



# COOPERATIVE EXTENSION

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## Fact Sheet-03-56

### Humboldt County Needs Assessment: Livestock Production

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#### Introduction to Humboldt County

Humboldt County is located in north central Nevada, largely north of Interstate 80. The county covers 9,658 mi<sup>2</sup>, and the Federal Government administers about 81% of the land area. Winnemucca is the only incorporated city, but small outlying communities include Golconda, Paradise Valley, Orovada, McDermitt, Kings River, and Denio. Small acreage residential developments occur near Winnemucca in Grass Valley and Paradise Hill. Population peaked in 1998 at 17,075. The 2000 census listed the countywide population as 16,106. By 2002 the population had declined to an estimated 15,004, reflecting an economic downturn in the mining industry. The population inside the city limits of Winnemucca is about 7,000. Another 6,000 live in Grass Valley, and other small acreage (unincorporated) areas within a 20-mile radius of Winnemucca. The remaining residents reside in or near the widespread ranching and farming communities. These demographics result in a definite split along urban and rural lines.

Local economics are heavily dependent on mining and agriculture. Mining has the largest economic input, but is a substantially more volatile industry than agriculture. Humboldt County is the largest agricultural producing county in Nevada. The most recent census of agriculture (1997) listed 218 economically reportable farms and ranches, and over 733,000 acres in production. The market value of agricultural products in 1997 was over \$57 million, with livestock production accounting for over \$18 million. On a nationwide basis, Humboldt County is among the top 3% of producers for acres of production for hay crops, field seed crops and potatoes, and is among the top 16% for cattle and calves sold.

An economic analysis of the county found that for every dollar the livestock sector increases its sales *total economic activity* in the county increases by \$2.31. Of the 21 economic sectors measured, livestock production has the second highest *economic multiplier*. Also, every increase in employment by one livestock production employee results in an increase of 2.9 employees in other segments of the economy. Livestock production generates the 7th highest (of 21 sectors measured) *employment multiplier* in Humboldt County.

#### Needs Assessment

Faculty in the College of Cooperative Extension must conduct a formal needs assessment in their geographic area of

responsibility. The Extension Educator in Winnemucca is responsible for conducting a needs assessment for Humboldt County. The assessment may include input from a variety of primary (surveys, focus groups, public meetings, etc.) and secondary sources (newspapers, minutes from meetings, etc.). The purpose of the needs assessment is to identify issues (needs) important to the citizens of Humboldt County. Data collected during the needs assessment are analyzed and the results used to guide the development of issue driven education and research programs.

A new Extension Educator arrived in Humboldt County in June 2001. His predecessor had been in the position for less than 3 years, and prior to him the position had been vacant for 3-4 years. A comprehensive needs assessment across all population segments had not been completed for many years. During the summer and early fall of 2001 the Extension Educator attended numerous local meetings (e.g., county commission, Farm Bureau, weed management area, Humboldt River water issues), met with representatives from federal and state agencies (e.g., Bureau of Land Management, United States Forest Service, Department of Agriculture), and discussed issues with local government officials and individuals from throughout the community. These primary data were combined with secondary economic data and collectively identified six general areas Cooperative Extension could focus education and research programming. These were:

- Community Development
- Crop Production
- Livestock Production
- Rangeland/Natural Resources
- Urban Horticulture
- Youth Development

To develop a better understanding about specific issues in each general area, Cooperative Extension developed an issue specific survey (based on input from producers, agencies, and meeting participants described in preceding paragraph). The survey was mailed to 485 residents in Humboldt County. Each recipient was asked to rate the issues' importance from low (1) to high (5), or don't know. The survey was structured so respondents could be classified by employment type and all respondents combined. Respondents were also prompted to provide written comments for issues/concerns the survey did not address; however very

few comments were received. Approximately 180 recipients were agricultural producers. The remaining 300 recipients were randomly selected from the county tax roll, ensuring there was no overlap with agricultural producers. All survey responses were anonymous. Agricultural producers were targeted because: 1) Humboldt County is the number one agricultural producing county in Nevada; 2) agriculture has been the one steady economic theme in the county for over 100 years and is second only to mining; 3) county leadership felt the Extension Educator position should emphasize agriculture and natural resources because agricultural production and natural resource management are tightly linked in Humboldt County.

Each anonymous response was assigned a unique identification number upon receipt, and the data entered into a spreadsheet. The 14 types of employment were reclassified into 6 categories to obtain sufficient samples for analyses. These categories are farmers, ranchers, business owners and managers, government and education workers, industry and/or retail workers, and other (e.g. retired). The results are reported two ways: 1) the percent of all respondents that rated an issue very high/high, low/very low, neutral or don't know; and 2) the average importance rating for each topic by employment type. Of the 485 surveys mailed, 161 were returned resulting in a response rate of 33%. This is well above average for an unsolicited mail survey.

