Table 1. Average nutrient values during different vegetative stages for winter annual forbs, annual grasses, and annual grass/forbs mixed (composite) species. Nutrients analyzed were Crude Protein (CP), Acid Digestible Fiber (ADF), amylase Neutral Detergent Fiber (aNDF), Water Soluable Carbohydrates (WSC), Nuetral Detergent Fiber, 48 hour (dNDF48), In-Vitro True Dry Matter Digestibility, 48 hour (IVTDMD48). Values were derived using near-infrared reflectance spectroscopy (NIRS) procedures. Means with different letters were significant at P<0.05. Winter annual forbs sampled were filaree (*Erodium sp*.), bur clover (*Medicago polymorpha*), vetch (*Vicia spp*.), annual clovers (*Trifolium spp.*), deervetch (*Acmispon spp*.), two-seeded milkvetch (*Astragalus didymocarpus*), soap plant (*Chlorogalum pomeridianum*), popcorn flower (*Plagiobothrys spp.)*, yarrow (*Achilla sp*.), lomatium (*Lomatium spp*.), western blue-eyed grass (*Sisyrinchium bellum*), pineapple weed (*Matricoria discoidea*), morning glory (*Convolvulus arvensis*). Annual grasses were wild oat (*Avena fatua*), soft chess (*Bromus hordeacous*), rye grass (*Fesctuca perennis*), annual fescue (*Festuca myuros*), ripgut grass (*Bromus diandrus*), red brome (Bromus rubens), foxtail (*Hordeum spp*.), false brome (*Brachypodium distachyon*), bulbous bluegrass (*Poa bulbosa*).

Species	Harvest Time	Vegetative State	Species[1] / Sites[2]	n	CP (%)	ADF (%)	aNDF (%)	WSC (%)	dNDF48 (%)	IVTDMD48 (%)
			# species							
Winter Annual Forbs	February - March	Vegetative	10	68	21.3[a]	28.2[d]	34.0[c]	8.2[a]	23.0[a]	86.6[a]
Winter Annual Forbs	Mid to Late April	Mature	8	131	19.2[b]	32.2[c]	38.8[b]	7.9[a]	23.1[a]	82.5[b]
Winter Annual Forbs	Early May	Senesced	5	41	14.4[c]	37.1[b]	45.6[a]	7.4[a]	19.6[b]	73.8[c]
Winter Annual Forbs	Late May	Senesced - Leached[3]	5	24	10.9[d]	42.9[a]	46.2[a]	6.1[b]	18.0[c]	68.9[d]
			# species							
Annual Grasses	February - March	Vegetative	6	102	11.9[a]	33.8[d]	57.0[d]	9.0[a]	38.2[ab]	81.8[a]
Annual Grasses	Late April	Mature	11	287	7.5[b]	37.8[c]	64.1[c]	8.4[a]	38.8[a]	76.9[b]
Annual Grasses	Early May	Senesced	8	118	4.2[c]	42.7[b]	70.3[b]	4.9[b]	37.7[b]	69.9[c]
Annual Grasses	Late May	Senesced - Leached	6	47	3.2[d]	47.1[a]	75.6[a]	4.8[b]	39.2[a]	64.1[d]
			# sites							
Composite[4] Samples	February - March	Vegetative	21	152	11.5[a]	35.7[e]	47.4[d]	10.2[a]	32.9[b]	81.1[a]
Composite Samples	Late April	Mature	61	291	8.1[b]	40.1[d]	57.4[c]	8.1[b]	33.5[b]	75.3[b]
Composite Samples	Early May	Senesced	14	64	5.6[c]	43.6[c]	58.2[c]	6.8[c]	30.2[c]	71.2[c]
Composite Samples	Late May	Senesced - Leached	13	52	4.4[d]	50.6[b]	65.0[b]	3.5[d]	33.5[b]	62.8[e]
Composite Samples	October	Weathered	43	172	4.6[d]	54.0[a]	71.5[a]	3.1[d]	37.4[a]	65.4[d]

[1] *The number individual species harvested within Monterey, San Luis Obispo and Santa Barbara Counties.*
[2] *The number of sites (locations) where samples were harvested within Monterey, San Luis Obispo and Santa Barbara Counties.*
[3] *Leached = samples harvested following a rain event of approximately 1.5 inches during mid-May*
[4] *Composite samples, as harvested on average consisted of rye grass (20%), wild oat (11%), red brome (9%), annual fescue (9%), soft chess (7%), foxtail (5%), ripgut brome grass (2%), false brome (2%), filaree (17%), bur clover (5%), annual clover (5%), deervetch (4%), morning glory (1%), owls clover (1%), two-seeded milkvetch (1%), other forbs (1%).*

Table 2. Average nutrient values for individual winter annual/biennial species. Samples were collected during the spring and summer during the vegetative, mature, and late mature growth stages. Nutrients analyzed were Crude Protein (CP), Acid Digestible Fiber (ADF), amylase Neutral Detergent Fiber (aNDF), Water Soluable Carbohydrates (WSC), Nuetral Detergent Fiber, 48 hour (dNDF48), In-Vitro True Dry Matter Digestibility, 48 hour (IVTDMD48).Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures. Asteric denotes the plants that have been reported as toxic to livestock (Burrows & Tyrl 2013). Standard error included for all species with ≥ 4 samples (n).

