Stamina Plus	01F-12323		
Glycine - Total, %	4.01	3.8	
Salt (ChlorideX1.65), %	5.07	2.5-3	EXCESSIVE
Salt (Sodium X 2.54), %	9.08	2.5-3	EXCESSIVE
Sodium, %	3.57	3.5-3.8	

Sterling Technology
Toronto, SD

** Nurse Mate ASAP	01F-00217		
Fat: Roesse Gottlieb, %	18.8	20	
Crude Protein, %	50.2	40	
Vitamin A, IU/ lb	14100.	20000	
Zinc, %	0.01	2	DEFICIENT
Nurse Mate R Milk Supp. For Lambs	01F-01255		
Fat: Roesse Gottlieb, %	30.6	30	
Crude Protein, %	29.9	23	
Nurse Mate ASAP	01F-08790		
Fat: Roesse Gottlieb, %	60.8	20	
Crude Protein, %	23.3	22	

Sun Seed Company Inc
Bowling Green, OH

Sunseed Vita Bird Food	01F-12452		
Crude Fiber, %	6.66	12	
Crude Fat, %	16.5	10	
Oven Moisture, %	10.2	12	
Crude Protein, %	17.9	16	
** Sunseed Sundrops Vitamins for Ferrets	02F-00105		
Vitamin A, IU/oz	255.	21000	DEFICIENT

Sweet Lix LLC
Salt Lake City, UT

Sweet Lix Mol-Mag Block 721	01F-08593		
Calcium, %	3.94	3.25-3.75	
Magnesium, %	12.9	13.5	
Salt (Sodium X 2.54), %	12.2	12-14.4	
Selenium, ug/g (ppm)	17.0	21.6	
Vitamin A, IU/ lb	77100.	100000	

Tetra Sales
Blacksburg, VA

Tetramin - Fish Food	01F-08783		
Crude Fat, %	6.34	5	
Oven Moisture, %	5.35	6	
Crude Protein, %	49.5	45	

The Iams Company
Dayton, OH

Iams Original Formula Cat Food	01F-00303		
Ash, %	6.27	6.5	
Fat: Acid Hydrolysis, %	21.5	21	
Oven Moisture, %	7.19	10	
Crude Protein, %	33.3	32	
Iams Mini Chunks Adult	01F-03083		
Fat: Acid Hydrolysis, %	15.3	15	

Oven Moisture, %	8.61	10	
Crude Protein, %	27.4	26	
Eukanuba Hairball Relief	01F-03085		
Fat: Acid Hydrolysis, %	21.1	21	
Oven Moisture, %	6.28	10	
Crude Protein, %	35.1	34	
** Iams Adult Cat Food - Original Formula	01F-03767		
Ash, %	6.02	6.5	
Fat: Acid Hydrolysis, %	21.3	21	
Oven Moisture, %	6.90	10	
Crude Protein, %	33.2	32	
Taurine - Total, %	0.112	0.15	DEFICIENT
Iams Original Puppy	01F-08960		
Fat: Acid Hydrolysis, %	17.6	17	
Oven Moisture, %	8.06	10	
Crude Protein, %	29.8	28	
Iams Mini Chunks	01F-08961		
Crude Fat, %	16.1	15	
Oven Moisture, %	7.39	10	
Crude Protein, %	27.6	26	
Iams Beef and Rice	01F-09111		
Crude Fat, %	7.22	6	
Oven Moisture, %	76.6	78	
Crude Protein, %	8.80	9	
Eukanuba Adult Dog Food	01F-12455		
Crude Fat, %	17.6	16	
Oven Moisture, %	7.30	10	
Omega-6 Fatty Acids, %	2.26	2.53	
Crude Protein, %	26.1	25	
Iams Weight Control Cat Food	01F-12709		
Ash, %	6.34	7	
Crude Fat, %	11.5	11-13.5	
Oven Moisture, %	6.19	10	
Omega-6 Fatty Acids, %	2.30	2	
Crude Protein, %	29.5	28	
Taurine - Total, %	0.111	0.13	
The Wardley Corporation			
Secaucas, NJ			
Wardley Premium Formula Chichlid Floating Pelleted Food	01F-04156		
Oven Moisture, %	5.56	9	
Crude Protein, %	44.2	40	
Wardley Goldfish Sinking Pellets	01F-04157		
Oven Moisture, %	7.78	9	
Crude Protein, %	28.5	25	
Cichlid Floating Pellet Food	01F-11337		
Oven Moisture, %	5.40	9	
Crude Protein, %	43.2	40	
Tradition Feed Products Company			
Mankato, MN			
Chlortetracycline Crumbles 4	01F-00132		
Calcium, %	6.58	5.5-6.6	
Crude Fiber, %	17.6	25	
Chlortetracycline, g/lb	4.44	4	
Crude Protein, %	11.7	5	
Cattle Coxy D1135	01F-00140		
Calcium, %	5.73	5.5-6.5	
Crude Fiber, %	16.5	24	
Decoquinat, mg/lb	1040.	1135	
Crude Protein, %	12.3	6	
Opticare Aureomycin Crumbles 4	01F-00306		
Crude Fiber, %	8.15	25	
Chlortetracycline, g/lb	3.87	4	
Crude Protein, %	14.0	9	
Tradition Rabbit Familyettes	01F-00417		
Crude Fiber, %	14.1	14	
Crude Protein, %	19.1	18	
Aureo S700 Crumbles 2 gram (Type B Medicated)	01F-00419		
Crude Fiber, %	8.43	29	

Chlortetracycline, g/lb	2.08	2	
Crude Protein, %	12.9	7	
Sulfamethazine, g/lb	1.89	2	
Tradition Nutriprime	01F-02662		
Acid Detergent Fiber, %	6.28	9	
Crude Protein, %	27.8	25	
Vitamin A, IU/ lb	35000.	44000	
Homestad 17% Egg Layer	01F-03074		
Calcium, %	3.82	2.9-3.9	
Lysine - Total, %	0.911	0.7	
Methionine - Total, %	0.335	0.3	
Crude Protein, %	17.7	17	
Tradition 17% Chick Grower Medicated AMBMD 18	01F-03741		
Amprolium, %	0.0105	0.0125	
Crude Protein, %	18.8	17	
Tradition Rabbit Familyettes Lot#6532-7 83JY11104 (50#)	01F-03742		
Crude Fiber, %	13.6	14	
Crude Protein, %	18.2	18	
Tradition Horse Power Pellets	01F-03755		
Crude Fiber, %	15.2	20	
Crude Protein, %	13.2	12.5	
Tradition 37% Sheep Supplement C165 Medicated	01F-03970		
Calcium, %	2.88	2.5-3	
Chlortetracycline, g/ton	154.	165	
Crude Protein, %	38.4	37	
Tradition Llama Nutrient Pellets	01F-04154		
Crude Fiber, %	12.5	22	
Crude Protein, %	13.8	10	
Tradition 20% Chick Starter AM.0125 BMD18	01F-04616		
Amprolium, %	0.0113	0.0125	
Lysine - Total, %	1.04	1	
Methionine - Total, %	0.338	0.37	
Crude Protein, %	20.3	20	
Opticare Beef Pack 1200	01F-05126		
Calcium, %	6.11	6-7.2	
Crude Fiber, %	7.86	15	
Monensin, g/ton	1180.	1200	
Crude Protein, %	15.0	5	
Opticare Beef Pack 1440	01F-05127		
Lasalocid, g/ton	1340.	1440	
Tradition Homestead 17% Egg Layer Pellets	01F-05130		
Calcium, %	3.87	2.9-3.9	
Crude Protein, %	18.2	17	
Tradition Horse Power Pellet	01F-05637		
Crude Fiber, %	15.2	20	
Crude Protein, %	13.7	12.5	
Tradition Game Bird Grower Am 0.175	01F-05639		
Amprolium, %	0.0163	0.0175	
Crude Protein, %	19.2	20	DEFICIENT
# Perfecta 12-12-12 Block	01F-08586		
Calcium, %	13.4	12-14.4	
Phosphorus, %	12.2	12	
Salt (Sodium X 2.54), %	12.7	12-14.4	
Selenium, ug/g (ppm)	20.8	20	
Vitamin A, IU/ lb	4830.	180000	DEFICIENT
20% Broiler Finish	01F-08701		
Amprolium, %	0.0103	0.0125	
Lysine - Total, %	0.867	1	
Methionine - Total, %	0.358	0.3	
Crude Protein, %	20.6	20	
23% Broiler Starter	01F-08716		
Amprolium, %	0.0109	0.0125	
Lysine - Total, %	1.15	1.2	
Methionine - Total, %	0.558	0.6	
Crude Protein, %	24.6	23	
Commercial Game Bird Grower	01F-08717		
Lysine - Total, %	1.03	1	
Methionine - Total, %	0.394	0.4	
Crude Protein, %	22.3	20	
Tradition Horse Power Pellet	01F-09848		

