Section 3 – GIPSA's and Other Entities' Captive Supply Statistics

Congress instructed the Secretary to "include the reasons why GIPSA's annual 'Packers and Stockyard[s] Statistical Report' frequently reports a captive supply percentage much lower than the percentages reported by other entities." GIPSA interviewed representatives from nine industry organizations [10] (including both opponents and proponents of captive supply) to identify the other published captive supply statistics. These organizations included livestock producer groups and their affiliated market research organizations as well as various other organizations. GIPSA identified six organizations that publish or have published statistics related to captive supply: USDA's Agricultural Marketing Service, Cattle-Fax, Kansas Livestock Association, Nebraska Cattlemen, Texas Cattle Feeders Association, and the Western Organization of Resource Councils. GIPSA asked those sources that produce other captive supply statistics to describe their captive supply statistics.

GIPSA found six fundamental differences between its captive supply statistic and those published by the other entities: 1) GIPSA obtains its captive supply data from summary data that packers are required to report. Five of the six other reporters obtain primary data for their captive supply statistics through voluntary reporting by feedlots or packers, and the sixth reproduces statistics that AMS reported. 2) GIPSA defines captive supply by the transaction's *procurement method*; others define captive supply by the transaction's *pricing method* or a combination of procurement and pricing methods. 3) GIPSA reports captive supply statistics on a national basis. The others report regional captive supply statistics. 4) GIPSA reports on an annual basis. Five of the six report or reported on weekly or monthly bases, while one of the six published two reports of captive supply for a limited time period in 1995. 5) GIPSA reports captive supply as a percentage of total slaughter. Three reported captive supply both as the number of head and as a percentage of total estimated movement from feedlots. Two reported captive supply as the number of head. One reported captive supply as a percentage of total cattle movement. 6) GIPSA's captive supply statistics are based on data reported by the packer slaughtering the cattle so that cattle would be reported in regional statistics according to where they were slaughtered. The other reporters report captive supply statistics from the feedlot shipping the cattle so that cattle would be reported regional statistics according to the location of the feedlot from which they were shipped.

GIPSA's Captive Supply Statistics

GIPSA has collected summary marketing agreement and forward contracted procurement information from packers since 1988, and summary packer feeding information since the early 1950s. GIPSA requires packers to report the total number of cattle procured and the number of cattle procured through forward contract, marketing agreement, packer fed, and "other methods" in the GIPSA packer annual report form. GIPSA compiles and reports packer fed cattle and cattle purchased with forward contracts and marketing

[10] Cattle-Fax, Kansas Livestock Association, Livestock Marketing Information Center, National Cattlemen's Beef Association, Nebraska Cattlemen, Organization for Competitive Markets, R-Calf, Texas Cattle Feeders Association, and Western Organization of Resource Councils.

agreements as a percentage of the packers' total steer and heifer slaughter for the largest 4 and largest 15 packers. GIPSA's measure of captive supply is the sum of the packer fed cattle and cattle purchased with forward contracts and marketing agreements expressed as a percent of packers' total slaughter. Monthly forward contract, marketing agreement, and packer fed slaughter by the largest 4 and largest 15 packers from 1990 to 1998, reported to GIPSA, are shown in Tables 1, 2, and 3.

Table 1. Packer Fed, Forward Contract, Marketing Agreement Steer and Heifer Slaughter as a Percentage of Total Steer and Heifer Slaughter for the Largest 4 and Largest 15 Packers, 1990 to 1998

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
							Percent						
4 Largest Packers													
1990	29.1	27.3	18.2	24.8	18.9	17.9	20.1	16.1	16.5	20.0	15.7	19.7	20.1
1991	18.6	16.0	22.0	19.7	14.7	22.8	19.6	17.6	17.8	17.1	15.7	23.4	18.7
1992	15.9	21.4	19.1	25.9	22.6	25.4	19.1	21.1	17.1	17.9	16.0	27.2	20.8
1993	19.2	18.3	18.1	24.8	15.5	21.4	16.1	15.4	14.1	14.9	15.7	17.5	17.5
1994	19.3	20.1	18.4	20.2	20.3	22.2	19.2	24.2	21.9	20.8	17.6	25.6	20.9
1995	22.9	25.4	23.0	28.5	19.0	26.3	22.6	20.3	15.6	14.6	14.9	23.2	21.3
1996	20.7	22.1	19.9	26.5	21.2	23.6	26.6	22.2	19.0	21.4	16.8	31.3	22.5
1997	25.0	24.0	17.0	18.0	20.0	18.0	21.5	20.6	19.2	16.8	17.9	24.2	20.1
1998	25.5	24.8	18.2	20.0	22.1	21.5	24.7	24.7	20.2	20.3	25.4	21.8	22.4
Average	22.3	21.6	19.1	24.5	19.8	23.7	21.2	19.8	18.7	18.3	17.8	24.6	20.9
15 Largest Packers													
1990	25.8	25.4	18.4	23.4	16.8	16.4	18.3	15.0	15.9	18.7	14.8	20.1	18.9
1991	16.5	15.1	19.5	17.9	13.4	20.8	17.7	16.5	16.7	15.9	15.2	22.4	17.2
1992	14.7	19.9	18.3	23.5	21.2	23.5	17.7	19.8	16.8	17.2	15.5	24.9	19.5
1993	18.4	18.0	17.7	24.1	15.5	20.9	16.1	15.4	14.4	15.2	16.2	17.9	17.4
1994	18.9	19.5	18.1	19.9	20.1	21.7	19.1	23.2	21.4	20.6	17.5	24.7	20.5
1995	22.2	24.6	22.5	27.6	19.0	25.5	22.2	19.9	15.9	15.4	15.7	23.0	21.1
1996	20.5	21.9	19.9	25.7	20.9	23.0	25.7	22.0	19.3	21.1	17.2	29.6	22.2
1997	22.8	21.1	15.6	16.6	18.8	17.1	19.6	19.1	17.9	16.0	16.9	22.2	18.6
1998	23.7	23.3	17.2	18.9	21.1	20.8	23.4	23.7	19.8	19.8	23.9	21.0	21.4
Average	20.6	20.6	18.2	22.9	18.7	22.2	20.0	18.9	18.0	17.7	17.4	23.5	19.9

Source: Based on GIPSA Packer Annual Reports

Table 2. Packer Fed Purchases of Steer and Heifer Slaughter as a Percentage of Total Steer and Heifer Slaughter for the Largest 4 and Largest 15 Packers, 1990 to 1998