The length and detail of the mail survey require that results be reported in multiple fact sheets. This fact sheet reports results for livestock production. Other fact sheets report issues related to: 1) crop production; 2) community development and urban horticulture; 3) rangeland resources; and 4) youth development.

## Results

At the countywide level (Figure 1), respondents indicated drought was the most important issue for livestock production. Over 70% of the respondents thought drought had a high or very high importance. About 60% of respondents indicated animal health was an important issue. About 50% indicated animal quality control and increasing seasonal forage availability were important issues UNCE should address. Between 40 and 46% of respondents felt increasing forage nutritional value, developing alternative/additional forage sources, tracking costs, developing specialty products and markets, and increasing calf-crop/weaning weights were important.

None of the issues addressed were ranked low/very low, neutral, or don't know by a majority of respondents. The percent of respondents that felt drought, animal health, and animal quality control were a low/very low priority was 15% or less. No more than 21% of respondents felt increasing the seasonal availability of forage (regardless of season) was a low or very low priority. Issues respondents gave the least importance were tracking costs (29.4%), increasing calf-crop and weaning weight (28.3%), developing alternative or additional forage sources (26.4%), and marketing products for specialty or niche markets (25.8%). The four issues with the largest difference between the percent of respondents that rated the issue high/very high and low/very low were drought (difference = 61.4%), animal health (43.8%), animal quality

control (35.2%), and increasing the availability of seasonal forage (30%).

Classifying the responses by type of employment indicates ranchers view the importance of most issues very different than do other population segments (Figure 2). Ranchers thought every issue, except developing alternative forage/feed sources was important/very important (Figure 2). The four issues ranchers felt were most important were: 1) increase calf-crop and weaning weight (4.63); 2) increase the availability of seasonal forage (4.58), specifically fall forage (4.48); improving animal health (4.58); and managing for drought (4.44). The issue ranchers felt was least important was developing alternative or additional forage/feed sources (3.88). At least one, and usually several, population segments placed substantially less importance than ranchers for education and research programs about the following issues: drought management, animal health concerns, improving animal quality, increasing forage nutritional value, tracking costs, increasing calf-crop and weaning weight, developing specialty products and markets, and developing alternative forage/feed supplies.

## Discussion and Summary

Over 30% of the countywide population responded either neutral or don't know for most issues. The only exceptions were management for drought (15% neutral/don't know) and animal health (25% neutral/don't know). This probably is due to constant reminders from the media about the current drought situation and recent incidences (in Europe and Canada) of mad cow disease, foot and mouth disease and other animal health issues (e.g., exotic new castle disease and west Nile virus). This result suggests that a large segment of the population lacks knowledge about many issues related to livestock production, indicating a need for a broad based education program, particularly from the livestock industry.

Results from both this survey (to be included in Rangeland Resources Fact Sheet) and a northeast Nevada survey indicate strong public support for livestock production on public rangelands. This survey's results, however, clearly demonstrate the hazard of using input from a broad spectrum of the population to address discipline specific needs. Ranchers ranked increasing calf-crop and weaning weight as their highest issue. The general population ranked this issue among the lowest, with substantial variability across different segments of the population.

This survey did not ask the same exact questions used in "An Assessment of the Educational Program Needs of Livestock Producers in Northeastern Nevada". Similar questions and themes in the two surveys permit a general comparison among the needs of ranchers in both areas. Both surveys found animal health issues and reproductive management (i.e. calf crop) were important issues (Table 1). In Humboldt County, ranchers felt managing for drought and increasing the availability of seasonal forage, particularly fall forage, were important issues. Written comments in the Northeast Nevada Survey identified the need for programs about drought management. However, there were no written comments about increasing seasonal forage availability.

Figure 1. Countywide (i.e., all respondents) importance ratings for livestock production issues in Humboldt County.