Scientific Name	Common Name	Vegetative State	Month Harvested	n	CP (%)	ADF (%)	aNDF (%)	WSC (%)	dNDF48 (%)	IVTDMD48 (%)
**Astragalus spp.*	Loco Weed	Mature	April	6	21.7 ± 0.9	30.5 ± 1.1	39.4 ± 0.5	7.8 ± 0.4	23.4 ± 0.6	84.2 ± 0.7
**Astragalus spp.*	Loco Weed	Late Mature	May-June	9	15.5 ± 1.1	36.1 ± 2.1	47.1 ± 3.1	6.4 ± 1.0	22.4 ± 0.7	76.1 ± 2.4
**Lupinus spp.*	Lupine	Mature	April	19	22.4 ± 0.6	29.8 ± 0.8	33.1 ± 1.2	11.6 ± 0.6	19.8 ± 0.6	86.0 ± 0.7
**Lupinus spp.*	Lupine	Late Mature	May-June	7	16.9 ± 1.0	34.4 ± 2.3	38.1 ± 2.6	8.9 ± 1.9	16.4 ±1.4	76.9 ± 1.7
**Amsinckia spp.*	Fiddleneck	Vegetative	February-March	19	13.4 ± 0.8	36.8 ± 0.9	41.2 ± 1.2	5.7 ± 0.6	18.3 ± 0.7	80.3 ± 1.1
**Amsinckia spp.*	Fiddleneck	Mature	April	33	9.3 ± 0.8	42.0 ± 0.9	48.4 ± 0.8	4.5 ± 0.3	18.8 ± 0.4	72.8 ± 1.0
**Amsinckia spp.*	Fiddleneck	Late Mature	May-June	17	5.6 ± 0.7	49.0 ± 0.9	54.6 ± 0.9	1.7 ± 0.5	16.7 ± 0.5	65.0 ± 1.1
**Trichostema ovatum*	Blue Curls	Mature	July	4	16.9 ± 0.4	30.9 ± 0.3	33.2 ± 1.0	3.6 ± 0.1	14.6 ± 0.7	84.5 ± 0.5
**Delphinium sp.*	Larkspur	Mature	Early May	1	9.5	34.2	42.6	7.0	15.2	75.0
**Delphinium sp.*	Larkspur	Senesced	Late May	1	3.2	49.6	57.9	3.6	16.3	62.9
**Rumex crispus*	Curly Dock	Mature	June	2	9.6	38.4	43.5	12.9	12.6	61.9
**Croton setiger*	Turkey Muellin	Mature	July	11	18.6 ± 1.1	30.9 ± 1.7	46.4 ± 2.6	6.0 ± 1.1	23.5 ± 0.8	74.8 ± 1.9
**Heliotropium curassavicum*	Heliotrope	Mature	July	3	19.1	32.7	40.0	2.7	9.2	65.7
**Datura wrightii*	Jimson Weed	Mature	July	7	22.8 ± 0.6	25.7 ± 0.7	36.1 ± 0.7	4.6 ± 0.5	18.8 ± 0.4	81.7 ± 0.6
**Erigeron canadensis*	Horse Weed (Marestail)	Mature	July	2	22.3	31.8	49.6	2.7	19.2	70.2
**Asclepias vestita*	Milkweed	Mature	August	3	19.5	20.0	24.4	4.8	16.4	84.3
**Asclepias fascicularis*	Narrow Leaf Milkweed	Mature	July	3	16.4	32.9	41.5	6.2	25.2	82.1
**Conium maculatum*	Poison Hemlock	Mature	August	3	9.0	38.3	50.3	9.4	22.6	74.1
**Castilleja spp.*	Owls Clover	Vegetative	March-April	17	15.7 ± 0.4	27.6 ± 0.8	27.9 ± 1.0	14.0 ± 0.8	18.4 ± 0.3	91.7 ± 1.2
**Castilleja spp.