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
							Percent						
4 Largest Packers													
1990	4.4	4.4	4.8	4.6	5.9	4.6	6.4	5.9	4.9	4.7	4.5	5.5	5.1
1991	5.6	4.4	5.8	5.0	4.3	5.0	4.7	4.2	4.7	5.1	4.0	3.7	4.7
1992	3.3	4.7	3.8	5.3	5.3	3.1	3.7	3.6	4.6	4.4	3.8	3.4	4.1
1993	3.7	4.7	3.7	4.0	3.5	3.4	3.8	4.4	3.6	4.5	3.7	2.3	3.8
1994	3.6	4.0	3.4	2.5	3.1	3.4	4.3	5.8	5.3	4.4	4.6	2.7	3.9
1995	3.6	5.0	4.0	3.1	2.0	3.6	4.7	4.9	1.6	1.5	1.9	2.0	3.2
1996	3.1	4.8	2.8	2.4	3.0	3.8	5.2	4.5	2.3	2.0	2.3	3.9	3.4
1997	5.4	4.8	1.6	1.9	3.8	4.4	5.4	3.8	3.3	3.0	4.2	4.8	3.8
1998	3.5	2.8	2.3	2.8	4.2	4.0	4.7	4.2	3.1	3.4	3.0	3.8	3.5
Average	4.1	4.4	3.6	3.9	4.2	4.2	5.1	4.7	4.0	4.0	3.7	3.8	4.2
15 Largest Packers													
1990	4.5	4.7	5.3	4.6	5.3	4.4	6.2	5.7	4.9	4.7	4.5	5.6	5.0
1991	4.9	4.0	4.9	4.3	4.1	4.8	4.7	4.5	4.8	5.1	4.3	4.0	4.5
1992	3.0	4.4	3.7	4.9	5.1	3.3	3.8	3.8	4.7	4.6	4.2	3.9	4.1
1993	4.0	4.8	3.9	4.3	3.7	3.8	4.2	4.6	4.0	4.8	4.2	3.0	4.1
1994	3.7	3.9	3.3	2.7	3.3	3.5	4.3	5.6	5.2	4.5	4.6	2.9	4.0
1995	3.5	4.7	3.9	3.2	2.3	3.8	4.8	4.8	1.8	1.9	2.4	2.4	3.3
1996	3.4	4.7	2.9	2.5	3.1	3.7	5.0	4.3	2.4	1.9	2.3	3.7	3.3
1997	4.8	4.3	1.5	1.8	3.8	4.4	4.9	3.6	3.3	3.0	4.0	4.5	3.7
1998	3.3	2.8	2.3	2.9	4.3	4.4	5.0	4.7	3.7	3.8	3.2	3.7	3.7
Average	4.0	4.3	3.6	3.8	4.1	4.2	5.1	4.7	4.1	4.1	3.9	4.0	4.2

Source: Based on GIPSA Packer Annual Reports

Table 3. Forward Contract and Marketing Agreement Steer and Heifer Slaughter as a Percentage of Total Steer and Heifer Slaughter by the Largest 4 and Largest 15 Packers, 1990 to 1998

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
							Percent						
4 Largest Packers													
1990	24.7	22.8	13.4	20.2	13.1	13.4	13.7	10.2	11.6	15.4	11.2	14.2	15.1
1991	13.0	11.6	16.2	14.7	10.4	17.8	14.9	13.5	13.2	12.0	11.7	19.7	14.0
1992	12.6	16.7	15.3	20.6	17.3	22.4	15.4	17.5	13.0	13.5	12.1	23.8	16.7
1993	15.5	13.5	14.4	20.8	12.0	18.0	12.3	11.1	10.4	10.4	11.9	15.2	13.7
1994	15.7	16.0	14.9	17.7	17.2	18.8	14.9	18.4	16.6	16.3	13.0	22.9	17.0
1995	19.3	20.4	19.0	25.4	16.9	22.6	17.9	15.4	14.0	13.2	13.1	21.2	18.1
1996	17.5	17.2	17.1	24.2	18.2	19.9	21.5	17.6	16.6	19.5	14.5	27.4	19.2
1997	19.7	19.3	15.5	16.0	16.2	13.6	16.0	16.8	16.0	13.8	13.8	19.4	16.2
1998	22.0	22.0	15.9	17.3	17.9	17.6	20.1	20.5	17.1	16.9	22.4	18.1	18.9
Average	18.1	17.2	15.5	20.6	15.6	19.5	16.1	15.0	14.7	14.3	14.1	20.8	16.7
15 Largest Packers													
1990	21.3	20.7	13.1	18.8	11.5	12.0	12.1	9.3	11.0	14.0	10.3	14.5	13.9
1991	11.5	11.1	14.5	13.6	9.3	16.0	13.0	12.0	11.9	10.9	10.9	18.4	12.7
1992	11.7	15.5	14.6	18.7	16.1	20.2	13.8	16.1	12.2	12.6	11.3	21.0	15.3
1993	14.4	13.1	13.8	19.8	11.8	17.1	11.9	10.8	10.5	10.4	11.9	14.9	13.3
1994	15.3	15.6	14.7	17.2	16.7	18.2	14.8	17.7	16.3	16.1	12.9	21.7	16.5
1995	18.7	19.9	18.6	24.4	16.7	21.7	17.4	15.2	14.1	13.5	13.3	20.5	17.8
1996	17.2	17.1	17.0	23.2	17.8	19.3	20.7	17.7	16.9	19.2	14.9	25.9	18.8
1997	18.0	17.7	14.2	14.8	15.0	12.7	14.7	15.5	14.5	13.0	13.0	17.7	14.9
1998	20.4	20.6	14.9	16.1	16.7	16.4	18.4	19.0	16.1	16.0	20.7	17.2	17.7
Average	16.6	16.3	14.7	19.2	14.6	18.0	14.9	14.2	13.9	13.6	13.5	19.5	15.7

Source: Based on GIPSA Packer Annual Reports

Other Captive Supply Statistics and Differences From GIPSA's Statistics

GIPSA's interviews with industry sources identified six organizations that publish or have published statistics related to captive supply: USDA's Agricultural Marketing Service, Cattle-Fax, Kansas Livestock Association, Nebraska Cattlemen, Texas Cattle Feeders Association, and the Western Organization of Resource Councils. Their captive supply statistics and comparisons to GIPSA's captive supply statistics are discussed below.

AMS's Additional Movement Statistic[11]

GIPSA's captive supply statistics are frequently compared with statistics reported by USDA's Agricultural Marketing Service (AMS). GIPSA's and AMS's statistics are often assumed to measure the same industry practices, and people often question why statistics reported by the two agencies are not identical. The two statistics, however, do not measure the same industry practices. The differences between them can be explained in terms of differences in what the statistics measure, the data used to develop them, and how those data are collected.