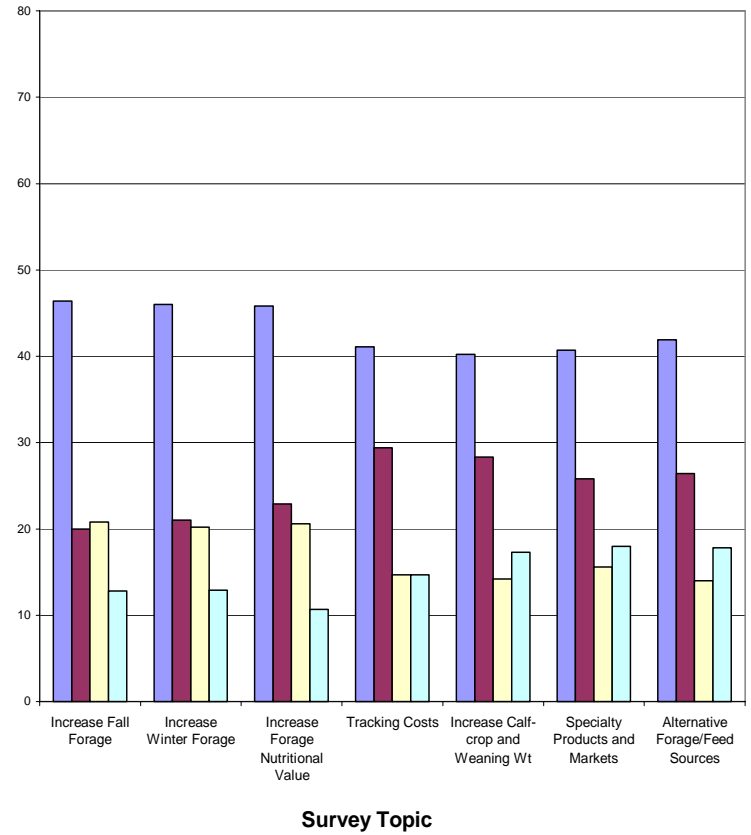
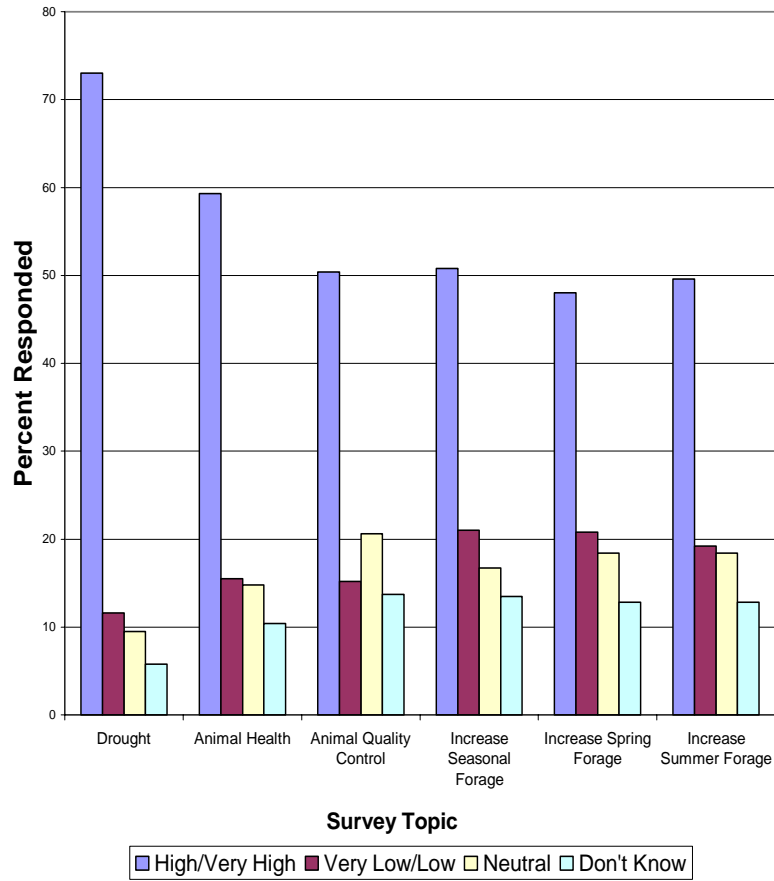