	Crude Fiber, %	13.7	20
	Crude Protein, %	13.8	12.5
Horse Power Pellet		01F-10713	
	Crude Fiber, %	15.6	20
	Crude Protein, %	13.7	12.5
Tradition Foal Creep and Grow		01F-11498	
	Crude Protein, %	19.1	16.5
Opticare Aureomycin Chlortetracycline 4 G Crumbles Type C		01F-11503	
	Crude Fiber, %	7.66	29
	Chlortetracycline, g/lb	3.54	4
	Crude Protein, %	14.8	7
Tradition Homestead 17% Egg Layer Granules		01F-11826	
	Crude Protein, %	17.4	17
Homestead 17% Egg Layer Pellets		01F-11827	
	Calcium, %	3.45	2.9-3.9
	Crude Protein, %	17.8	17
TSC Stores			
Nashville, TN			
Dumor Livestock 16% Poultry Grower Layer		01F-09252	
	Crude Protein, %	16.6	16
US Commodities Inc			
Wayzata, MN			
Blood Meal		01F-05687	
	Crude Protein, %	91.7	85
Vigortone Ag Products Inc			
Cedar Rapids, IA			
325 Plus Cow Mineral		01F-04984	
	Calcium, %	13.3	13.5-16.2
	Phosphorus, %	6.92	7
	Salt (Sodium X 2.54), %	19.5	18.2-21.8
	Selenium, ug/g (ppm)	27.8	26.4
	Vitamin A, IU/ lb	377000.	300000
Vigortone Wheat and Legume Grazer (Medicated)		01F-04986	
	Calcium, %	8.43	8.2-9.8
	Magnesium, %	4.01	4
	Phosphorus, %	3.00	3
	Salt (Sodium X 2.54), %	23.4	22-26.4
	Selenium, ug/g (ppm)	9.64	8.8
	Vitamin A, IU/ lb	151000.	156000
Vigortone No. 325CTC		01F-05618	
	Calcium, %	14.2	13.5-16.2
	Chlortetracycline, g/lb	1.30	1.4
	Phosphorus, %	6.97	7
	Salt (Sodium X 2.54), %	20.8	18.2-21.8
	Selenium, ug/g (ppm)	26.8	26.4
	Vitamin A, IU/ lb	323000.	300000
Vigortone No. 355B		01F-05619	
	Calcium, %	20.7	20-24
	Lasalocid, g/ton	1540.	1600
	Phosphorus, %	3.51	3.5
	Salt (Sodium X 2.54), %	20.9	18.2-21.8
	Selenium, ug/g (ppm)	26.1	26.4
	Vitamin A, IU/ lb	369000.	300000
Vitalix Inc.			
Alliance, NE			
12:12 Range Mineral Vit + Min Supple.		01F-04152	
	Calcium, %	10.9	11.3-13.5
	Phosphorus, %	11.6	12
	Sulfur, %	1.35	1.1
	Vitamin A, IU/ lb	146000.	167000
Wagner Bros Feed Corp			
Farmingdale, NY			
Wagners Wild Bird Food		01F-08784	
	Crude Fiber, %	3.76	10
	Crude Protein, %	9.35	9

**Wal Mart Stores Inc
Bentonville, AR**

Special Kitty Premium Cat Food	01F-04017	
Ash, %	2.26	2.8
Oven Moisture, %	80.3	82
Crude Protein, %	10.2	8
Taurine - Total, %	0.046	0.05
Ol' Roy Dog Food	01F-09276	
Oven Moisture, %	82.2	82
Crude Protein, %	11.7	8
Maximum Nutrition Super Premium Lamb and Rice Dog Food	02F-00198	
Fat: Acid Hydrolysis, %	18.1	17
Oven Moisture, %	8.18	10
Crude Protein, %	29.0	28

**Watertown Coop Elevator
Watertown, SD**

# Custom Mix Feed	01F-02911	
Decoquinatate, g/ton	N.D.	28
Lasalocid, g/ton	63.4	
Oxytetracycline, g/ton	490.	600
Distillers Dry Grain	01F-06269	
Ash, %	3.99	8
Crude Fiber, %	6.34	15
Crude Fat, %	11.0	10
Crude Protein, %	26.1	25
Custom Hog Mix	01F-08794	
Tylosin, g/ton	33.9	40

**West River Feed
Scranton, ND**

Custom Buffalo Mineral #39-1523	01F-04983	
Calcium, %	23.0	23-26
Phosphorus, %	6.23	6
Salt (Sodium X 2.54), %	3.62	3-4
Selenium, ug/g (ppm)	23.9	20
Vitamin A, IU/ lb	353000.	350000

**Western Consolidated Coop
Sunburg, MN**

Pure Gold for Horses	01F-05630	
Crude Fat, %	97.7	98
Vacuum Moisture, %	0.59	0.1

**Westway Feed Products
New Orleans, LA**

Sweet 45 Lite Dry Molasses	01F-03073	
Acid Detergent Fiber, %	25.1	26
Crude Fiber, %	22.8	24
Oven Moisture, %	4.15	6
Total Sugars(Invert), %	37.3	38
Dried Molasses Sweet 45	01F-03170	
Crude Fiber, %	24.4	24
Oven Moisture, %	5.16	6
Total Sugars(Invert), %	34.3	38
Westway E-Z Glo TM 4-70.5	01F-03978	
Vacuum Moisture, %	31.8	29.5
Potassium, %	3.44	2
Total Sugars(Invert), %	36.6	37
Wes Las 79.5 Brix Cane Molasses	01F-04836	
Vacuum Moisture, %	25.8	27
Total Sugars(Invert), %	41.3	43

J & R 35%-1-68 (NC)	01F-04893	
Equiv Crude Protein, %	25.5	26.5
Vacuum Moisture, %	32.0	32
Potassium, %	3.06	3
Crude Protein, %	36.7	35
Total Sugars(Invert), %	27.9	30

Vitamin A, IU/ lb	35800.	40000	
# J & R 45/66 (B500)	01F-04894		
Equiv Crude Protein, %	33.9	41	
Lasalocid, g/ton	609.	500	
Vacuum Moisture, %	36.8	34	
Potassium, %	2.29	2.5	
Crude Protein, %	41.8	45	DEFICIENT
Total Sugars(Invert), %	9.46	27	DEFICIENT
Vitamin A, IU/ lb	32900.	40000	
Sweet 4S " Lite" Dried Molasses	01F-05412		
Crude Fiber, %	23.1	24	
Oven Moisture, %	4.86	6	
Total Sugars(Invert), %	36.8	38	
Mol - Mix Prime #1077	01F-06284		
Equiv Crude Protein, %	22.8	25	
Vacuum Moisture, %	34.7	33	
Potassium, %	3.13	2	
Crude Protein, %	34.7	32	
Total Sugars(Invert), %	28.7	32	
Vitamin A, IU/ lb	52600.	40000	
GTA Rum - Liq 41CR	01F-06285		
Equiv Crude Protein, %	27.8	32	
Vacuum Moisture, %	35.7	34	
Crude Protein, %	41.6	41	
Total Sugars(Invert), %	24.5	25	
Vitamin A, IU/ lb	33400.	40000	
Wes Las 79.5 Brix Cane Molasses	01F-10207		
Vacuum Moisture, %	29.0	27	
Total Sugars(Invert), %	38.6	43	
Sweet 4S Lite Dried Molasses	01F-10965		
Acid Detergent Fiber, %	29.6	38	
Crude Fiber, %	25.1	24	
Total Sugars(Invert), %	34.2	38	
Westway Trading Corp			
Omaha South, NE			
Westway EZ Flo 62 #6223	01F-05625		
Vacuum Moisture, %	35.2	38	
Crude Protein, %	14.0	4.5	
Whitetail Inst. of North America			
Pintala, AL			
# Imperial White Tail 30-06 Mineral/Vitamin	01F-09108		
Calcium, %	15.7	15.17-18.2	
Phosphorus, %	4.23	4	
Salt (Sodium X 2.54), %	44.3	40-45	
Selenium, ug/g (ppm)	7.94	9	
Vitamin A, IU/ lb	61900.	160000	DEFICIENT
Imperial Whitetail 30-06 Plus Protein	01F-09109		
Calcium, %	11.7	11-13.2	
Phosphorus, %	4.04	4	
Crude Protein, %	10.7	10	
Salt (Sodium X 2.54), %	16.8	15-16	
Selenium, ug/g (ppm)	7.28	9	
Vitamin A, IU/ lb	155000.	160000	
Woody's Performance Horse Feed Products			
Dickinson, ND			
# Crimped Oats	01F-02505		
Crude Protein, %	10.1	11	DEFICIENT
Steamed Crimped Oats	01F-03366		
Crude Fat, %	4.76	4.5	
Crude Protein, %	13.1	10.5	
Apple Flavored Horse Treats	01F-03762		
Crude Fiber, %	15.8	18	
Crude Protein, %	14.6	12	
Woody's Horseman's Complete	01F-04548		
Crude Fiber, %	21.1	24	
Crude Protein, %	15.4	12	
# Cracked Corn	01F-04549		
Crude Protein, %	7.01	8	DEFICIENT

Hen Scratch		01F-04550		
	Crude Protein, %	9.72	9.5	
Steamed Crimped Oats		01F-04555		
	Crude Protein, %	13.3	10.5	
*** Complete Cycle Rabbit Bits		01F-04987		
	Crude Fiber, %	18.8	15-20	
	Crude Protein, %	12.6	14	DEFICIENT
Woody's Futurity Blend 18		01F-04989		
	Lysine - Total, %	1.05	0.96	
	Methionine - Total, %	0.313	0.27	
	Crude Protein, %	20.0	18	
Woody's Summer Heat		01F-04990		
	Fat: Acid Hydrolysis, %	6.84	7	
	Lysine - Total, %	0.656	0.6	
	Methionine - Total, %	0.211	0.15	
	Crude Protein, %	13.8	12.5	
Woody's Futurity Blend 14 for Brood Mares		01F-04991		
	Lysine - Total, %	0.697	0.61	
	Methionine - Total, %	0.241	0.12	
	Crude Protein, %	15.5	14	
XFE Products				
Hartford, TX				
*** Psyllium Seed Husks		01F-07139		
	Crude Fiber, %	9.14	5	EXCESSIVE
	Oven Moisture, %	10.5	9	EXCESSIVE
Yaggies Inc				
Yankton, SD				
Custom Mix Min Base V1.6-200/ton		01F-07137		
	Copper, ug/g (ppm)	26000.	34115	
	Manganese, ug/g (ppm)	54500.	39104	
	Selenium, ug/g (ppm)	298.	269	
	Vitamin A, IU/ lb	2880000.	2988704	
	Zinc, ug/g (ppm)	158000.	111122	
Custom Mix A-5200 Feed Sub 2K		01F-07138		
	Copper, ug/g (ppm)	45800.	45570	
	Manganese, ug/g (ppm)	51000.	52220	
	Selenium, ug/g (ppm)	324.	353	
	Vitamin A, IU/ lb	3550000.	3800000	
	Zinc, ug/g (ppm)	139000.	148180	

Remedy Sample Count Report

Remedies Sampled From 01/01/2001 To 12/31/2001

Manufacturer and Location			Sample	Passed	Not
Agri Laboratories LTD	St. Joseph	MO	7	7	0
American Cyanamid Company	Wayne	NJ	1	1	0
Aspen Veterinary Resources	Kansas City	MO	6	6	0
Boehringer Ingelheim Animal Health	St Joseph	MO	1	1	0
Carter Wallace Inc	Cranbury	NJ	1	1	0
Dealer Distribution of America	Grapevine	TX	3	3	0