Prior to USDA's implementation of mandatory price reporting in April 2001, AMS published weekly statistics on the composition of reported feedlot shipments of cattle to packers (feedlot shipment volume) for the week. These quantity statistics supplemented AMS's spot market price reports. AMS's reported feedlot shipment volumes were intended to provide producers with market information about packers' current demand for cattle, often expressed as the "market's strength." AMS collected the data through telephone contacts with feedlots and packers and reported weekly feedlot shipment volume for four cattle marketing regions – Texas/Oklahoma, Kansas, Colorado, and Nebraska/Wyoming.

AMS reported statistics on the four regions' cash sales, estimated total movement, estimated additional movement, and percent estimated additional movement. On its reporting form, AMS described cash sales as "cattle sold on a negotiated live or beef basis, to be delivered within the normal pickup period, with the price to be determined at the time of sale" (see figure 2). Cash sales used in AMS's additional movement reporting reflected the volume of cash sales voluntarily reported to AMS. Total movement was the estimated movement, or shipments, of cattle from feedlots in the region. Additional movement was the difference between estimated total movement and reported cash sales volume, and was characterized by AMS on the reporting form as "(a) cattle that are fed by or for packers, (b) contract or formula agreements, (c) cattle financed by packers and slaughtered by the same packer, and (d) cattle committed to packers with the price non-negotiated prior to change in ownership." Percent additional movement was additional movement in the region expressed as a percentage of estimated total movement in the region.

[11] The description of AMS's additional movement statistic is based on discussion with AMS officials and information contained in reports published by AMS.

There are several differences between GIPSA's captive supply statistics and AMS's additional movement (table 4). First, GIPSA obtains its data for computing captive supply from annual reports packers are required by law to file with GIPSA; it publishes captive supply statistics for the largest 4 and the largest 15 packers on an annual basis. In contrast, AMS obtained its data from voluntary reporting from feedlots and packers; it published additional movement from feedlots on a weekly basis.

Second, GIPSA reports captive supply on a national basis. AMS reported additional movement for four regions: Texas/Oklahoma, Kansas, Colorado, and Nebraska/Wyoming.

Third, procurement methods are the basis for GIPSA's captive supply statistics. Packers report to GIPSA the number of slaughtered cattle that were procured through any of the four defined procurement categories that comprise GIPSA's captive supply definition. In contrast, AMS estimated additional movement as the residual difference between estimated total movement and voluntarily reported cash sales.

Fourth, some transactions included in AMS's additional movement would not be reported to GIPSA as captive supply transactions. For example, packers often use formula pricing for transactions that are not associated with an established, ongoing agreement between the packer and the feedlot. These transactions would not be reported to AMS as cash sales because the cattle did not receive a fixed live-weight or carcass-weight price at the time of sale, but they would be included in AMS's estimates of additional movement. Similarly, cash sales that were not voluntarily reported to AMS as cash sales would be treated as AMS's additional movement if they were subsequently reported in total movement. Cattle procured in these transactions would not be included in GIPSA's definition of captive supply, and GIPSA would not require packers to report them in any of its captive supply categories.

Figure 2. AMS's Additional Movement, Reported Weekly on AMS's Website until Implementation of Mandatory Price Reporting

AM_LS170
Amarillo, TX Mon Apr 02, 2001 USDA-TX Dept of Ag Market News

Breakdown of Reported Feedlot Volume for Week Ending - March 01, 2001

Total volume of slaughter cattle reported by USDA (Monday through Sunday) in Texas/Oklahoma, Kansas, Colorado, and Nebraska/Wyoming.

	Current Week	Week Ago	Year Ago
Texas/Oklahoma			
Cash Sales	46,200	51,700	57,900
Additional Movement	51,800	47,000	44,600
Total	98,000	98,700	102,500
Percent Add'l Movement	53%	48%	44%
Kansas			
Cash Sales	51,800	37,000	34,600
Additional Movement	21,200	24,300	25,900
Total	73,000	61,300	60,500
Percent Add'l Movement	29%	40%	43%
Colorado			
Cash Sales	12,600	11,400	5,100
Additional Movement	12,100	17,700	13,100
Total	24,700	29,100	18,200
Percent Add'l Movement	49%	61%	72%
Nebraska/Wyoming			
Cash Sales	46,000	68,000	57,400
Additional Movement	13,300	17,200	23,800
Total Movement	59,300	85,200	81,200
Percent Add'l Movement	22%	20%	29%
Total Cash Sales	156,600	168,100	155,000
Total Additional Movement	98,400	106,200	107,400
Total	255,000	274,300	262,400
Percent Add'l Movement	39%	39%	41%

Cash sales include cattle sold on a negotiated live or beef basis, to be delivered within the normal pickup period, with the price determined at the time of sale.

Additional movement (a) cattle that are fed by or for packers (b) contract or formula agreements (c) cattle financed by packers and slaughtered by the same packer and (d) cattle committed to packers with the price non-negotiated prior to change in ownership.

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This report will be discontinued on March 30, 2001. Starting April 2, 2001, market information contained in this report is included in the reports developed for Livestock Mandatory Reporting. A list of all mandatory livestock reports is available at the following web site.
http://www.ams.usda.gov/lsg/mpr/MPRreport.htm
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Source: USDA-Texas Dept of Ag Market News, Amarillo, TX
806/372-6361 - 24 hr Markets 806/372-3494
www.ams.usda.gov/mnreports/am_ls170.txt

1330c pj

Table 4. Major Differences between GIPSA's Reported Captive Supply Statistics and AMS's Additional Movement Statistics

GIPSA's Captive Supply Statistics	AMS's Additional Movement Statistics
Collection Method	
Mandatory annual reporting by packers on a written report form.	Voluntary weekly reporting by feedlots and packers in response to telephone queries by AMS market news reporters.
Geographic Focus	
Steer and heifer slaughter by all plants in the United States operated by the largest 15 steer and heifer slaughterers.	Steer and heifer shipments from voluntarily reporting feedlots in Texas, Oklahoma, Kansas, Colorado, Nebraska, and Wyoming.
Types of Transactions Included	
Transaction types include: - Forward or basis contracts - Packer fed - Marketing agreements - Other purchases more than 14 days in advance of slaughter.	Transaction types include: - Packer fed - Contract or formula agreements - Cattle financed by packers and slaughtered by the same packer - Cattle committed to packers with the price non-negotiated prior to the change in ownership.
Calculation of Captive Supply	
Captive supply calculated from volume of cattle slaughtered reported to have been procured under one of the four transaction types.	Additional movement calculated as the difference in cattle reported to be cash sales and the reported total movement.

Source: GIPSA and AMS publications and conversations with AMS personnel.

Finally, there is an arithmetic difference between the two statistics when expressed on a "percent captive" or "percent additional movement basis." (table 5) GIPSA's captive supply statistic and AMS's additional movement statistic are reasonably close in terms of number of head but much different in terms of their percentage of total slaughter and total movement because packers report substantially more cattle being slaughtered at packing plants in AMS's reporting regions than AMS estimates total movement from feedlots in those regions.