*	Owls Clover	Mature	May	12	9.8 ± 0.5	36.6 ± 0.8	40.5 ± 1.2	10.5 ±1.3	18.7 ± 0.3	78.5 ± 1.6
**Malva parviflora*	Cheeseweed	Vegetative	March	3	25.8	20.7	30.1	9	23.4	93.0
**Malva parviflora*	Cheeseweed	Mature	April	16	26.1 ± 0.8	25.8 ± 0.5	34.3 ± 0.5	5.5 ± 0.6	23.6 ± 0.3	88.4 ± 0.8
**Malva parviflora*	Cheeseweed	Late Mature	May-June	9	18.9 ± 0.6	29.8 ± 1.2	40.9 ± 1.3	6.8 ± 1.1	20.3 ± 0.4	77.8 ± 1.6
**Centaurea melitensis*	Tocalote	Vegetative	April	1	19.3	26.2	30.8	8.5	20.8	89.1
**Centaurea melitensis*	Tocalote	Mature	May-June	6	11.7 ± 0.8	32.1 ± 0.9	46.5 ± 1.9	10.0 ± 0.6	19.2 ± 0.6	77.0 ± 1.5
**Centaurea melitensis*	Tocalote	Late Senesced	July	3	7.1	47.7	66.0	<0.5	16.8	52.1
**Centaurea solstitialis*	Yellow Star Thistle	Vegetative	April	1	19.7	27.3	32.4	10.6	24.8	92.2
**Centaurea solstitialis*	Yellow Star Thistle	Mature	May-June	13	13.0 ± 0.5	38.1 ± 0.5	48.0 ± 0.9	6.2 ± 0.4	24.9 ±0.7	81.3 ± 0.6
**Centaurea solstitialis*	Yellow Star Thistle	Late Mature	July	6	10.9 ± 0.3	35.7 ± 0.6	52.7 ± 1.1	8.4 ± 0.4	19.6 ± 0.3	70.7 ± 0.9
**Salsola tragus*	Russian Thistle	Vegetative	July	4	22.5 ± 0.2	23.0 ± 0.4	28.3 ± 0.4	6.8 ±0.3	17.5 ± 0.5	92.5 ± 0.4
**Salsola tragus*	Russian Thistle	Mature	July	4	17.0 ± 0.7	39.1 ± 1.8	44.2 ± 1.7	5.9 ± 0.9	15.8 ± 3.1	73.7 ± 1.3
Hirschfeldia incana	Summer Mustard	Vegetative	March	4	26.4 ± 1.7	20.9 ± 2.5	30.6 ± 2.5	8.6 ± 0.2	22.5 ± 0.3	89.6 ± 2.0
Hirschfeldia incana	Summer Mustard	Mature	April	16	20.3 ± 1.3	31.0 ± 1.4	45.1 ± 2.1	5.9 ±0.6	23.3 ± 0.4	77.1 ± 2.2
Hirschfeldia incana	Summer Mustard	Late Mature	May-June	26	15.0 ± 1.1	37.0 ± 1.3	56.0 ± 2.0	3.8 ± 0.5	20.6 ± 0.7	65.0 ± 1.8
Verbena bracteata	Prostrate Vervain	Mature	August	6	11.9 ± 0.4	37.3 ± 1.0	44.1 ± 0.4	4.4 ± 1.0	16.3 ± 0.2	68.8 ± 1.5
Eryngium spinosepalum	Button-Celery	Mature	August	4	9.0 ± 0.3	42.4 ± 0.7	53.9 ± 1.4	2.5 ± 1.1	17.7 ± 0.2	62.5 ± 1.0
Helichrysum petiolare	Licorice Plant	Vegetative	June	3	22.7	24.0	23.1	10.6	9.1	70.7
Convolvulus arvensis	Morning Glory	Mature	May-June	9	16.9 ± 1.1	26.6 ± 1.0	34.1 ± 0.9	11.6 ± 0.7	18.5 ± 0.6	83.3 ± 1.5
Centromadia pungens	Spike Weed	Mature	July	9	14.7 ± 0.8	36.8 ± 1.5	44.4 ± 1.1	1.1 ± 0.8	15.3 ± 1.0	70.1 ± 1.0

Table 3. Average nutrient values for individual woody browse species. Samples were collected during the summer while plants were mature. Nutrients analyzed were Crude Protein (CP), Acid Digestible Fiber (ADF), amylase Neutral Detergent Fiber (aNDF), Water Soluable Carbohydrates (WSC), Nuetral Detergent Fiber, 48 hour (dNDF48), In-Vitro True Dry Matter Digestibility, 48 hour (IVTDMD48).Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures. Asteric denotes the plants that have been reported as toxic to livestock (Burrows & Tyrl 2013). Standard error included for all species with ≥ 4 samples (n).