Durvet Inc	Blue Springs	MO	4	4	0
Elanco Animal Health	Indianapolis	IN	7	7	0
Farnam Pet Products	Phoenix	AZ	5	5	0
Fleming Laboratories	Charlotte	NC	1	1	0
Fort Dodge Animal Health	Fort Dodge	IA	5	5	0
G. C. Hanford Mfg. Co.	Syracuse	NY	1	1	0
Hartz Mountain Corp	Secaucus	NJ	2	2	0
Hess & Clark Inc	Ashland	OH	1	1	0
Lambert Kay	Cranbury	NJ	1	0	1
Merial Limited	Iselin	NJ	1	1	0
Milk Specialties Company	Dundee	IL	1	1	0
North American Animal Health	Lee's Summit	MO	1	1	0
Osborn	Iselin	NJ	2	2	0
Pet Gold Products	San Diego	CA	1	1	0
Pfizer Animal Health	Exton	PA	17	17	0
RX Veterinary Products	Porterville	CA	1	1	0
Solvay Animal Health	Mandota Heights	MN	1	1	0
St. Jon Labs	Harbor City	CA	2	2	0
Tradition Feed Products Company	Mankato	MN	1	1	0
Vet-A-Mix Inc	Shenandoah	IA	1	1	0
Zema Corp.	Research Triangle Park	NC	1	1	0
	Totals:		76	75	1

Percent Passed: 98.7%

Percent Not 1.3%

**ANIMAL REMEDIES SAMPLED -- 2001
LIST OF ANALYTES**

<u>DRUG ANALYTES</u>	<u>NUMBER OF SAMPLES</u>
Oxytetracycline	23
Piperazine	9
Tylosin	7
Pyrantel Base	5
Chlortetracycline	4
Sulfamethazine	4
Tetracycline Hydrochloride	4
Sulfadimethoxine	3

Penicillin	2
Amprolium	1

OTHER ANALYTES

Vitamin A	6
Sodium	5
Dextrose	4
Magnesium	3
Calcium	2
Iron	2
Moisture	2
Potassium	2
Crude Protein	1
Glycine	1
Salt	1
Potassium Iodide	1
Chloride	1
Iodine	1
Linoleic Acid	1
Phosphorus	1
Amino Acid Profile	1

Remedy Summary Report

Remedies
01-01-2001 to 12-31-2001

Manufacturer Location	Product	Analyte	Found	Claim
Agri Laboratories LTD St. Joseph, MO	Agrimycin 343	Oxytetracycline Hydrochloride Soluble	01D-02909	
		Oxytetracycline, g/ pkg	104.	102.4
	Tetra Bac 324	Tetracycline Hydrochloride Soluble Powder	01D-02910	
		Tetracycline HCl, g/pkg	103.	101.2
	Agri Labs Piperazine 17		01D-08962	
		Piperazine, g/100cc	17.0	17
	Agrimycin 200		01D-12891	
		Oxytetracycline, mg/ mL	188.	200
	Sustain III Calf Bolus		01D-12893	
		Sulfamethazine, grams/bolus	8.05	8.02
	Tetra-Bac 324	Tetracycline Hydrochloride Soluble Powder	01D-12894	
		Tetracycline HCl, g/packet	97.4	101.2

Di-Methox		01D-12895	
	Sulfadimethoxine, oz/pkg	3.26	3.34
American Cyanamid Company			
Wayne, NJ			
Aureomycin Soluble Powder		01D-04544	
	Chlortetracycline, g/pkg	27.9	25.6
Aspen Veterinary Resources			
Kansas City, MO			
Sulfadimethoxine Injection - 40%		01D-01256	
	Sulfadimethoxine, mg/ml	395.	400
Amino Acid Concentrate Oral Solution		01D-03370	
	Arginine HCl, mg/500mL	402.	425
	Calcium, mg/500mL	190.	204
	Cysteine HCl H2O, mg/500mL	256.	250
	Dextrose Monohydrate, g/500mL	25.6	
	Dextrose, g/500mL	23.3	25
	Glutamic Acid-Total, mg/500mL	646.	680
	Histidine HCl H2O, mg/500mL	297.	297.5
	Isoleucine - Total, mg/500mL	425.	425
	Leucine - Total, mg/500mL	966.	935
	Lysine HCl, mg/500mL	889.	850
	Magnesium, mg/500mL	95.9	98.6
	Methionine - Total, mg/500mL	209.	255
	Phenylalanine-Total, mg/500mL	601.	595
	Potassium, mg/500mL	541.	524
	Sodium, mg/500mL	208.	211
	Threonine - Total, mg/500mL	400.	391
	Valine - Total, mg/500mL	690.	680
Iron Hydrogenated Dextran Injection		01D-03372	
	Iron, mg/mL	104.	100
Terra Vet 100		01D-04739	
	Mg Chloride Hexhydrate, %	5.66	5.76
	Karl Fisher Moisture, %	19.0	17
	Oxytetracycline, mg/ mL	102.	100
Terra - Vet 100		01D-06286	
	Mg Chloride Hexhydrate, %	5.63	5.76
	Karl Fisher Moisture, %	18.6	17
	Oxytetracycline, mg/ mL	111.	100
Sulfadimethoxine Soluble Powder		01D-06287	
	Sulfadimethoxine, g/pkg	97.1	94.6
Boehringer Ingelheim Animal Health			
St Joseph, MO			
BioMycin 200		01D-02512	
	Oxytetracycline, mg/ mL	207.	200
Carter Wallace Inc			
Cranbury, NJ			
Evict Liquid Wormer		01D-03093	
	Pyrantel Base, mg/ mL	1.90	2.27
Dealer Distribution of America			
Grapevine, TX			
Oxy-mycin 200		01D-03748	
	Oxytetracycline, mg/ mL	202.	200
Iodine Tincture 7%		01D-05626	
	Iodine, %	7.02	7
	Potassium Iodide, % w/v	5.05	5
Oxytetracycline 200		01D-05627	
	Oxytetracycline, mg/ mL	193.	200
Durvet Inc			
Blue Springs, MO			
Durvet Liquid Wormer		01D-03103	
	Pyrantel Base, mg/ mL	1.89	2.27
Sustain III		01D-08721	
	Sulfamethazine, g/bolus	7.96	8.02
Durvet Pen-Aqueous		01D-09254	
	Penicillin, units/ mL	306000.	300000
Durvet Vitamin AD		01D-09255	

	Vitamin A, I.U./ mL	500000.	500000
Elanco Animal Health			
Indianapolis, IN			
	Elanco Tylan	01D-03101	
	Tylosin, mg/ mL	44.9	50
	Tylan R 200 Injection 200mg per mL	01D-03371	
	Tylosin, mg/ mL	187.	200
	Tylan 50 Injection	01D-03766	
	Tylosin, mg/ml	48.0	50
	Tylan 200 Injectable	01D-04737	
	Tylosin, mg/ mL	199.	200
	Tylan 200	01D-08719	
	Tylosin, mg/ mL	189.	200
	Tylan 50 Injection 100mL	01D-10976	
	Tylosin, mg/ mL	47.5	50
	Tylan	01D-12892	
	Tylosin, g/container	98.8	100
Farnam Pet Products			
Phoenix, AZ			
	D-Worm TM Dog Wormer Chewable Tablets	01D-01254	
	Pyrantel Base, mg/tablet	114.	113.5
	D-Worm Farnam	01D-03086	
	Pyrantel Base, mg/tablet	110.	113.5
	Tasty Paste R Dog Wormer	01D-03369	
	Piperazine, %	19.8	20.8
	Tasty Paste	01D-03750	
	Piperazine, %	20.7	20.8
	Tasty Paste Dog Wormer	01D-03752	
	Piperazine, %	20.5	20.8
Fleming Laboratories			
Charlotte, NC			
	Wazine	01D-06565	
	Piperazine, g/100 mL	17.0	17
Fort Dodge Animal Health			
Fort Dodge, IA			
	D-Lyte H2O-K (Electrolyte Supp.)	01D-01257	
	Dextrose, %	84.6	72.38
	Sodium, %	2.76	3.36-4.11
	Aureomycin Chlortetracycline Soluble Powder	01D-01423	
	Chlortetracycline, g/pkg	10.6	10
	Vitamins and Electrolytes	01D-04545	
	Vitamin A, I.U./ lb	5370000.	5000000
	Aureomycin Chlortetracycline Soluble Powder	01D-05236	
	Chlortetracycline, g/lb	24.5	25
	Aureomycin Chlortetracycline	01D-06564	
	Chlortetracycline, g/lb	26.9	25
G. C. Hanford Mfg. Co.			
Syracuse, NY			
	Sterile Penicillin G. Procaine	01D-04208	
	Penicillin, units/ mL	319000.	300000
Hartz Mountain Corp			
Secaucus, NJ			
	Hartz Once A Month Wormer for Dogs	01D-03156	
	Piperazine, mg/capsule	81.8	80
	Hartz Wormer	01D-08596	
	Piperazine, mg/capsule	81.2	80
Hess & Clark Inc			
Ashland, OH			
	VI-TAL	01D-02399	
	Vitamin A, I.U./ pkg	2300000.	2600000