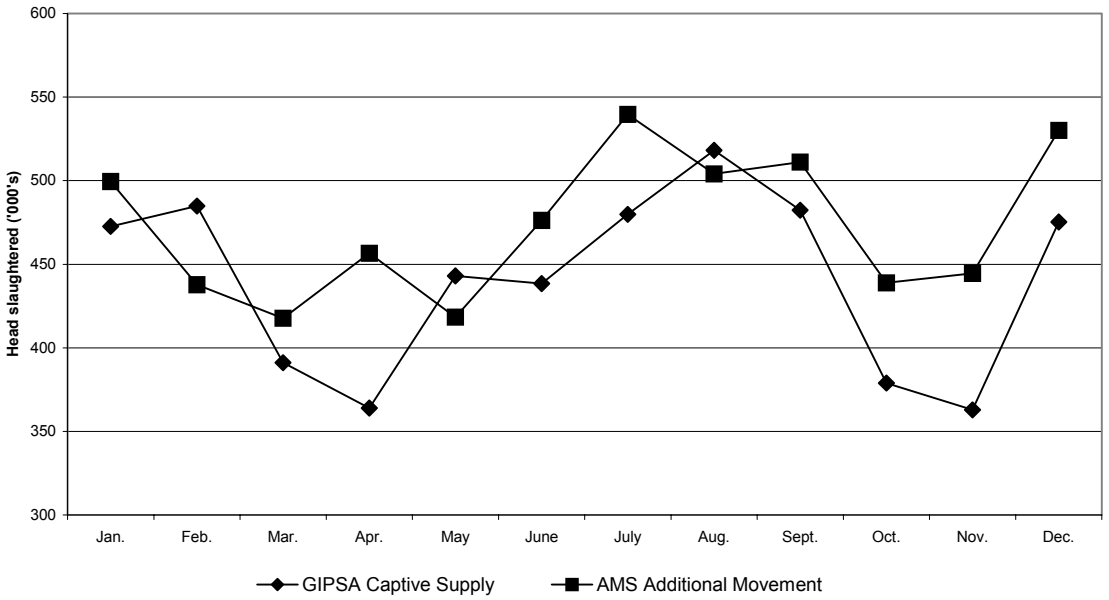
Table 5. GIPSA's Captive Supply Statistics and AMS's Additional Movement Statistics, 1999

	GIPSA's captive supply for the largest 15 Packers	Captive Supply as a Percentage of Largest 15 Packers' Steer and Heifer Slaughter	AMS's Additional Movement from feedlots in AMS's reporting regions	Additional Movement as a Percentage of AMS' Total Movement
	Head	Percent	Head	Percent
Texas & Oklahoma	1,869,801	35.3	2,027,241	38.4
Kansas	1,903,748	24.1	1,779,800	40.1
Colorado, Nebraska & Wyoming[1]	1,517,607	17.0	1,967,400	30.3
Total for AMS's Additional Movement Reporting Regions	5,291,156	23.7	5,774,440	35.6
Total United States	6,559,559	23.6	--	--

[1] Colorado, Nebraska, and Wyoming were combined to protect the confidentiality of GIPSA data.
Source: Packer annual reports to GIPSA and AMS publications.

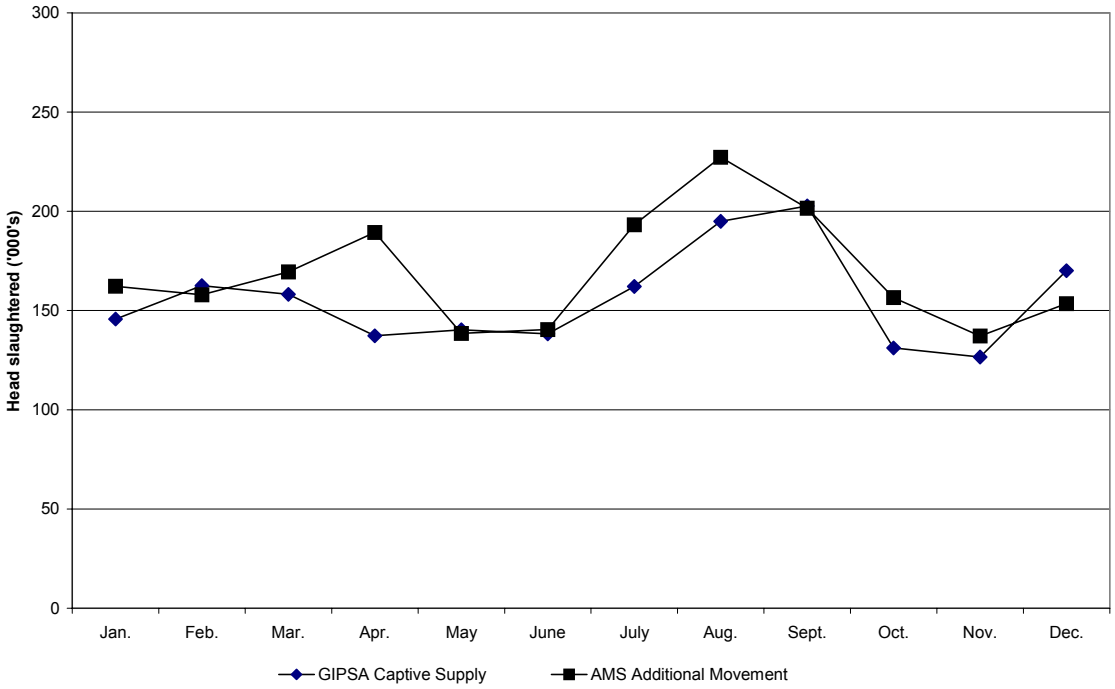
Despite large discrepancies in the two captive supply measures when expressed as percentages of their respective totals (table 5's, 17.0 percent and 30.3 percent for Colorado, Nebraska and Wyoming, for instance), the strong relationship exists between the two measures when expressed in the number of head (graphs 1, 2 and 3).