Scientific Name	Common Name	Vegetative State	Month Harvested	n	CP (%)	ADF (%)	aNDF (%)	WSC (%)	dNDF48 (%)	IVTDMD48 (%)
**Baccharis pilularis*	Coyote Brush	Mature	July	8	19.0 ± 0.4	24.0 ± 0.6	33.2 ± 0.8	<0.5	8.6 ± 0.4	70.8 ± 0.8
**Baccharis salicifolia*	Mulefat	Mature	August	6	23.6 ± 0.2	16.6 ± 0.3	27.2 ± 0.2	3.9 ± 0.1	5.8 ± 0.1	75.0 ± 0.2
**Ericameria sp.*	Golden Bush	Mature	July	8	19.9 ± 3.2	29.7 ± 3.1	51.9 ± 0.8	0.6 ± 0.9	11.1 ± 1.3	56.9 ± 3.5
**Sambucus mexicana*	Elderberry	Mature	July	3	19.8	28.2	33.2	9.1	3.7	73.2
**Quercus douglasii*	Blue Oak	Mature	July	6	17.0 ± 0.4	29.2 ± 0.4	35.6 ± 0.7	11.8 ± 0.5	16.3 ± 0.4	72.5 ± 1.0
**Quercus lobata*	Valley Oak	Mature	July	6	17.6 ± 0.3	33.5 ± 0.5	40.6 ± 0.4	8.7 ± 0.6	18.4 ± 0.1	64.8 ± 0.8
**Quercus agrifolia*	Live Oak	Mature	July	10	13.4 ± 0.1	38.3 ± 0.5	45.9 ± 0.7	9.3 ± 0.2	14.1 ± 0.3	54.7 ± 0.4
**Prunus dulcis*	Almond	Mature	July	4	15.6 ± 0.3	21.9 ± 0.6	21.4 ± 0.4	12.3 ± 0.9	10.1 ± 0.1	79.9 ± 1.0
**Juglans sp.*	Walnut	Mature	July	6	15.3 ± 0.1	30.9 ± 0.1	21.2 ± 0.3	17.5 ± 0.3	8.3 ± 0.3	82.5 ± 0.3
Morus sp.	Mulberry	Mature	August	8	11.2 ± 0.2	22.9 ± 0.2	22.3 ± 0.1	5.0 ± 0.6	16.0 ± 0.1	91.5 ± 0.4
Salix sp.	Willow	Mature	August	6	14.0 ± 0.4	28.1 ± 1.0	35.3 ± 0.5	11.2 ±0.6	<0.5	59.6 ± 0.5
Adenostoma fasciculatum	Chamise	Mature	July	3	18.7	34.3	47.8	0.7	19.7	70.6
Platanus racemosa	Sycamore	Mature	July	8	17.8 ± 0.6	34.3 ± 0.8	39.0 ± 2.1	8.8 ± 0.7	7.5 ± 0.8	64.7 ± 1.5

Table 4. Toxin concentrations and nutrient values for selected lupine species. Samples were collected during spring (vegetative state) and summer months (mature stage, but still growing). Nutrients analyzed were crude protein (CP), acid detergent fiber (ADF. Nutrients analyzed were Crude Protein (CP), Acid Digestible Fiber (ADF), amylase Neutral Detergent Fiber (aNDF), Water Soluable Carbohydrates (WSC), Nuetral Detergent Fiber, 48 hour (dNDF48), In-Vitro True Dry Matter Digestibility, 48 hour (IVTDMD48).Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures., amylase neutral detergent fiber (aNDF), water soluble carbohydrates (WSC), digestible neutral detergent fiber at 48 hrs (dNDF48), in vitro true dry matter digestibility at 48 hrs (IVTDMD48). Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures.