Lambert Kay				
Cranbury, NJ				
	** Linatone Supplement for Cats	01D-03751		
	Linoleic Acid 18:2, %	48.9	47.9	
	Vitamin A, I.U./kg	218000.	324244	DEFICIENT
Merial Limited				
Iselin, NJ				
	Corid (Amprolium)	01D-12449		
	Amprolium, %	21.0	20	
Milk Specialties Company				
Dundee, IL				
	Arrest Electrolyte/Energy Supplement	01D-05329		
	Dextrose, %	48.4	33	
	Sodium, %	1.91	2	
North American Animal Health				
Lee's Summit, MO				
	RFD Liquid Wormer	01D-00219		
	Pyrantel Base, mg/mL	1.96	2.27	
Osborn				
Iselin, NJ				
	Sustain III Sulfamethazine	01D-03378		
	Sulfamethazine, grams/bolus	32.0	32.1	
	Sustain III	01D-08963		
	Sulfamethazine, g/bolus	31.8	32.1	
Pet Gold Products				
San Diego, CA				
	Pet Gold Liquid Wormer	01D-03094		
	Piperazine, mg/ml	52.2	50	
Pfizer Animal Health				
Exton, PA				
	Terramycin	01D-00215		
	Oxytetracycline, g/ pkg	10.6	10	
	Liquamycin LA200	01D-00216		
	Oxytetracycline, mg/ mL	203.	200	
	Terramycin R Soluble Powder	01D-03373		
	Oxytetracycline, g/bag	10.6	10	
	Liquamycin LA200 (Oxytetracycline injection)	01D-03765		
	Oxytetracycline, mg/ mL	201.	200	
	Terramycin Soluble Powder	01D-03967		
	Oxytetracycline, g/ pkg	10.7	10	
	Terramycin Soluble Powder	01D-04058		
	Oxytetracycline, g/ pkg	11.3	10	
	Terramycin Soluble Powder	01D-04546		
	Oxytetracycline, g/ pkg	10.4	10	
	Terramycin Scours Tablets	01D-04738		
	Oxytetracycline, mg/tablet	250.	250	
	Terramycin Soluble Powder	01D-05132		
	Oxytetracycline, g/ pkt	10.2	10	
	Liquamycin LA 200	01D-05237		
	Oxytetracycline, mg/ mL	200.	200	
	Terramycin Soluble Powder	01D-05330		
	Oxytetracycline, g/ pkt	10.3	10	
	Entrolyte	01D-05629		
	Chloride, %	1.97	1.7	
	Glycine - Total, %	2.69	2.3	
	Potassium, %	1.08	0.95	
	Crude Protein, %	20.0	19	
	Salt (ChlorideX1.65), %	1.63	1.2-1.7	
	Sodium, %	2.67	2.2-2.7	
	Terramycin Soluble Powder	01D-06288		
	Oxytetracycline, g/packet	9.48	10	
	Terramycin Scour Tablets	01D-08452		

	Oxytetracycline, mg/tablet	245.	250
Liquamycin LA-200		01D-08720	
	Oxytetracycline, mg/ mL	201.	200
Terramycin Scours Tablets		01D-08789	
	Oxytetracycline, mg/tablet	228.	250
Liquamycin LA200 Oxytetracycline		01D-12321	
	Oxytetracycline, mg/ mL	207.	200
RX Veterinary Products			
Porterville, CA			
	Iron Dextran	01D-05628	
	Iron, mg/mL	101.	100
Solvay Animal Health			
Mandota Heights, MN			
	Vitamin T.E.A.M.	01D-02398	
	Vitamin A, I.U./ lb	9820000.	1000000
St. Jon Labs			
Harbor City, CA			
	Tetracycline Tablets	01D-03091	
	Tetracycline HCl, mg/tablet	276.	250
	Ornacycline for Birds	01D-03092	
	Tetracycline HCl, mg/tablet	269.	250
Tradition Feed Products Company			
Mankato, MN			
	Opticare Thrive	01D-05134	
	Sodium, %	5.38	5.5-6
Vet-A-Mix Inc			
Shenandoah, IA			
	Vet A Mix Osteo-Form	01D-01294	
	Calcium, %	19.2	18.5-22.2
	Phosphorus, %	11.2	10
	Vitamin A, IU/tablet	772.	750
Zema Corp.			
Research Triangle Pa, NC			
	Pulvex Liquid Wormer	01D-00218	
	Piperazine, %	3.50	3.35

ANIMAL FEED & DRUG CONTAMINANTS MONITORING PROGRAM

Sulfonamide (Sulfa) Drugs

Sulfamethazine and sulfathiazole are the two most common sulfonamide drugs used in animal production, although many other sulfonamide drugs are available. Because they are effective and relatively inexpensive, they have been widely used. They are most effective when used early in the course of a disease when bacterial organisms are rapidly multiplying because they act by blocking enzymes necessary for protein synthesis during bacterial reproduction. They are not very effective in cases where the infection is firmly established because the animal must be able to mount an immune response for the sulfonamide therapy to be successful.

The sulfa drugs are available in a wide variety of dosage forms, as well as Type A Medicated Articles and Type B and C medicated feeds. In feeds, sulfamethazine and sulfathiazole are used primarily to prevent or treat bacterial infections. The sulfa drugs are distributed throughout the entire body, including muscle, bone, blood and milk. Bacterial resistance may gradually develop and in some cases is widespread. Misuse of any of the sulfa products has the potential to cause tissue residues.

Several years ago the National Center for Toxicological Research tentatively concluded that sulfamethazine is a carcinogen. Since that time much of its use has been curtailed. Due to the carcinogenicity issue, sulfa residues in animal tissues intended for human consumption became a concern, especially in swine. In 1975, the United States Department of Agriculture began a national monitoring program. In 1977, they found sulfa residue in 12.6% of swine sampled. In 1990, sulfa residue was detected in less than 1.0% of swine sampled.

The Food & Drug Administration (FDA) in 1990 removed a portion of the Food, Drug and Cosmetic Act, 21 CFR 510.450 which had allowed the interim sale of sulfa drugs not covered by an approved new animal drug application (NADA). This served to curtail the availability of some of these products, principally water-soluble forms of sulfa.

The South Dakota Department of Agriculture has also operated a program designed to monitor feeds and feed ingredients for contamination by sulfonamides. This program has been successful in that few samples containing significant levels of sulfa contamination have been found. In the six years between January 1,

1991 and December 31, 1996, we analyzed 319 samples for sulfa drug residues, and detected residues in 19 samples, or 6.0% of the samples. None of these samples contained more than 2.0 ppm sulfa residue, and most contained 1.0 ppm or less. Nine positives were detected in 1991, and the rate has gone down since then. No residues were found in 1995 or 1996, although sample numbers were reduced during this time, as well.

FDA's action level for residues in feed is 2 ppm in the complete feed. Feed ingredients may contain residues greater than 2 ppm, but the total ration must have a residue concentration below 2 ppm. None of the residues found by our monitoring program during this time period were violative. Of the 19 samples positive for sulfa residue, two were samples of cattle concentrates, seven were samples of meat and bone meal, and ten were hog feeds and concentrates.

SAMPLING PROGRAM

Although the incidence of sulfa residues in animal tissues has been reduced, the problem has not been eliminated entirely. However, our results indicate that we can maintain an effective animal feed monitoring program while monitoring fewer samples. To achieve this we will concentrate our sulfa residue monitoring program on those feeds and feed ingredients believed to have a higher probability of contamination and/or potential to cause meat or milk residues. Of primary concern are feeds that were mixed immediately following a batch of feed containing sulfonamide drugs, meat and bone meal, and other finished feeds not labeled to contain sulfa.

We do not intend to collect additional samples, but plan on getting more use out of the samples that are taken. Although we have not done many sulfa residue analyses in the last several years we would like to maintain that analytic capability, as well as continue to be able to monitor samples for sulfa residues.

Specific instructions for our continued sulfa-residue monitoring program are as follows:

1. The lab will only analyze for sulfa residues when requested by the inspector or the Office of Agronomy Services.
2. Determine if the feed sampled fits into one of the priority categories. These categories are:
 - commercial and/or custom-mixed feeds at feed mills which may show cross-contamination from a previously mixed batch of feed. Check production records prior to sampling for this purpose
 - meat and bone meal,
3. Other products which may be sampled are:
 - feeds and supplements for finishing hogs and cattle,
 - feeds and supplements for lactating dairy cows, and
 - other products which the inspector suspects may contain sulfa residues.
4. Make a note in the "Remarks" section of the Report on Sample requesting sulfa residue analysis.

Care should be taken when handling sulfonamide products. Some people are allergic and may experience adverse reactions when exposed to these drugs. In general, the more concentrated the product being handled, the more care that should be taken during handling. Avoid skin contact as well as ingestion. In case of eye contact, flush with water. In case of ingestion, obtain medical attention. Induce vomiting if the person is conscious. Always wash with soap and water after direct skin exposure to these drugs or feeds containing these drugs.

ANIMAL FEED & DRUG CONTAMINANTS MONITORING PROGRAM

Adulteration by Noxious Weed Seeds

Noxious weeds are a problem in South Dakota. One method being used to try to control the distribution of noxious weeds in the state is to reduce or eliminate noxious weed seeds from animal feeds. Several sections of the South Dakota Commercial Feed Law and Regulations address the issue of commercial feeds containing noxious weed seeds.

Section 39-14-53 of the South Dakota Commercial Feed Law states "a commercial feed shall be deemed to be adulterated if it contains viable weed seeds in amounts exceeding the limits which the Secretary of Agriculture shall establish by rule pursuant to the provisions of Chapter 1-26."

These rules are further addressed in the Administrative Rules of South Dakota (ARSD), Chapter 12:53:01:10, which states:

All screenings or by-products of grains and seeds containing prohibited or restricted weed seeds, as defined in chapter 12:36:03, when used in commercial feed or sold as such to the ultimate consumer, must be ground fine enough or otherwise treated to destroy the viability of the weed seeds. The finished product may contain no viable prohibited weed seeds per pound and not more than 4.5 viable restricted weeds seeds per pound.

Regulation 9(b) of the commercial feed regulations (and the Uniform Feed Bill and Regulations) essentially repeats this.

Chapter 12:36:03 of the South Dakota Seed Law, SDCL 38-12A, defines those noxious weed seeds that are prohibited and restricted. They are listed as follows:

12:36:03:01 Prohibited noxious weed seeds.

- | | |
|----------------------|--------------------------|
| (1) Field bindweed | (5) Perennial sowthistle |
| (2) Leafy spurge | (6) Canada thistle |
| (3) Hoary cress | (7) Quackgrass |
| (4) Russian knapweed | (8) Horse nettle |

12:36:03:02 Restricted noxious weed seeds.

- | | |
|----------------------|------------------------|
| (1) Wild oats | (7) Annual bluegrass |
| (2) Dodder | (8) Spotted knapweed |
| (3) Wild mustard | (9) Giant foxtail |
| (4) Hedge bindweed | (10) Musk thistle |
| (5) Wild carrot | (11) Plumeless thistle |
| (6) Field pennycress | |

Based on our test results, we find feed samples containing noxious weed seeds. We are not analyzing a representative cross-section of the commercial feed supply, however, we are only analyzing those products which appear to contain noxious weed seeds. Additionally, the weed seeds need to be **viable** in order for the product to be violative. From 1989 through 1998 the South Dakota Department of Agriculture analyzed 423 feed samples for noxious weed seeds. 85 of those samples (20%) were reported NOT PASSED, because they contained viable noxious weed seeds in excess of the standards specified above.
AS-FS-102

SAMPLING PROGRAM

While many feeds and feed ingredients have little or no contamination by weed seeds, other feeds and ingredients have a higher probability of containing noxious weed seeds. By concentrating our sampling and

analysis on those feeds and feed ingredients that have a higher chance of containing noxious weed seeds, we may get better compliance with the regulations and decrease the amount of contaminated feed distributed. Grain screenings, custom formula feeds, texturized feeds, and wild bird food are products of primary concern at this time.