Graph 1. GIPSA Captive Supply and AMS Additional Movement for Colorado, Kansas, Oklahoma, Nebraska, Wyoming, and Texas by Month, 1999



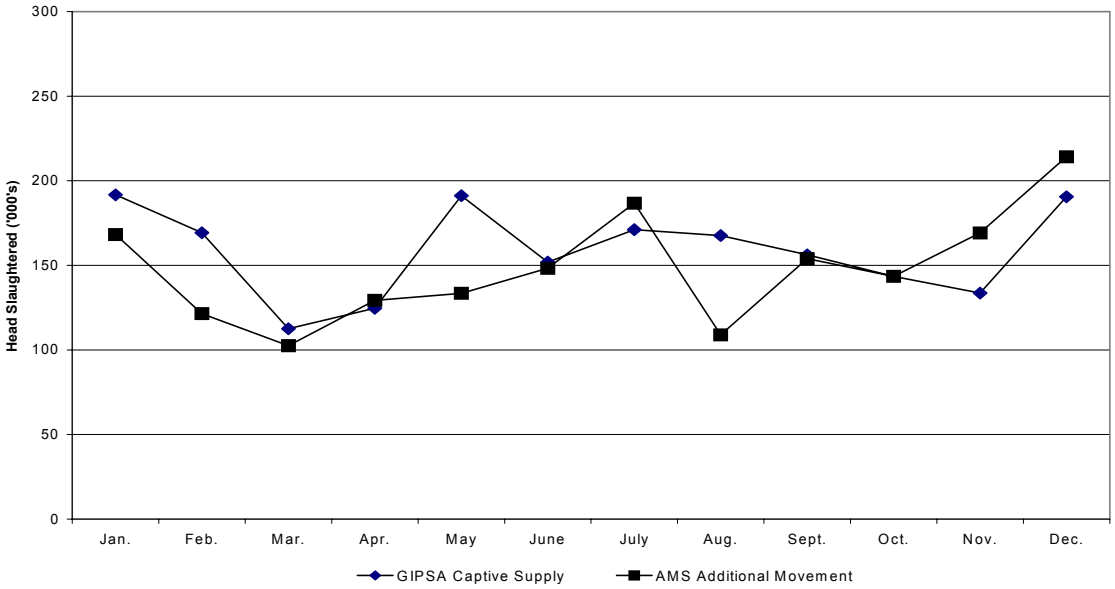
Source: Packer annual reports to GIPSA and AMS publications

Graph 2. GIPSA Captive Supply and AMS Additional Movement for Texas/ Oklahoma by month, 1999



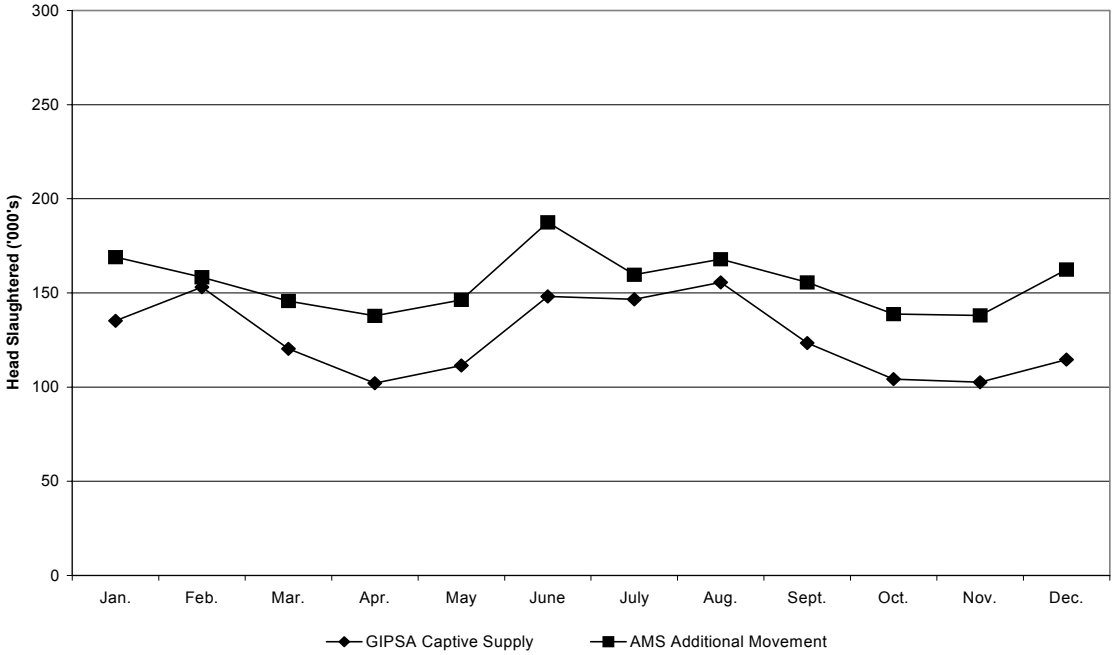
Source: Packer annual reports to GIPSA and AMS publications.

Graph 3. GIPSA Captive Supply and AMS Additional Movement for Kansas by Month, 1999



Source: Packer annual reports to GIPSA and AMS publications.

Graph 4. GIPSA Captive Supply and AMS Additional Movement for Colorado, Nebraska and Wyoming by Month, 1999



Source: Packer annual reports to GIPSA and AMS publications.

Cattle-Fax Captive Supply Statistics

Cattle-Fax, the marketing research arm of the National Cattlemen's Beef Association, issues a series of reports to its members that track forward contracted and formula cattle shipments from feedlots in Kansas, the Texas Panhandle and parts of Oklahoma, Colorado, Nebraska, and parts of the Dakotas. Cattle-Fax's reports are developed from surveys of Cattle-Fax members. The reports are designed to capture non-cash and non-negotiated cattle transactions. Data on forward contracted and formula sales are reported to Cattle-Fax members in three formats: a daily report, a weekly report issued at the end of the week, and a monthly report with projections three months ahead. Cattle-Fax has been issuing these reports for approximately 13 years.

Cattle-Fax's captive supply statistic does not include packer fed cattle. After subtracting packer fed cattle from GIPSA's statistics, GIPSA reported more captive supply in Kansas and Texas than Cattle-Fax reported, and less captive supply in Colorado and Nebraska than Cattle-Fax reported in 1999 (Table 6).