			Toxins										Nutrients					
Species	Vegeatative Stage	Date Sampled	Spartiene	Ammodendrine	N-Acetylhistrine	N-Methylcytisine	5,6-Dehydro-α-isolupanine	α-Isolupanine	5,6-Dehydrolupanine	Lupanine	Thermopsine	Anagyrinie						
		Sample Retention Time	Concentration ug/mg										CP	ADF	aNDF	WSC	dNDF48	IVTDMD48
		(min)	5.6	6.3	6.9	7.3	8.4	8.8	8.9	9.3	11.3	12.2	(%)	(%)	(%)	(%)	(%)	(%)
Lupinus sp.	Vegetative	4/9/2019	0.072							0.11			22.6	30.7	28.1	10.2	19.1	86.0
Lupinus sp.	Mature	6/25/2019		3.5	0.35	4			0.15	0.18		0.54	19.7	33.9	26.9	13.0	11.2	81.0
Lupinus sp.	Vegetative	4/24/2019	0.25							0.24			18.1	35.1	33.2	14.3	17.3	87.1
L. bicolor	Vegetative	4/18/2019						2.3	0.33		1		21.9	28.2	39.3	9.8	22.7	83.9
L. bicolor	Vegetative	4/18/2019						2.5	0.23		1		20.8	31.5	40.1	8.9	23.5	83.8
L. bicolor	Vegetative	4/18/2019						1.9	0.22		1.2		20.3	31.3	40.7	6.5	24.3	79.1
L. microcarpus	Vegetative	4/16/2019		0.13		2			0.25	0.21		0.62	24.3	27.8	28.2	15.5	16.7	88.0
L. microcarpus	Vegetative	4/13/2019				2.2			0.31	0.29		0.47	24.7	26.4	28.8	15.2	18.9	89.5
L. microcarpus	Mature	5/7/2019		0.52		3.6			0.43	0.36		1	17.5	36.4	36.1	14.4	14.4	81.3
L. albifrons	Mature	6/25/2019							1.9	4.4		1.6	19.0	25.2	37.3	7.0	15.7	75.8

Table 5. Toxin concentrations and nutrient values for selected *Amsinckia,Heliotrpium, Datura* and *Delphinium* species. Samples were collected during spring (vegetative state) and summer months (mature stage, but still growing). Nutrients analyzed were crude protein (CP), acid detergent fiber (ADF. Nutrients analyzed were Crude Protein (CP), Acid Digestible Fiber (ADF), amylase Neutral Detergent Fiber (aNDF), Water Soluable Carbohydrates (WSC), Nuetral Detergent Fiber, 48 hour (dNDF48), In-Vitro True Dry Matter Digestibility, 48 hour (IVTDMD48).Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures., amylase neutral detergent fiber (aNDF), water soluble carbohydrates (WSC), digestible neutral detergent fiber at 48 hrs (dNDF48), in vitro true dry matter digestibility at 48 hrs (IVTDMD48). Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures.