Rather than collect extra samples for weed seed analysis, we will analyze a number of our routine samples for weed seeds, in addition to the routine analytes. We will continue monitoring commercial feeds for contamination by viable noxious weed seeds.

Specific instructions to field staff for our weed seed monitoring program are as follows:

1. The lab will only analyze for weed seeds when requested by the Inspector or the Office of Agronomy Services.
2. Visually inspect each sample collected.
3. Determine if the product sampled fits into one of the priority categories. These categories are:
 - Grain screenings,
 - Custom formula feeds, especially those containing whole grains or screenings,
 - Texturized and other feeds containing whole grains, and
 - Wild bird food.
4. Other products may be submitted for analysis if there appears to be a high probability of weed seed contamination.
5. When collecting a sample for weed seed analysis and label analysis, please collect an additional pound of feed for the weed seed analysis.
6. Make a note in the "Remarks" section of the Report of Sample form requesting analysis for weed seed.

If the sample is reported NOT PASSED after analysis, it will be handled like any other violative sample. Any product remaining of the lot sampled will be placed under Stop Sale Order as an adulterated product. The product can be released from Stop Sale Order only for remanufacturing to render the weed seeds non-viable or disposal.

SUMMARY OF WEED SEED OCCURRENCE IN COMMERCIAL FEEDS

Commercial Feeds Sampled January 1, 2001 - December 31, 2001

Total samples analyzed for weed seed contamination: 32
Number of samples analyzed reported as PASSED: 25
Number of samples analyzed reported NOT PASSED: 7
Percent of samples reported NOT PASSED: 22%
Number of samples actually containing weed seeds: 17
Number of samples containing no weed seeds: 15

Sampling was confined to products that looked like they may contain noxious weed seeds. Some of the samples that passed did contain some weed seeds. However, the factor that determines if a sample passes or not is seed viability. The weed seeds need to be viable to be violative. Samples containing noxious weed seeds but reported as PASSED contained less than 4.5 viable *restricted* weed seeds per pound or no viable *prohibited* weed seeds. In some cases, there were no viable weed seeds in the sample.

Type of feed analyzed for weed seeds	Number analyzed	Number PASSED	Number NOT PASSED	Percent NOT PASSED
Texturized feed, scratch feeds, poultry feed	9	3	6	43%
Customer formula feeds	7	3	4	50%
Grain, grain screenings	6	1	5	17%
Wild bird feeds	10	0	10	--

In 2000 we analyzed 12 samples for weed seed contamination and reported 1 samples as NOT PASSED, an 8% non-compliance rate. Since 1989 we have analyzed approximately 495 samples for weed seeds, reporting about 95 of them as NOT PASSED, for a non-compliance rate of about 19% during that time period.

WEED SEED ANALYSIS OF COMMERCIAL FEEDS

Commercial Feeds Sampled Jan. 1, 2001 - Dec. 31, 2001

* Results marked by an asterisk indicate that the number of restricted noxious weed seeds found in that sample was below the tolerance of 4.5 restricted noxious weed seeds per pound. In these instances, viability was not determined.

American Agco

S. St. Paul, MN

Cardinal Blend Wild Bird Food
None found Passed

Dakota Mill & Grain

Sturgis, SD

Hen Scratch Not Passed
Found: Field bindweed 20/lb, Wild oat 11/lb
5 Field bindweed & 10 Wild oat seeds germinated

Sweet Chop Feed Passed
Found: Field bindweed 9/lb, Wild oat 45/lb
No seeds germinated

Hen Scratch Not Passed
Found: Wild mustard 18/lb, Field pennycress 2/lb, Field bindweed 7/lb, Wild oat 49/lb
2 Field pennycress, 7 Wild mustard, 2 Field bindweed & 23 Wild oat seeds germinated

Douglas Feed Mill

Armour, SD

Custom Sow Ration Passed
None found

Gutwein & Co.

Francesville, IN

Morning Song Wild Bird Food Passed
None found

Hartz Mountain Company

Secaucus, NJ

Hartz Canary Bird Feed Passed
Found: Wild oat 72/lb, only 3 Wild oat seeds germinated

Harvest States Feeds

Sioux Falls, SD

Ruf'n Pro Lamb Feed Passed
Found: Field pennycress 1/lb, only 1 seed germinated

Hy-Vee Inc.

W. Des Moines, IA

Hy-Vee Wild Bird Food Passed
None found

Kaytee Products Inc.

Chilton, WI

Kaytee Wild Bird Food None found	Passed
Kaytee Forti-Pet None found	Passed
Wild Bird Food None found	Passed
Supreme Natural Blend Found: Wild mustard 3/lb, Indian mustard 3/lb, only one seed germinated	Passed
Kaytee Fiesta None found	Passed

New Underwood Grain

New Underwood, SD Chicken Scratch Found: Field bindweed 2/lb, no seed germinated	Passed
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Northern Plains Coop

Dupree, SD Sweet Chop Feed Found: Field pennycress 9/lb, Wild oat 3/lb 2 Wild oat & 3 Field pennycress germinated	<u>Not Passed</u>
Custom Horse Feed Found: Wild oat 15/lb, Field pennycress 5/lb, Field bindweed 1/lb 10 Wild oat seeds germinated	<u>Not Passed</u>

Ranchers Feed & Seed

Buffalo Gap, SD Custom Feed None found	Passed
--	--------

Ranchers Feed & Supply

Edgemont, SD Custom Feed Found: Wild oat 9/lb, 5 Wild oat seeds germinated	<u>Not Passed</u>
Custom Feed Found: Wild oat 2/lb, Wild mustard 5/lb; no seeds germinated	Passed
Custom Feed Found: Wild mustard 105/lb, Wild oat 96/lb, Field bindweed 27/lb 36 Wild oat, 23 Wild mustard & 3 Field bindweed germinated	<u>Not Passed</u>

Red River Commodities

Fargo, ND Black Oil Sunflower Seed for Wild Birds No weed seeds, but insect damage was found	Passed
--	--------

Southeast Farmers Elevator

Elk Point, SD Custom Swine Feed None found	Passed
--	--------

Sun Seed Company

Bowling Green, OH Sunseed Vita Bird Food	Passed
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Found: Wild mustard 3/lb*

Tradition Feed Products

Mankato, MN

Tradition Horse Power Passed
None found

Commercial Gamebird Passed
No weed seeds, but live bugs were found

Utica Grain

Utica, SD

Ground Corn Passed
None found

Watertown Coop Feed Store

Webster, SD

Grain Screenings Not Passed
Found: Wild mustard 95/lb; 8 Wild mustard germinated

Woody's Feed & Grain

Dickinson, ND

Cracked Corn Passed
None found

Hen Scratch Passed
Found: Wild oat 7/lb; no Wild oat seeds germinated

Steamed Crimped Oats Passed
Found: Wild oat 22/lb; no Wild oat seeds germinated

Steamed Crimped Oats Passed
Found: Wild oat 73/lb; no Wild oat seeds germinated

ANIMAL FEED AND DRUG CONTAMINANTS MONITORING PROGRAM
Vomitoxin

Vomitoxin is the common name for the mycotoxin *deoxynivalenol* (DON). DON is one of a closely related group of mycotoxins known as the trichothecene mycotoxins. The name Vomitoxin was chosen because if enough contaminated grain or feed is eaten by an animal that animal may begin to vomit.

If vomitoxin is present in sufficient quantity, it will usually result in feed refusal by the animals. Swine seem to be the most sensitive animals, chickens seems to be the least sensitive. Cattle are in the middle of that scale. Consumption of enough contaminated feed could be toxic to the animal consuming it. Because this toxin stimulates vomiting, though, death is rare. Most animals will quit eating before they consume enough feed to cause death. The toxin may also suppress the animal's immune system, allowing a secondary infection to mask the actual problem.

These mycotoxins are produced by fungi, and the *Fusarium* family is primarily responsible for the production of vomitoxin. Cool, wet weather seems to stimulate the production of the trichothecene mycotoxins (compared to aflatoxin, which is usually found during drought conditions). Because the trichothecene mycotoxins are closely related, the presence of one toxin (such as vomitoxin) indicates that other mycotoxins may also be present. Because it is difficult to analyze mycotoxins, a toxin that can be identified and quantitated such as vomitoxin may be blamed for problems caused by other toxins that are harder to identify.

Fusarium growth requires a minimum of 22-25% moisture, so the toxin should not continue to be produced in properly stored grain or feed. Toxin already present, however, will not decrease even though the fungus may have quit growing. This points out the importance of maintaining clean bins, trucks and feed bunks. Although there is no direct correlation between mold or scab on grain or feed and the amount of vomitoxin, the presence of mold indicates that vomitoxin may be present.

Because vomitoxin occurs sporadically and in localized areas, it has not been extensively researched and there are no federal regulations concerning the use of contaminated grain. The Food and Drug Administration (FDA) has published some guidelines pertaining to the use of contaminated grain, however. They are:

1. 1 ppm DON (vomitoxin) on finished wheat products, e.g. flour, bran and germ, that may potentially be consumed by humans. FDA is not stating an advisory level for wheat intended for milling because normal manufacturing practices and additional technology available to millers can substantially reduce DON levels in the finished wheat product from those found in the original raw wheat. Because there is significant variability in manufacturing processes, an advisory level for raw wheat is not practical.
2. 10 ppm DON on grains and grain by-products destined for ruminating beef and feedlot cattle older than 4 months and for chickens with the added recommendation that these ingredients not exceed 50% of the diet of cattle or chickens.
3. 5 ppm DON on grains and grain by-products destined for swine with the added recommendation that these ingredients not exceed 20% of their diet.
4. 5 ppm DON on grains and grain by-products destined for all other animals with the added recommendation that these ingredients not exceed 40% of their diet.

The first guideline applies only to finished *wheat* products intended for human food. It does not apply to other grains such as corn, oats or barley, for example. Guidelines 2-4 apply to any type of grain or grain by-product intended for use as animal feed.