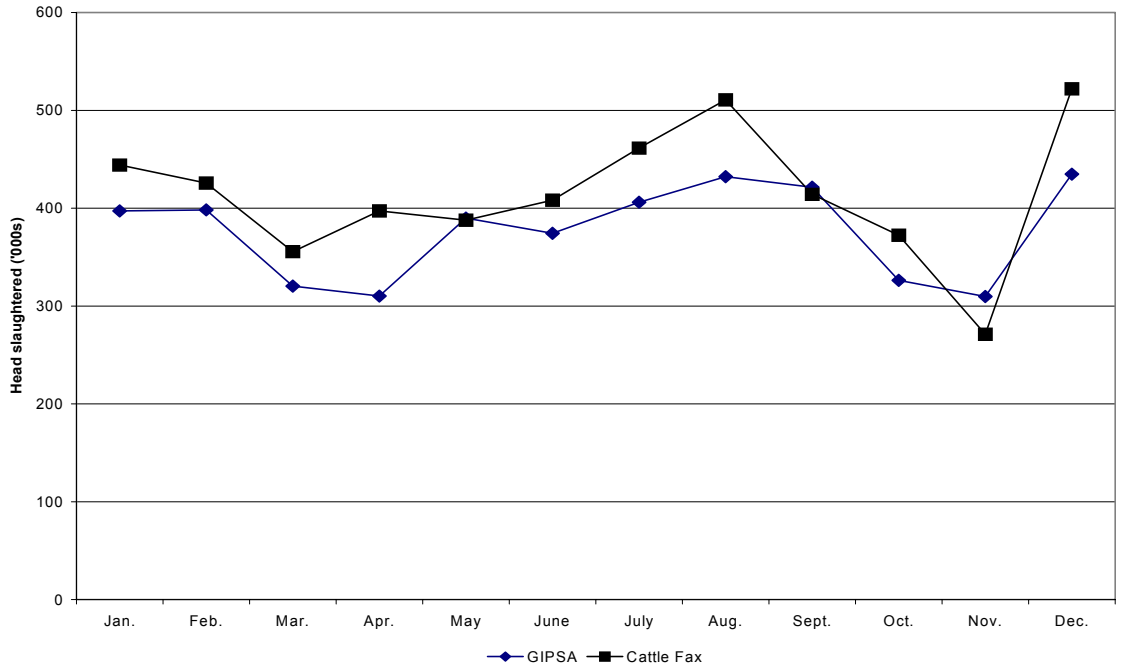
The explanation for the differences between GIPSA's captive supply statistics and Cattle-Fax's captive supply statistics is essentially the same as the explanation for differences between those of GIPSA and AMS. Cattle-Fax collects information from member surveys, while GIPSA develops its information from reports packers are required to submit to the Agency. Cattle-Fax measures captive supply from the feedlot side includes cattle that are shipped for slaughter to packing plants outside the region. GIPSA measures captive supply from the packer side and will pick up cattle that are shipped into the region for slaughter from feedlots outside the region. Finally, GIPSA and Cattle-Fax use different captive supply categories with Cattle-Fax using pricing methods and GIPSA procurement methods. Despite these differences, however, the two measures are related. This is especially apparent when viewing their monthly patterns (graph 5). GIPSA's (adjusted) monthly captive supply percentage and Cattle-Fax's monthly captive supply percentage followed similar paths in 1999.

Table 6. Comparison of Cattle-Fax's Contract and Formula Priced Cattle Shipments to GIPSA's Forward Contracted and Marketing Agreement Slaughter Reported by Plants Operated in Cattle-Fax Regions by Largest 15 Packers, 1999

	Colorado and Nebraska		Kansas		Texas Panhandle		Total	
	Cattle-Fax	GIPSA	Cattle-Fax	GIPSA	Cattle-Fax	GIPSA	Cattle-Fax	GIPSA
January	143,350	69,137	152,300	185,682	148,600	142,520	444,250	397,339
February	149,250	77,815	120,300	160,924	157,200	159,706	425,750	398,445
March	126,875	52,501	83,300	111,087	145,800	156,859	355,675	320,447
April	135,240	52,037	112,000	122,795	150,100	135,385	397,340	310,217
May	139,200	60,961	123,400	190,646	125,100	138,341	387,700	389,948
June	162,950	85,175	128,100	151,909	117,100	137,455	408,150	374,539
July	131,600	73,978	144,700	171,069	185,200	161,145	461,500	406,192
August	150,500	70,687	153,800	167,670	206,500	194,025	510,800	432,382
September	120,200	66,113	121,000	156,221	173,100	199,166	414,300	421,500
October	110,800	52,493	115,100	143,512	146,600	130,215	372,500	326,220
November	85,900	54,214	96,900	133,588	88,400	122,103	271,200	309,905
December	155,600	75,360	211,900	190,555	154,600	168,912	522,100	434,827
Total	1,6110,465	790,471	1,562,500	1,885,658	1,798,300	1,845,832	4,971,275	4,521,961

Source: Packer annual reports and Cattle-Fax publications.

Graph 5. Cattle-Fax Total Captive Supply and GIPSA's Captive Supply Statistics for Largest 15 Packers in Cattle-Fax's Reporting Area, 1999[1]



[1] To ensure a like-with-like comparison, packer fed cattle are excluded from GIPSA's captive supply statistics depicted here.
Source: Packer annual reports and Cattle-Fax publications.

Cattle-Fax does not estimate total shipments of cattle in its reporting regions. Therefore, comparisons to GIPSA's captive supply statistics as a percentage of total slaughter are unavailable. However, in all other respects, Cattle-Fax's captive supply statistics reflect volume of captive supply similar to GIPSA's.

Kansas Livestock Association Captive Supply Statistics

The Kansas Livestock Association (KLA), a trade association representing producers involved in all segments of the livestock industry including cow-calf production, cattle feeding, swine, dairy and sheep, currently reports no captive cattle supply statistic, but did survey its membership twice during 1995 on the extent of captive supply shipments in Kansas. KLA conducted the surveys as a member service to aid in a better understanding of the use of captive supply.

In its first survey, KLA defined three categories of shipments as captive supply: cattle that were packer owned, forward contracted, and sold on a formula basis. Information to develop the first survey, covering the period February 27, 1995 to April 22, 1995, was provided by 106 Kansas feedlots that reported shipping 517,647 head of cattle to IBP, inc., Excel Corporation, ConAgra Beef Company, and Farmland National Beef during the period. Feedlot operators reported that 29 percent of the 517,647 head were procured by packers through captive supply arrangements.

KLA modified its definition of captive supply in its second survey to also include "cash sales picked up in more than 7 days." KLA conducted the second survey, an extension of the first, for the period February 27, 1995 to October 31, 1995. KLA asked its members to report cash and captive supply movement during the nine months covered by the survey, with cash movement identified as "cash sales picked up in 7 days," and captive defined as "cash sales picked up in more than 7 days, packer owned, forward contracted, and formula sales." Feedlot operators reported that captive supply movement was 417,420 head, or 22.8 percent of the total 1,827,099 head shipped during the period (Table 7). Captive shipments to the largest four packers were equivalent to 4.4 percent, 17.3 percent, 22.4 percent, and 32.4 percent of the feedlots' shipments to the four largest packers, while captive shipments to all other packers averaged 38.1 percent of their total shipments.

Table 7. Kansas Livestock Association Captive Supply Survey, Feb. 27, 1995 through Oct. 31, 1995

Cash, < 7 days	Cash, > 7days	Packer-owned	Forward Contracted	Formula Sales	Total
		Number of Head			
1,409,679	92,638	19,973	100,300	204,509	1,827,099
		Percent of Total			
77.2	5.1	1.1	5.5	11.1	100.0

Source: Kansas Livestock Association publications.