			Toxins			Nutrients					
Species	Vegetative Stage	Date Sampled	Total Alkaloid mg/g			CP (%)	ADF (%)	aNDF (%)	WSC (%)	dNDF48 (%)	IVTDMD48 (%)
Amsinckia sp.	Vegetative	2/23/2019	0.65		lycopsomine N-oxide, intermedine N-oxide, lycopsomine, intermedine	15.9	33.3	35.6	6.3	18.0	82.5
Amsinckia sp.	Vegetative	2/23/2019	0.59		lycopsomine N-oxide, intermedine N-oxide, lycopsomine, intermedine	15.6	33.3	36.3	6.1	18.0	81.4
Amsinckia sp.	Vegetative	3/9/2019	1.07		lycopsomine N-oxide, intermedine N-oxide, lycopsomine, intermedine	14.1	33.2	40.5	9.4	19.6	84.3
Amsinckia sp.	Vegetative	3/25/2019	0.8		lycopsomine N-oxide, intermedine N-oxide, lycopsomine, intermedine	8.6	39.3	41.3	6.5	19.6	80.3
Amsinckia sp.	Vegetative	3/29/2019	0.35		lycopsomine N-oxide, lycopsomine	12.4	43.0	47.7	0.2	17.5	71.2
Amsinckia sp.	Vegetative	4/11/2019	0.34		lycopsomine N-oxide, intermedine N-oxide, lycopsomine, intermedine	8.6	40.8	47.9	6.1	19.9	75.8
Amsinckia sp.	Vegetative	4/9/2019	0.94		lycopsomine N-oxide, lycopsomine	13.6	36.6	38.8	3.8	21.3	78.1
Amsinckia sp.	Mature	4/19/2019	0.33		lycopsomine N-oxide, lycopsomine	9.5	40.0	46.8	4.3	20.3	74.9
Amsinckia sp.	Mature	4/12/2019	0.38		lycopsomine N-oxide, lycopsomine	17.3	36.6	41.9	3.7	18.2	81.2
Amsinckia sp.	Mature	4/16/2019	0.35		lycopsomine N-oxide, lycopsomine	9.7	40.3	45.3	5.3	17.9	75.3
Amsinckia sp.	Mature	4/18/2019	0.18		lycopsomine N-oxide, lycopsomine	10.3	41.4	45.4	5.4	15.6	75.4
Amsinckia sp.	Mature	4/18/2019	0.37		lycopsomine N-oxide, lycopsomine	9.2	40.4	47.7	4.4	20.5	74.3
Amsinckia sp.	Mature	4/26/2019	0.25		lycopsomine N-oxide, intermedine N-oxide, lycopsomine, intermedine	10.4	44.1	50.8	1.2	18.7	71.8
Amsinckia sp.	Mature	4/25/2019	0.11		lycopsomine N-oxide, lycopsomine	4.7	45.7	50.7	2.5	17.8	69.5
Amsinckia sp.	Mature	4/25/2019	0.09		lycopsomine N-oxide, lycopsomine	4.4	46.5	52.2	2.2	17.9	68.3
Amsinckia sp.	Mature	5/1/2019	0.08		lycopsomine N-oxide, lycopsomine	4.6	51.0	58.2	2.4	15.4	63.2
Amsinckia sp.	Mature	5/1/2019	0.09		lycopsomine N-oxide, lycopsomine	5.1	49.2	54.1	3.5	16.1	67.1
Amsinckia sp.	Late Mature	5/25/2019	0.14		lycopsomine N-oxide, lycopsomine	5.5	49.4	57.1	2.0	18.8	63.8
Amsinckia sp.	Late Mature	5/25/2019	0.19		lycopsomine N-oxide, lycopsomine	5.2	49.7	56.9	2.6	19.3	64.5
Amsinckia sp.	Late Mature	5/25/2019	0.14		lycopsomine N-oxide, lycopsomine	5.7	50.0	58.9	1.7	18.5	61.8
Amsinckia sp.	Late Mature	6/2/2019	0.26		lycopsomine N-oxide, intermedine N-oxide, lycopsomine, intermedine	11.5	43.7	50.1	4.9	15.1	71.7
Heliotropium curassavicum		7/5/2019	3.93		lycopsomine N-oxide, lycopsomine	20.4	31.2	41.3	3.9	9.7	67.0