Limited data suggests that as little as 1 ppm vomitoxin may result in reduced feed intake of swine. Poultry and ruminants tolerate levels significantly higher than this.

During August 1993, the Department of agriculture collected 29 samples of small grains from the northern and central parts of the state. Individual sample results ranged from 0.7 to 20 ppm, with vomitoxin detected in every sample. The average of these samples was 7.6 ppm. This contrasts greatly with data collected in 1991 and 1992, when parts of South Dakota were affected by vomitoxin in small grain and corn. Analysis of those crops found vomitoxin to be widespread, but at low levels. Of 53 samples analyzed during that time, only two samples contained more than 2 ppm DON and the highest level detected was 2.6 ppm. Since 1993, vomitoxin has not been much of a problem in the state. However, occasionally ingredients are transported here from areas where vomitoxin has occurred. In these cases, it is important to be aware that vomitoxin sometimes concentrates in grain by-products routinely used as feed ingredients.

SAMPLING PROGRAM

While the Department of Agriculture has not established a schedule for routine sampling of commodities to monitor vomitoxin occurrence, the inspection staff is instructed to obtain samples for analysis whenever contamination is suspected. Individual producers and businesses may also follow these same guidelines. Sampling procedures are:

1. Collect a representative sample of the material. Two pounds is the minimum sample size needed.
2. Collect and submit samples in heavy paper bags. DO NOT USE PLASTIC BAGS!
3. Make sure each sample is carefully wrapped and identified.
4. Include your name, complete address, and telephone number with the samples.
5. Mail samples with high moisture early in the week so they don't get left in the post office over a weekend. This may cause sample degradation.

Most labs will phone or FAX results if that service is requested. If you have any questions concerning lab procedure or practice, please contact the lab prior to sending your sample. Analysis can be done in-state by Olson Biochemistry Labs, SDSU, P.O. Box 2170, Brookings, SD 57007 (phone 605-688-5466). The Department of Agriculture also maintains a list of commercial labs in the upper Midwest that provide mycotoxin analysis.

Issuing Office: South Dakota Department of Agriculture
Office of Agronomy Services

Issue Date: October 21, 1991

Review Date: October 14, 1999

MYCOTOXIN OCCURRENCE IN FEED INGREDIENTS

Ingredients Sampled January 1, 2001 - December 31, 2001

Although we did not have any widespread mycotoxin problems during 2001, we did analyze two samples for vomitoxin (deoxynivalenol or DON). The results of these analyses are listed below:

Product	Lab Number	Manufacturer	Result
Wheat midds	01F-09355	ConAgra Flour Milling, Omaha, NE	Vomitoxin 2.70 ppm
Wheat midds	01F-09356	North Dakota Mill, Grand Forks, ND	Vomitoxin 3.20 ppm

Although detectable levels of vomitoxin were present in each sample, levels are not high enough in either sample to prohibit use in animal feed. However, the levels are high enough that you would limit the amount of this ingredient in the feed of monogastric animals such as swine or dogs. Specific guidelines for the feeding of vomitoxin-containing ingredients may be found in the previous section of this Annual Report entitled "Animal Feed & Drug Contaminants Monitoring Program – Vomitoxin".

Mycotoxin monitoring will continue as needed.

Selenium

Selenium is a necessary trace mineral in animal diets. Too little selenium in the diet may cause a deficiency-related response, but too much selenium may be toxic. Nutritional muscular dystrophy is the most common deficiency-related problem. The most common problem related to toxicity is alkali disease, also known as blind staggers.

The primary source of dietary selenium is the soil where the crop or grass grows. Much of the United States contains soils low in selenium and the forage and grain grown in these locations do not contain enough selenium to meet the dietary requirements of livestock. Animals raised in selenium-deficient areas often require some sort of supplementation to prevent deficiencies and related problems. Most South Dakota soils, on the other hand, contain adequate to excessive amounts of selenium and toxicity related problems are more common here than deficiency related problems.

Selenium supplementation of animal diets was first approved by the Food and Drug Administration (FDA) in 1974, allowing for limited, low level supplementation in only a couple animal species. Since that time, FDA has approved supplementation at higher levels and in more species. Specifics are discussed in the Code of Federal Regulations, Chapter 21, Section 573.920 (21 CFR 573.920).

Since 1987, when the current regulation was adopted, selenium supplementation has been allowed in the complete feed of swine, chickens, turkeys, sheep, cattle, and ducks at a level not exceeding 0.3 parts per million (ppm). It is allowed for limit feeding at a maximum intake of 3 milligrams per head per day (mg/hd/day) in cattle and 0.7 mg/hd/day in sheep. It may also be fed free-choice in salt-mineral mixtures to cattle and sheep at the same amounts described for limit feeding.

21 CFR 573.920 goes further to specify some premix, manufacturing and labeling requirements, the most important of which is the mandatory label warning statement, which is: *Caution: Follow label directions. The addition of this premix containing selenium is not permitted.*

Usually this statement means that the maximum amount of selenium allowed has been added to a product. In complete feeds containing added selenium at a rate of 0.3 ppm, this means that a ton of feed contains 272.4 mg of selenium. Sometimes the label of mineral/trace mineral premixes will contain a statement explaining this. For example, "adding 50 pounds of this product to one ton of feed will provide 272.4 mg (0.3 ppm) of selenium."

Several years ago, selenium supplementation of animal feeds came under scrutiny due to environmental concerns. Our concern is environmental selenium. Considering the amount of selenium that livestock in South Dakota may consume from their drinking water and locally grown forages and grain, we do not feel that excess selenium (beyond the amount guaranteed) should be encouraged. This is one of the reasons we have been monitoring selenium in feeds, and we are prepared to take regulatory action on samples that exceed the guarantee by more than the analytical variation. However, our analytical data seem to indicate that feed manufacturers are doing a pretty good job in getting the right amount of selenium into their feed products. For 262 samples analyzed between 1993 and 1997 we found a 90% compliance rate. Of the samples reported NOT PASSED during that time, most were deficient.

SAMPLING PROGRAM

The purpose of this monitoring program is to look at the accuracy of feed labels regarding selenium content of the product. This includes evaluating claims that the product contains the maximum amount of selenium when it may contain more than is allowed or less than is expected. The results may also reflect mixer ability and efficiency in those cases where the correct amount of selenium was added to a feed but the analytical results were not as expected.

Specific instructions to field staff for our selenium monitoring program are as follows:

1. Products targeted for monitoring are those products containing a guarantee for selenium, the mandatory selenium warning statement, or claims relating to selenium and its benefits. Additionally, some products without claims or guarantees, but with a source of selenium listed as an ingredient, may be analyzed.
2. Collect a representative sample of the material in question, as well as a product label, if possible.
3. Request a selenium analysis in the "Remarks" section of the Inspectors Report on Sample Form.

Sodium selenite is the form of selenium most often used in the production of animal feeds. Care should be taken when handling selenium premixes. Most feed mills will use a premix containing 0.06% selenium to manufacture complete feeds. Feed mills manufacturing premixes may also use a 1.0% selenium premix. Avoid Skin and eye contact, as well as ingestion and inhalation. Wash with soap and water after exposure to concentrated premixes and prior to eating, drinking or using tobacco. "Pure" sodium selenite contains 45% selenium and should be avoided; it is toxic and should not be handled without protective clothing and a respirator.

Issuing Office: South Dakota Department of Agriculture
Office of Agronomy Services
Issue Date: January 4, 1993 Review Date: October 26, 1999

SELENIUM ANALYSIS OF COMMERCIAL FEEDS SUMMARY

Commercial Feeds Sampled January 1, 2001 - December 31, 2001

<u>Lab number</u>	<u>Manufacturer</u>	<u>Claim (ppm)</u>	<u>Found (ppm)</u>	<u>Not passed (NP)</u>
01F-00128	Hubbard Feeds	16.0	15.3	
01F-00133	Cargill Nutrena Feeds	30.0	43.1	
01F-00138	Golden Sun Feeds	30.0	28.0	
01F-00139	Hubbard Feeds	20.0	20.9	
01F-00207	Hubbard Feeds	26.4	22.1	
01F-00208	Golden Sun Feeds	22.2	22.6	
01F-00209	Golden Sun Feeds	20.0	20.5	
01F-00210	Golden Sun Feeds	30.0	32.3	
01F-00211	Golden Sun Feeds	22.0	21.7	
01F-00304	Country Pride Coop	14.97	13.5	
01F-00305	Country Pride Coop	15.0	14.0	
01F-00416	Kay Dee Feed Co	28.0	25.4	
01F-01009	Golden Sun Feeds	30.0	30.2	
01F-01014	Land O'Lakes/Harvest States	36.0	35.4	
01F-01016	Land O'Lakes	30.0	26.6	
01F-02396	Harvest Brands	7.20	7.86	
01F-02504	Land O'Lakes/Harvest States	17.0	18.2	
01F-02659	Prairie Pride	35.0	30.4	
01F-02802	Old West Feeds	100.0	61.8	Deficient
01F-02839	Land O'Lakes/Harvest States	36.0	36.8	
01F-02908	Midwest Ag Supply	24.0	22.8	
01F-02918	J & R Distributing	0.0030 %	0.0031 %	
01F-03232	Kent Feeds	33.0	35.5	
01F-03233	Kent Feeds	28.0	27.2	
01F-03359	Purina Mills	0.60	1.29	
01F-03364	Kay Dee Feed Co	28.0	37.8	
01F-03398	Country Pride Coop	15.0	14.5	
01F-03578	Farmland Industries	22.0	23.6	
01F-03969	Zip Feed Mills	50.0	49.2	
01F-03972	Hubbard Feeds	20.0	11.4	Deficient
01F-03979	New Generation Feeds	6.60	7.86	
01F-04540	Quality Liquid Feeds	4.00	5.80	
01F-04541	Land O'Lakes	35.2	35.8	
01F-04542	Land O'Lakes	37.3	34.8	
01F-04623	Land O'Lakes	15.0	12.2	
01F-04628	Kent Feeds	28.0	25.9	
01F-04631	Golden Sun Feeds	30.0	31.4	
01F-04839	Hubbard Feeds	20.0	17.5	
01F-04840	Hubbard Feeds	35.0	23.6	
01F-04897	J & R Distributing	0.0010 %	0.0012%	
01F-04905	Purina Mills	54.0	52.4	
01F-04983	West River Feed	20.0	23.9	
01F-04984	Vigortone Ag Products	26.4	27.8	
01F-04986	Vigortone Ag Products	8.80	9.64	
01F-05141	Ridley Block Operations	8.80	8.82	
01F-05401	Golden Sun Feeds	20.0	17.4	
01F-05618	Vigortone Ag Products	26.4	26.8	
01F-05619	Vigortone Ag Products	26.4	26.1	
01F-05646	Land O'Lakes	36.0	42.7	
01F-05650	Hubbard Feeds	20.0	13.2	Deficient
01F-05667	Land O'Lakes	35.2	29.0	
01F-05682	Land O'Lakes	4.00	3.40	
01F-05764	Bovine Basics	27.0	25.8	
01F-06258	Consolidated Nutrition	24.0	29.5	
01F-06259	Farmland Industries	22.0	17.7	
01F-06266	Consolidated Nutrition	4.00	6.03	