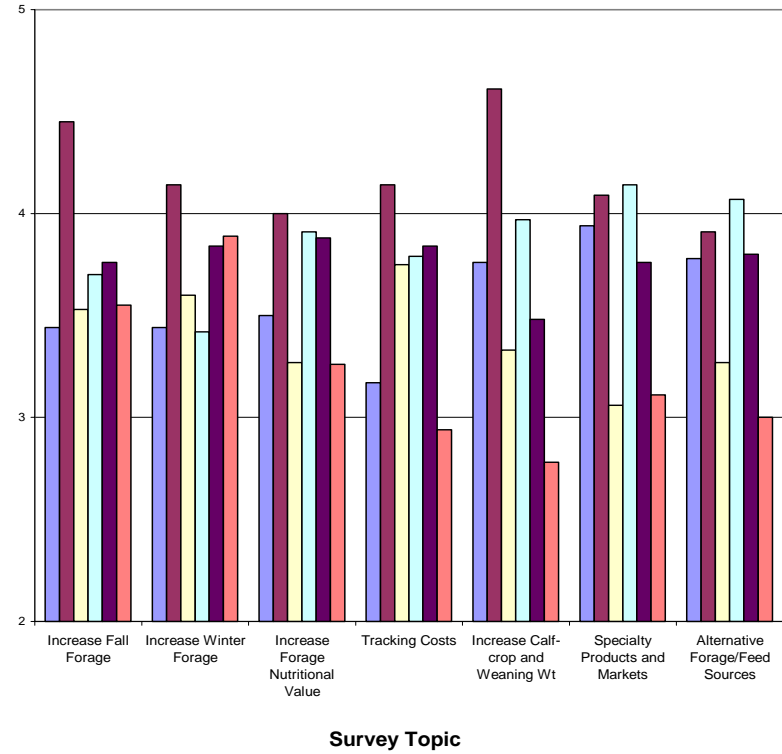
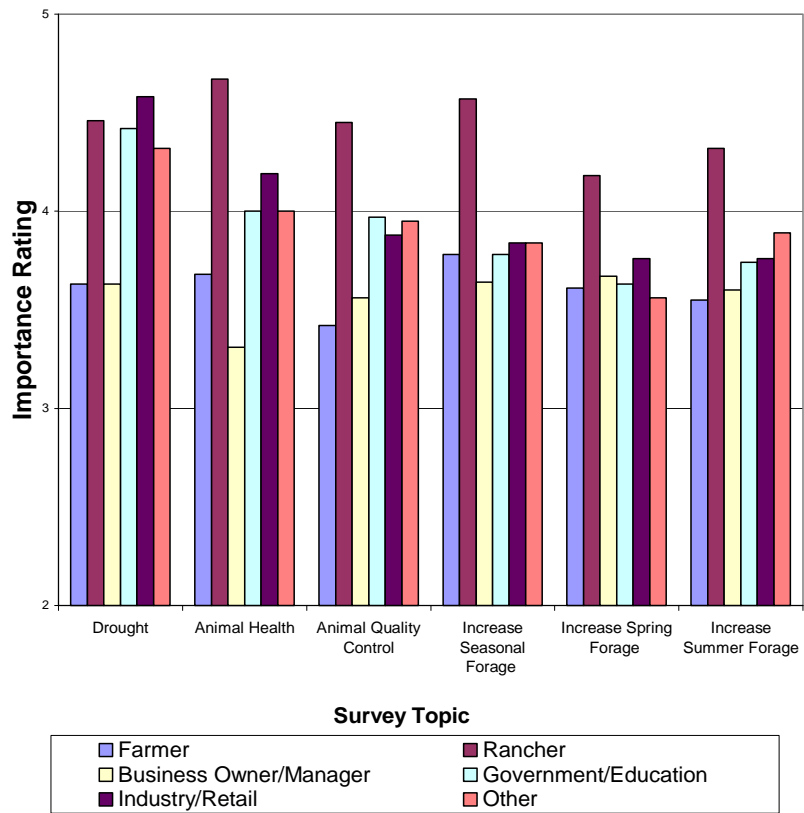