Datura wrightii		6/25/2019	15		(Scopolamine, demethylatropine, atropine)	24.9	23.1	32.9	6.7	16.5	83.8
			MSAL Alkaloids								
			Total	mg/g							
Delphinium sp.	Mature	5/1/2019	4.0	4.2	Methyllycaconitine, Nudicauline, 14-deacetylnudicauline	9.5	34.2	42.6	7.0	15.2	75.0
Delphinium sp.	Senecsed	6/25/2019	0.6	0.8	Methyllycaconitine, Nudicauline, 14-deacetylnudicauline	3.2	49.6	57.9	3.6	16.3	62.9

Table 6. Toxin concentrations and nutrient values for selected *Astragalus* species. Samples were collected during spring (vegetative state) and summer months (mature stage, but still growing). Nutrients analyzed were crude protein (CP), acid detergent fiber (ADF. Nutrients analyzed were Crude Protein (CP), Acid Digestible Fiber (ADF), amylase Neutral Detergent Fiber (aNDF), Water Soluable Carbohydrates (WSC), Nuetral Detergent Fiber, 48 hour (dNDF48), In-Vitro True Dry Matter Digestibility, 48 hour (IVTDMD48).Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures., amylase neutral detergent fiber (aNDF), water soluble carbohydrates (WSC), digestible neutral detergent fiber at 48 hrs (dNDF48), in vitro true dry matter digestibility at 48 hrs (IVTDMD48). Nutrient values were derived using near-infrared reflectance spectroscopy (NIRS) procedures.

		Toxins			Nutrients					
Species	Vegetative Stage	Date Sampled	Swainsonine (%)	Nitrotoxins	CP (%)	ADF (%)	aNDF (%)	WSC (%)	dNDF48 (%)	IVTDMD48 (%)
A. asymmetricus	Vegetative	4/18/2019	0.08	NF	23.9	27.7	38.3	6.8	24.8	86.3
A. asymmetricus	Mature	5/23/2019	0.13		15.3	36.9	48.8	2.7	23.0	70.7
A. asymmetricus	Mature	5/23/2019	0.15		17.8	32.5	46.7	6.5	22.8	76.9
A. asymmetricus	Mature	5/23/2019	0.18		16.5	34.7	47.8	4.6	22.9	73.8
A. asymmetricus	Mature	6/25/2019	0.09		17.1	34.6	47.5	6.5	22.2	75.8
A. asymmetricus	Mature	6/25/2019	0.09		17.2	34.6	47.0	6.4	22.9	76.9
A. asymmetricus	Mature	7/16/2019	0.12	NF	14.8	36.6	44.8	1.5	19.1	69.2
A. asymmetricus	Mature	7/16/2019	0.06		17.6	33.4	48.7	5.8	21.4	73.4
A. oxyphysus	Vegetative	4/16/2019	0.34		20.1	33.1	41.5	8.6	22.2	81.4
A. oxyphysus	Vegetative	4/16/2019	0.33		18.6	33.9	39.2	9.2	22.0	84.4
A. oxyphysus	Late Mature	6/25/2019	0.12		7.5	50.7	69.7	1.3	21.4	59.6
A. oxyphysus	Late Mature	6/25/2019	0.14		16.4	32.0	40.9	9.5	23.1	83.0
A. oxyphysus	Late Mature	6/25/2019	0.17		13.0	40.3	42.7	5.6	25.0	79.8
A. oxyphysus	Late Mature	6/25/2019	0.17		16.2	35.1	44.1	9.0	23.6	82.0
A. didymocarpus	Vegetative	4/9/2019	NF	NF	24.6	25.7	36.6	11.9	21.3	86.7
A. didymocarpus	Vegetative	4/18/2019	NF	NF	24.7	23.9	35.8	8.5	23.3	85.6
A. didymocarpus	Mature	5/4/2019	NF	NF	10.2	41.5	54.6	6.3	18.6	66.5
A. didymocarpus	Mature	5/4/2019	NF	NF	10.3	40.5	53.0	6.3	19.8	68.8