01F-07133	BW Feeds	26.0	24.0
01F-07134	BW Feeds	26.0	28.4
01F-07135	BW Feeds	26.0	22.9
01F-07136	BW Feeds	26.0	21.8
01F-07137	Yaggies	269.0	298.0
01F-07138	Yaggies	353.0	324.0
01F-08586	Tradition Feed	20.0	20.8
01F-08588	Tradition Feed	24.0	27.7
01F-08592	Kay Dee Feeds	28.0	24.9
01F-08593	Sweet Lix	21.6	17.0
01F-08692	Kent Feeds	25.0	23.9
01F-08694	Kent Feeds	28.0	30.8
01F-08798	Hubbard Feeds	20.0	15.8
01F-08799	Hubbard Feeds	5.00	5.60
01F-08970	Golden Sun Feeds	22.0	20.1
01F-09108	Whitetail Institute N. America	9.00	7.94
01F-09109	Whitetail Institute N. America	9.00	7.28
01F-09251	Ragland Mills	15.0	13.8
01F-09481	Land O'Lakes/Harvest States	4.00	4.00
01F-09483	Land O'Lakes	15.0	15.9
01F-09484	Land O'Lakes	35.2	33.5
01F-09528	Hubbard Feeds	35.0	31.7
01F-09529	Zip Feed Mills	35.0	29.9
01F-09847	Hubbard Feeds	20.0	17.3
01F-10223	Golden Sun Feeds	30.0	23.0
01F-10227	J&R Distributing	0.0030	0.0038
01F-10719	Hubbard Feeds	35.0	34.9
01F-12319	Kay Dee Feeds	28.0	23.9
01F-12708	Land O'Lakes	4.10	5.08

During 2001, 85 samples were analyzed for selenium, with 3 samples reported NOT PASSED, a 96% compliance rate. In the eight years prior to 2001 we analyzed 375 samples for selenium, reporting 341 PASSED and 34 NOT PASSED, a 90% compliance rate.

The analytical variation (AV) established by AAFCO for selenium is 25%. Although selenium is required to be guaranteed as a minimum, we may also report a sample as containing excessive selenium if it is more than 25% higher than the guarantee and, when fed according to directions on the product label, it provides more selenium to the animal than is allowed by the selenium feed additive regulation, 21 CFR 573.920. The basis for this policy is the high naturally-occurring selenium levels that can be found in central and western South Dakota. Considering the amount of selenium that livestock may receive from water and locally grown forages and grain, we do not feel that excess selenium in a commercial feed should be encouraged.

We will continue to monitor selenium levels in animal feeds.

Selenium Effects on



South Dakota Livestock Production

What is Selenium?

Selenium occurs naturally in various mineral forms in nearly all parts of the world and is a necessary part of a healthy diet for humans and animals. Some areas of the world supplement selenium in human and animal diets, as locally produced food and feed does not contain sufficient quantities to meet nutritional needs. However, an over abundance of selenium in human and animal diets can cause severe toxic effects.

Most of western South Dakota is composed of sedimentary marine shales that were developed when an inland sea covered South Dakota (see [map](#) - *.pdf format). Selenium is often associated with marine shales and therefore South Dakota has areas of high selenium concentration in soil and water. Soils that are high in concentration of selenium are referred to as "seleniferous" soils. Plants growing in those soils will absorb selenium from the soil in the form of selenite (SeO₃) and selenate (SeO₄). Selenate is said to be the most common form of selenium in the state due to the chemical properties of soils in the western portion of the state.

Selenium toxicity is commonly referred to as selenosis. Selenosis was first documented in 1856 near Ft. Randall in South Dakota. A physician with the U.S. Cavalry reported horses experiencing hair, mane, and tail loss and sloughing of hooves. Over the next 75 years similar reports from livestock owners led to a cooperative investigation by the South Dakota and Wyoming Experiment Stations and US Department of Agriculture. It was found that the symptoms experienced by livestock were the result of consuming forage containing high concentrations of selenium.

How do I Know if Selenium is a Problem on my Farm or Ranch?

Visually there are several things to look for that will indicate that forage or water may contain toxic concentrations of selenium.

Several plant species have been found to thrive in seleniferous soils and are referred to as selenium indicator plants. Three species of these plants are found in South Dakota, Twogrooved poisonvetch (*Astragalus bisulcatus*)[§], Racemed poisonvetch (*Astragalus racemosus*)[§], and Prince's plume (*Stanleya pinnata*)[§]. These plants are reasonably reliable indicators of areas of high selenium concentration in soils. Areas that are saline or have saline seeps have the potential to have high levels of selenium in forage and water. Not all saline areas will be seleniferous nor will all saline water contain high levels of selenium. Areas where saline seeps discharge water high in selenium have been documented in western South Dakota by the Department of Agriculture.

Another indicator is to observe livestock that may or may not be exposed to toxic levels of selenium. Research has shown that horses will begin to lose the long hairs in the mane and tail from high doses of selenium. Cattle may have a rough hair coat and exhibit symptoms such as reduced reproductive performance, poor weight gain, or hoof or horn changes or loss. Lameness can result from advanced cases of selenosis. Cattle that have been exposed to high levels of selenium have been observed to graze on their knees, as the front feet become sore.

Observations of indicator plants and saline areas provide a producer with an indication of a problem with selenium but the only way to determine if a threat to livestock exists is to sample the water and forage and have it tested by a reputable laboratory. The O.E. Olsen Biochemistry Laboratory on the campus of South Dakota State University provides analysis of forage and water for a fee, as do many other public and private laboratories. A laboratory analysis of water and forage provide a livestock producer with detailed information to make management decisions regarding a livestock operation.

Forage or feed suspected to be high in selenium can be analyzed to determine total selenium. Research has shown that forage or feed that contain 2-5 ppm selenium poses a marginal threat to livestock. Livestock that are continually fed forages containing marginal levels of selenium may experience chronic selenium toxicity. Forage above 5 ppm selenium is said to cause acute toxic conditions in livestock and should be avoided.

Water supplies in seleniferous areas are also a source where toxic levels of selenium can be found. Livestock that use stock dams, streams, or seep discharges in a seleniferous area for a water supply are at risk of chronic or acute selenium toxicity. Livestock should be excluded from water supplies that have a selenium concentration of 0.5 ppm or greater.

What should I Do If I have a Potential for Selenium Toxicity?

Excluding the livestock from water or feed that contains toxic levels of selenium is a priority. Adverse effects of selenium will usually reverse if the source of selenium is reduced and the toxicity has not progressed to a point where it is irreversible.

Seleniferous forages usually occur in a localized area. If these areas can be identified and livestock can be excluded, loss of livestock productivity can be avoided. If feed such as hay or other feed crops have been determined to be high in selenium the feed can still be used if it is blended with feed known to be low in selenium.

Managing selenium in livestock production means that a consideration of the total selenium intake is considered. Selenium can be consumed by livestock in water and feed supplies. Controlling selenium intake will reduce the risk of selenosis and avoid undue economic loss.

§Photographs provided courtesy of Jim Johnson, South Dakota State University.



AS-FS-105

ANIMAL FEED & DRUGS CONTAMINANTS MONITORING PROGRAM

Copper

Copper is an essential trace mineral in animal diets. Too little copper in the diet may result in a deficiency, but too much copper may be toxic. Sheep are susceptible to copper toxicity problems, while cattle tend to be more susceptible to deficiency related problems. Monogastric animals, such as swine, tolerate much higher levels of copper than do ruminants.

The amount of copper required in the diet varies from species to species and even from animal to animal. High levels of other minerals, particularly molybdenum, sulfur and zinc, may reduce the availability of copper in the diet. Five to eight parts per million (ppm) of copper may be adequate if interference from other

minerals is at a minimum, but may not be adequate if significant amounts of these other minerals are present. The amount of copper present in the soil where the crop or grass is grown largely determines the amount of copper the animal consumes. Problems with absorption in the gut of the animal are a common source of deficiency-related problems.

Copper is necessary for the formation of red blood cells, bone, elastin in the cardiovascular system, and hair and wool pigmentation. Quite a bit of research has been done to determine the effects of feeding high levels of copper to growing swine. Studies have shown that copper levels of 250 ppm may result in an improved growth rate. As a result, copper levels similar to this may be found in many feeds intended for growing swine.

Unlike selenium, there are no specific regulations regarding the use of copper in animal feeds. The following copper compounds are approved for feed use: copper carbonate, copper chloride, copper gluconate, copper hydroxide, copper orthophosphate, copper oxide, copper pyrophosphate, and copper sulfate. These compounds are all considered GRAS (generally recognized as safe) and, according to the Code of Federal Regulations 21 CFR 582.80, are allowed for use in animal feeds "when added at levels consistent with good feeding practice". In the case of copper, the term "good feeding practice" would usually be considered a level necessary to meet nutritional requirements.

Copper sulfate is probably the most common source of copper used in feed manufacturing. Copper sulfate is blue in color and water-soluble. If copper sulfate is subjected to prolonged storage under humid conditions it may cake, which could make it difficult to get a homogeneous mixture in the feed mixer.

In South Dakota, copper deficiency in cattle is more common than copper toxicity in sheep, primarily because much of the forage is relatively low in copper. Typical causes of copper toxicity in sheep are mixer carry-over caused by mixing a sheep feed following a swine or cattle feed or simply by feeding the sheep a product formulated for another species of livestock.