Data limitations preclude a direct comparison of KLA's captive supply statistics with GIPSA's captive supply statistics. However, there are important similarities and differences between the two captive supply measures that deserve discussion. KLA's method of computing captive supply is similar to GIPSA's in that both measure captive supply according to distinct procurement categories. They differ in their category definitions because KLA included cash sales picked up in more than 7 days in their definition of captive supply, while GIPSA does not. Finally, they also differ in that KLA obtained its information from voluntary reports by Kansas feedlots while GIPSA obtains its information from packers who report to GIPSA on a mandatory basis.

Nebraska Cattlemen Captive Supply Statistics

Nebraska Cattlemen, a producer organization representing Nebraska cattle producers, has been reporting captive supplies to its members since 1991. Nebraska Cattlemen collects and reports monthly data on captive supplies from its members who participate in the organization's Market Reporting Service (figure 3). Nebraska Cattlemen's fee-based Market Reporting Service currently represents over 140 feedlots with a combined capacity in excess of 650,000 head, with member feedlots ranging in size from 500 to 45,000 head.

Figure 3. Nebraska Cattlemen's Market Reporting Service

Market Reporting Service
Cattle on Feed Report - December 1, 1999

	1999 (Head)	1998 (Head)	99/98 (Percent)		5 yr avg. (Head)	99/5yr (Percent)
Feedlot Capacity	500,000	500,000	100%		500,000	100%
Inventory, Dec 1	356,620	361,061	**99%**	**Dec 1 Inv.**	318,038	112%
Nov Placements	61,354	62,700	**98%**	**Nov Plcd.**	51,732	119%
Nov Marketings	97,768	92,935	**105%**	**Nov Mktd.**	96,251	102%
Forward Sold, Dec*	7,182	5,280	136%		n/a	n/a
Nov Disappearances	598	496	121%	**Nov O.D.**	940	64%
Marketing Intentions						
December	**101,133**	90,034	112%	**December**	97,140	104%
January	**70,496**	74,618	94%	**January**	69,943	101%
February	**62,175**	68,545	91%	**February**	61,162	102%
After Feb 28th	122,816	127,865	96%	**After Feb 28th**	89,792	137%
Total	356,620	361,061	99%	**Total**	318,038	112%
Packer Captive Supplies						
December	10,972	9,779	112%	**December**	6,046	181%
January	7,275	8,133	89%	**January**	4,685	155%
February	6,864	5,982	115%	**February**	4,200	163%
After February 28th	13,860	13,500	103%	**After Feb 28th**	6,054	229%
Total	38,971	37,395	104%	**Total**	20,984	186%
Steer Inventory						
<600#	1,914	6,753	28%	**<600**	2,064	93%
6-700	3,762	6,817	55%	**6-700**	3,481	108%
7-800	10,010	12,681	79%	**7-800**	7,580	132%
8-900	20,307	26,191	78%	**8-900**	18,769	108%
9-1000	24,069	28,859	83%	**9-1000**	27,660	87%
10-1100	31,806	42,011	76%	**10-1100**	38,985	82%
11-1200	52,463	56,646	93%	**11-1200**	56,981	92%
>1200#	36,256	40,481	90%	**>1200#**	35,750	101%
Total	180,588	220,439	82%	**Total**	191,269	94%
Heifer Inventory						
<600#	4,594	5,026	91%	**<600#**	3,114	148%
6-700	9,602	7,735	124%	**6-700**	6,162	156%
7-800	16,996	16,563	103%	**7-800**	14,147	120%
8-900	26,089	23,247	112%	**8-900**	20,891	125%
9-1000	38,851	28,835	135%	**9-1000**	28,462	136%
10-1100	36,929	31,168	118%	**10-1100**	33,093	112%
11-1200	37,949	25,330	150%	**11-1200**	18,387	206%
>1200#	4,156	1,517	274%	**>1200#**	1,527	272%
Total	175,167	139,420	126%	**Total**	125,785	139%

* Cattle sold in the previous month to be shipped this month.

Nebraska Cattlemen defines captive supply as cattle not purchased on a traditional bid and offer basis. Captive supplies are reported as the number of head sold relative to a base 500,000 head feedlot capacity in Nebraska and not as a percentage of the total number sold. Nebraska Cattlemen also makes comparisons to the previous year and the previous 5-year average. Nebraska Cattlemen believes the sample has a bias towards cash marketings, thus understating captive supply shipments from Nebraska feedlots.

Because feedlots report voluntarily, the reporting sample changes over the course of a year, and Nebraska Cattlemen adjusts for this by standardizing reporting to a base 500,000 head feedlot capacity. If survey results generate less reporting than a 500,000 head base, results are adjusted upward to that target; conversely, if results generate more reporting than a 500,000 head base, results are adjusted downward.

Limited survey participation and a perceived survey bias towards cash marketings precludes meaningful comparisons with GIPSA's data for the top 15 packers operating in Nebraska Cattlemen's market area, but two differences should be noted. First, Nebraska defines captive supply based on pricing mechanisms while GIPSA defines captive supply based on the procurement method. Second, GIPSA's captive supply statistics obtained from mandatory packer reporting in Nebraska are far greater than Nebraska Cattlemen's captive supply statistics based on responses from their members and standardized to a 500,000 head feedlot capacity (Table 8).[12]

Table 8. Captive Supply in Nebraska Reported by Nebraska Cattlemen and by GIPSA, 1999

Month	Nebraska Cattlemen	GIPSA
	head	head
January	1,927	48,089
February	2,392	46,545
March	2,767	24,964
April	3,752	24,919
May	4,917	35,079
June	6,505	56,184
July	2,669	34,908
August	5,624	36,112
September	4,603	37,112
October	2,887	26,396
November	7,533	29,905
December	10,972	48,303
Total	56,548	449,516

Source: Nebraska Cattlemen and GIPSA

Texas Cattle Feeders Association Captive Supply Statistics

The Texas Cattle Feeders Association (TCFA) represents cattle feeders in Texas, Oklahoma, and New Mexico, and provides its members with a series of captive supply estimates. TCFA defines captive supply as cattle procured through formula agreements or forward contracts. It reports to its members on aggregated formula sale shipments in the Texas, Oklahoma, and New Mexico region on a weekly basis and on aggregated formula and forward contract sale shipments in the Texas, Oklahoma, and New Mexico region on a monthly basis.