Figure 2. Importance ratings for livestock production issues in Humboldt County by type of employment.



Ranchers ranked the development of alternative forage/feed sources as their lowest issue. This suggests they may not understand how alternative forages may be used to increase calf-crops and/or manage for drought. In some, but not necessarily all settings, increasing the amount of nutritious spring forage on their confined private ground could improve breed back, particularly for second conceptions. Some operations have the potential to develop wild-rye, other tall rangeland grasses, or even domesticated grasses (e.g., triticale) that could be pastured in late summer, fall, or early winter when animal nutritional requirements are lowest. These forages could replace the early feeding of expensive, high quality alfalfa. The survey results indicate an education/research program could emphasize linkages between drought management, increasing seasonal forage supplies, increasing calf crop, and the development of alternative forage supplies. This program may increase producer flexibility that could help them successfully encounter a number of ongoing and/or upcoming challenges (e.g., drought, endangered species, noxious weeds, declining access to federal rangelands, etc.).

The preferred methods, formats, times, and locations for receiving education programs are shown in tables 2-5. Their preferences are different than other segments of society, including farmers. Ranchers prefer direct contact when possible (Table 2). They want programs delivered through fact sheets, newsletters, workshops, field tours and demonstration sites (Table 3). Printed media provide reference materials that

can be periodically consulted, while tours and demonstration sites fit their “show me the results” approach to doing business. Ranchers are much more likely to attend programs from November through February, Tuesday through Thursday, and during the workday or early evening (Table 4). In Humboldt County they prefer programs be held in Winnemucca, Paradise Valley, or Orovada (Table 5). Maximizing their participation is possible only if these scheduling concerns are included in program development.

**Table 1.** Comparison of education program needs for livestock producers. Program needs are ranked from highest (top row) to lowest (bottom row) in each survey area.

<b>Humboldt County</b>	<b>Northeast Nevada Livestock Producers Assessment</b>
Increase calf-crop and weaning weight	Disease treatment and prevention
Increase the availability of seasonal forage, specifically fall forage	Reproductive management and second conception
Improving animal health	Beef Quality Assurance programs
Managing for drought	Traditional 4-H livestock programs

**Table 2.** Preferred methods for communicating problems, concerns, and needs with the UNCE office in Humboldt County. Values are percent within work types who had a high or very high preference for the specific method.

<b>Method</b>	<b>Countywide</b>	<b>Farmer</b>	<b>Rancher</b>	<b>Business Owner/Manager</b>	<b>Government/ Education</b>	<b>Industry/ Retail</b>	<b>Other</b>
Regular Scheduled Meetings	52	54	57	35	52	68	37
Phone Conversations	41	35	50	38	39	54	33
Email	40	33	21	27	44	63	42
On-site visits	56	75	59	44	45	60	58
Open Houses	55	44	38	29	54	80	77

**Table 3.** Preference for delivery of education programs by specific formats. Values are percent of respondents by work type who wanted education programs delivered by specific format.

<b>Program Format</b>	<b>Countywide</b>	<b>Farmer</b>	<b>Rancher</b>	<b>Business Owner/Manager</b>	<b>Government/ Education</b>	<b>Industry/ Retail</b>	<b>Other</b>
Seminar	75	86	83	80	71	70	59
Workshop	90	91	90	100	82	91	90
Field Day	76	81	69	60	73	75	95
Field Tour	79	91	90	71	70	65	95
Newsletter	84	96	95	81	83	74	76
Fact Sheet	85	95	100	80	89	70	75
Newspaper	70	57	73	71	82	63	56
Web Site	69	57	53	60	81	83	63
Demonstration Site	83	80	90	63	93	78	84

**Table 4.** Preference for receiving education programs at a specific time of year, day of the week, and time of day. First value is the percent of respondents that answered yes, and the second value in ( ) is the percent that responded no. The remaining balance was neutral responses.

	Countywide	Farmer	Rancher	Business Owner/Manager	Government/ Education	Industry/ Retail	Other
<b>Best time of year</b>							
Sept.-Oct.	26 (28)	19 (57)	35 (24)	21 (14)	25 (29)	46 (9)	6 (29)
Nov.-Feb.	50 (13)	91 (0)	74 (0)	43 (7)	42 (21)	19 (33)	28 (6)
March-May	39 (23)	19 (48)	12 (47)	28 (27)	58 (8)	62 (10)	47 (5)
June-August	19 (45)	10 (85)	7 (60)	14 (36)	14 (46)	32 (32)	24 (12)
<b>Best Time of Week</b>							
Monday or Friday	28 (25)	29 (29)	24 (24)	27 (20)	32 (36)	37 (16)	12 (18)
Tuesday-Thursday	48 (11)	76 (0)	47 (16)	33 (20)	54 (12)	29 (14)	45 (0)
Weekend	27 (36)	11 (56)	17 (39)	27 (27)	42 (25)	40 (35)	12 (41)
<b>Best time of day</b>							
Workday (8-5)	40 (40)	67 (10)	56 (19)	23 (39)	35 (39)	32 (32)	29 (18)
Early Evening (5-7)	51 (15)	36 (32)	59 (18)	50 (19)	68 (8)	52 (14)	33 (0)
Late Evening (7-10)	25 (50)	30 (65)	27 (67)	33 (42)	26 (2)	25 (35)	6 (38)

**Table 5.** Preference for having education programs in respective communities in Humboldt County. Values are percent of respondents who rated the location high/very high.

Location	Countywide	Farmer	Rancher	Business Owner/Manager	Government/ Education	Industry/ Retail	Other
Winnemucca	82	74	65	77	93	96	81
Paradise Valley	48	24	59	53	54	52	43
Orovada	51	73	57	29	40	38	45
McDermitt	41	24	40	29	61	48	38
Kings River	36	32	35	29	46	33	37
Denio	33	14	33	29	50	32	35

## References

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