There are some copper sulfate products on the market intended for adding to watering systems, instead of feeds. Copper sulfate also has some applications as a pesticide, for algae control.

AS-FS-105

SAMPLING PROGRAM

Because it is important to provide a sufficient amount of copper to swine and cattle and a safe level of copper to sheep, it is important that copper be used carefully in feed manufacturing. Therefore, the purpose of this sampling plan is to monitor the amount of copper contained in cattle and sheep feeds. In swine feeds, where high levels of copper are desired, an additional concern is monitoring copper levels in feeds when the label of advertising makes a claim regarding copper. In addition to letting us determine "typical" levels of copper in feeds, "atypical" results may point out deficiencies in mixing or cleanout procedures by the manufacturer.

Specific instructions to field staff for our copper monitoring program are as follows:

1. Products targeted for monitoring are all sheep feeds and those cattle and swine feeds containing copper guarantees and/or claims specific to the copper content

of the feed. All sheep feeds collected under our routine sampling program should be submitted for a copper analysis.

2. Collect a representative sample of the feed in question, as well as a product label, if possible.
3. Request a copper analysis in the "Remarks" section of the Inspectors Report on Sample form.

Copper sulfate and copper oxide, in concentrated form, are found as fine dust. Eye and skin contact should be avoided. Wear long sleeves, gloves and goggles when handling. A respirator should also be worn for respiratory protection. No special precautions are necessary for handling trace mineral premixes that contain copper.

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BSE COMPLIANCE ASSISTANCE

This material has been prepared by the South Dakota Department of Agriculture, Office of Agronomy Services, for use by the feed industry and livestock producers in South Dakota. The intent of this document is to help affected parties understand, and comply with, federal and state rules prohibiting mammalian-to-ruminant feeding.

On June 5, 1997, the Food & Drug Administration (FDA) published a final rule prohibiting the use of mammalian protein (i.e. animal protein products such as meat and bone meal) in feeds for ruminant animals. This rule is published in the Code of Federal Regulations, 21 CFR 589.2000. This rule went into effect August 4, 1997, and all products and labels

were to have complied with this rule by October 3, 1997. The intent of the rule is to help ensure that bovine spongiform encephalopathy (BSE) or "mad cow disease" does not become established in the United States and spread through the feed supply to other animals.

Ruminant animals include cattle, sheep, goats, bison, deer, elk, and other related animals having a four-compartment stomach. Mammalian protein is defined as protein from all mammals, and we refer to these mammalian protein ingredients as "prohibited material".

There are some exemptions from this rule. Porcine (pork) and equine (horse) protein that originate from single-species slaughter plants have been exempted from this ban and may be used in ruminant feeds. Also exempt are blood and milk products, gelatin and processed meat products which have been cooked and offered for human consumption (such as plate waste, for example). Fat and tallow are not animal proteins and are not covered by this rule. Poultry and fish are not mammals so proteins originating from these species may continue to be used in ruminant feeds. We refer to these ingredients, including porcine and equine protein from single-species slaughter facilities, as "non-prohibited material".

This rule applies to rendering facilities, ingredient brokers, feed manufacturers, trucking companies transporting feeds and feed ingredients, and any person or business that feeds ruminant animals.

Prohibited materials also include any ingredient, premix or concentrate feed, which contain a prohibited mammalian protein. For example, a livestock producer or small feed mill may not use meat and bone meal to manufacture feed, but instead will take a product such as a 40% hog concentrate and further process it into a finished feed. If this ingredient, premix or concentrate contains a prohibited material, the concentrate, as well as the complete feed, must be treated as prohibited material.

To further protect livestock producers, the 2001 South Dakota legislature adopted statutes, SDCL 39-14-55.1 and 39-14-60 (9), addressing BSE, and requiring the Department of Agriculture to adopt rules to implement these laws. State rules were adopted April 18 and August 8, 2001, and January 15, 2002. The state requirements are more restrictive than the federal regulation, and feed manufacturers and distributors, as well as ruminant feeders, located in South Dakota, or doing business in the state, need to be aware of the state requirements.

There are three principal areas in which compliance is needed -- labeling, equipment cleanout and recordkeeping. Each area has different requirements and will be discussed separately.

Labeling

The federal rule requires that any feed or ingredient (except pet foods) that contains prohibited material have the statement "Do not feed to cattle or other ruminants" placed prominently on the front of the label. This statement should be printed in a different color, or in some other way offset, from the other label information.

The state rules require the use of an additional advisory statement on the labels of all ruminant feeds, advising the purchaser that "this product was made in a feed manufacturing facility that does not handle or store products containing animal proteins prohibited in ruminant feed" if the product was made in a feed mill that does not use prohibited material to make feeds and feeds containing prohibited material are not stored with ruminant feeds and ingredients. Alternatively, if the product was made in a feed mill that uses prohibited material to make swine or poultry feeds, for example, or if they do not store feeds or ingredients containing prohibited material separately from ruminant feeds, then the advisory statement would read "this product was made in a feed manufacturing facility that handles or stores products containing animal proteins prohibited in ruminant feed".

The federal rule allows the collective term "animal protein products" to continue to be used in the ingredient statement, but ruminant feeds may not contain any of the prohibited materials. Any feed for non-ruminants (except pet foods) that contains prohibited materials will need to carry the mandatory warning statement on the label. Labels for feeds containing no prohibited materials do not need the mandatory federal warning statement.

Every shipment of feed, whether bagged or bulk, medicated or non-medicated, delivered to the customer or picked up at the feed mill, must be labeled. The federal rule requires that anyone feeding ruminant animals must save copies of invoices and labeling of every feed they receive containing animal protein. Feed that does not have an invoice or label from the manufacturer or distributor does not comply with the law, and keeps the feed user from complying with this requirement, as well.

Equipment Cleanout/ Physical Segregation

Although the federal rule allows feed manufacturers to use both prohibited and non-prohibited materials in a single manufacturing facility, if the firm has a written cleanout procedure for their milling equipment, the state rules do not allow this practice. Feed manufacturers located in South Dakota, that make feed for ruminant animals, may not use prohibited materials in their facilities. Further, any feed or ingredient containing prohibited material, such as pet food, that a facility keeps in its warehouse must be physically separated from the mixing equipment and any ruminant feed or feed ingredients that will be used to manufacture ruminant feeds.

Additionally, any person or business that manufactures ruminant feed must also take care in how any feed containing prohibited material is transported and stored. The state rules require that bulk ruminant feeds and ingredients be transported or conveyed only in equipment that is not used to handle prohibited material. Bulk ruminant feeds and ingredients must be stored in a manner that does not allow cross-contamination. Feeds and ingredients containing prohibited material must be stored so they are physically separated from ruminant feeds.

In a facility that sells, but does not manufacture feed, the state rules allow packaged ruminant feed products to be stored with feed products that contain prohibited material. However, any spillage must be cleaned up immediately, and disposal of the spillage be handled in a manner that does not risk contamination of ruminant feeds.

Cleanout of mixing equipment following the manufacture of medicated feeds is still necessary.

Ingredients from single species slaughter facilities

Firms purchasing and using non-prohibited ingredients (horse and/or pork) only from single species slaughter facilities are not required to utilize the federal warning statement ("Do not feed to cattle or other ruminants") or special cleanout procedures. However, these firms do need to place the state-required advisory statement ("This product was made in a feed manufacturing facility...") on the label of any ruminant feed they manufacture. Firms will need records sufficient to document that they are obtaining all of their animal protein from single species slaughter facilities. These firms should also make sure that ingredient haulers are complying with the requirements for trucks and other conveyance equipment.

Recordkeeping

For firms using prohibited materials, the federal rule requires records sufficient to track ingredients and finished products from receipt, through processing and distribution. Firms not using prohibited materials will need to be able to document that they are using only non-prohibited materials, but will not necessarily need to meet the other recordkeeping requirements of this rule. Livestock producers feeding ruminant animals must keep records of the feed they purchase and use. In particular, these records must include invoices and labeling of all feeds containing animal protein.

Records must be available for inspection and copying by state and federal investigators, and must be maintained for one year after distribution of the product for feed manufacturers and distributors. Livestock producers must maintain the records for at least a year after the feed is received. In some cases, existing business records may be sufficient to comply with this rule. For example, most livestock producers already save invoices to document feed costs for tax purposes.

Livestock producers

Livestock producers feeding ruminant animals, in feeding operations of all sizes, need to comply with all aspects of these rules. Specifically, if producers mix their own feed, and feed both ruminants and non-ruminants, they need to comply with the state rules, and not use prohibited material in their feeding operations. Although the labeling requirements may not apply if the producer does not sell feed, sufficient records must be kept to document compliance with the rules. For example, producers mixing their own feed may wish to establish a mixer log book, in which they record the dates they mixed feed, the ingredients in that feed, and the animals to which it was fed.

Ruminant feeders purchasing feed or feed ingredients must keep copies of invoices for all feeds received that contain animal protein sources. A copy of the product label for each feed containing animal protein must also be kept. In many cases, particularly for bulk feeds/ingredients, the invoice may contain the required "label" information. If the invoice contains all of the necessary labeling information, such as the list of ingredients, withdrawal statement, etc., it is not necessary to keep an extra copy of the product label on file.

To determine if the feed contains animal proteins, look at the ingredient list for the terms *animal protein products, meat and bone meal, meat meal, bone meal, feather meal, blood meal, fish meal*, etc. Mention of any type of animal (fish, poultry) or animal product (milk or dairy product, meat) would identify the product as containing an animal protein.

These records must be maintained for at least a year after the date the feed is received, and must be made available for inspection and copying by federal or state investigators. We recommend that the labels be attached to the corresponding invoice and filed that way. Feeds and feed ingredients not containing animal proteins are not subject to the regulation.

Ruminant feeders must also be cognizant of how feeds and ingredients are stored and used. Feed containing prohibited material, such as pet food, should not be stored or fed where these products will be confused with, or get mixed with, ruminant feed. Products containing prohibited material, such as pet food, should not be fed in a location where ruminant animals may consume them. Spilled material in storage or a vehicle should be cleaned up immediately and disposed of in a way that will not contaminate ruminant feed.

Questions

Questions may be directed to the South Dakota Dept. of Agriculture at 605-773-4432 or the Food and Drug Administration at 301-594-1724.