TCFA calls its member feedlots every Monday to obtain information about formula shipments scheduled for the coming week. TCFA defines formula shipments as "cattle committed to a

[12] Cattle procurement with forward contracts and marketing agreements accounted for 95.9 percent of total use of captive supplies in Nebraska by plants reporting use of captive supplies to GIPSA in 1999.

packer in advance of a price". TCFA specifies no time period for "commitments in advance of a price" beyond those formula sales scheduled to be shipped in the current week. TCFA also conducts a monthly contract cattle survey, and provides its membership with estimates of contracted sales three months into the future. The monthly contracted estimates are combined with TCFA's weekly formula shipments and estimated cash marketings in a monthly report to members. The report also provides an estimate of total marketings developed from National Agricultural Statistic Service's monthly *Cattle on Feed* reports. A summary of TCFA's monthly reports for 1999 is shown in table 9.

Table 9. Monthly Total Marketings and Shipments by Type as Reported by Texas Cattle Feeders Association, Texas Cattle Feeders Association Trade Area, 1999[1]

Month	Total Marketings		Shipments by Type Reported by TCFA			
	NASS	TCFA	Cash Marketings	Formula Shipments	Forward Contracted	Total Captive Supply[2]
			Head			
January	571,000	504,760	362,466	136,337	5,957	142,294
February	524,000	445,196	285,803	148,698	10,695	159,393
March	647,000	446,643	261,474	170,045	15,124	185,169
April	663,000	655,719	475,937	120,199	59,583	179,782
May	610,000	463,343	304,227	146,154	12,962	159,116
June	605,000	401,592	264,277	130,128	7,187	137,315
July	605,000	518,296	342,040	172,025	4,231	176,256
August	604,000	483,086	223,388	254,656	5,042	259,698
September	647,000	486,947	304,981	178,553	3,413	181,966
October	619,000	551,051	398,380	147,450	5,221	152,671
November	535,000	332,074	174,260	155,809	2,005	157,814
December.	485,000	366,344	232,708	129,151	4,485	133,636
Total	7,115,000	5,655,051	3,629,941	1,889,205	135,905	2,025,110

[1] Texas, Oklahoma, and New Mexico.
[2] Formula shipments plus forward contracted cattle.
Source: Texas Cattle Feeders Association.

For all of 1999, TCFA's statistics show member feedlots shipped 2,025,110 head using formula pricing or forward contracts. By comparison, plants in Texas, Oklahoma and New Mexico operated by the largest 15 firms that reported to GIPSA purchased 1,845,832, head with forward contracts or marketing agreements (Table 10 and Graph 6). TCFA's members reported 35.8 percent of their cattle shipments to packers consisted of captive supply. The largest 15 packers reported to GIPSA that 35.6 percent of the cattle they purchased for their plants in the states surveyed by TCFA were procured using captive supply procurement methods excluding packer feeding. On a monthly basis, GIPSA's statistics were higher than TCFA's in six months and lower in the other six.

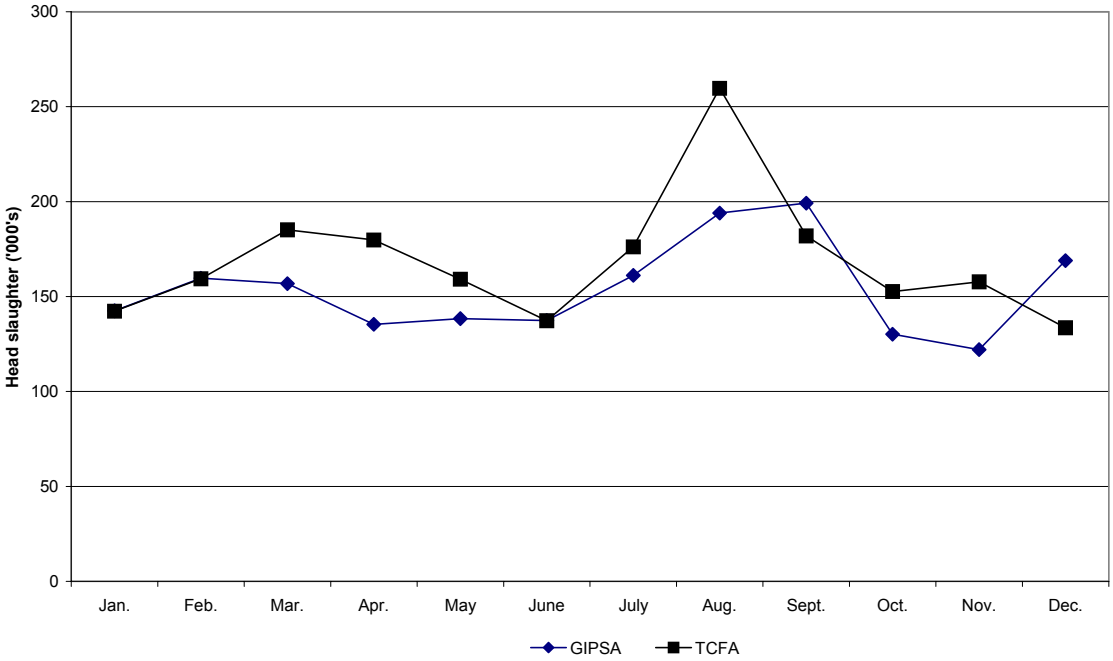
Table 10. Comparison of TCFA's and GIPSA's Captive Supply Statistics, 1999

	Total Captive		Percent Captive	
	TCFA[1]	GIPSA[2]	TCFA[3]	GIPSA[4]
	head		Percent	
January	142,294	142,520	28.2	34.9
February	159,393	159,706	35.8	38.8
March	185,169	156,859	41.5	35.3
April	179,782	135,385	27.4	34.0
May	159,116	138,341	34.3	29.3
June	137,315	137,455	34.2	29.5
July	176,256	161,145	34.0	39.5
August	259,698	194,025	53.8	42.0
September	181,966	199,166	37.4	42.3
October	152,671	130,215	27.7	31.2
November	157,814	122,103	47.5	30.0
December	133,636	168,912	36.5	40.6
Total	2,025,110	1,845,832	35.8	35.6

1 Formula priced and forward contract shipments.
2 Purchased using forward contracts or marketing agreements.
3 Percent of total shipments reported by TCFA.
4 Percent of total slaughter by plants reporting to GIPSA.

Although TCFA and GIPSA measure captive supply arrangements from the feedlot and packer side, respectively, TCFA and GIPSA both define captive supply by procurement method. When GIPSA's captive supply statistics are adjusted by removing packer fed cattle to make them comparable to TCFA's captive supply statistics, TCFA and GIPSA report similar levels of captive supply as a percentage of total marketings and total slaughter, respectively. Without this adjustment, GIPSA's captive supply statistics would include packer fed cattle and would be greater both in number and in percentage of total slaughter terms than TCFA's captive supply statistics.

Graph 6. Texas Cattle Feeders Association (TCFA) Total Captive Supply and GIPSA's Captive Supply Statistics for Largest 15 Packers in TCFA's Reporting Area, 1999



Source: Packer Annual Reports and TCFA.

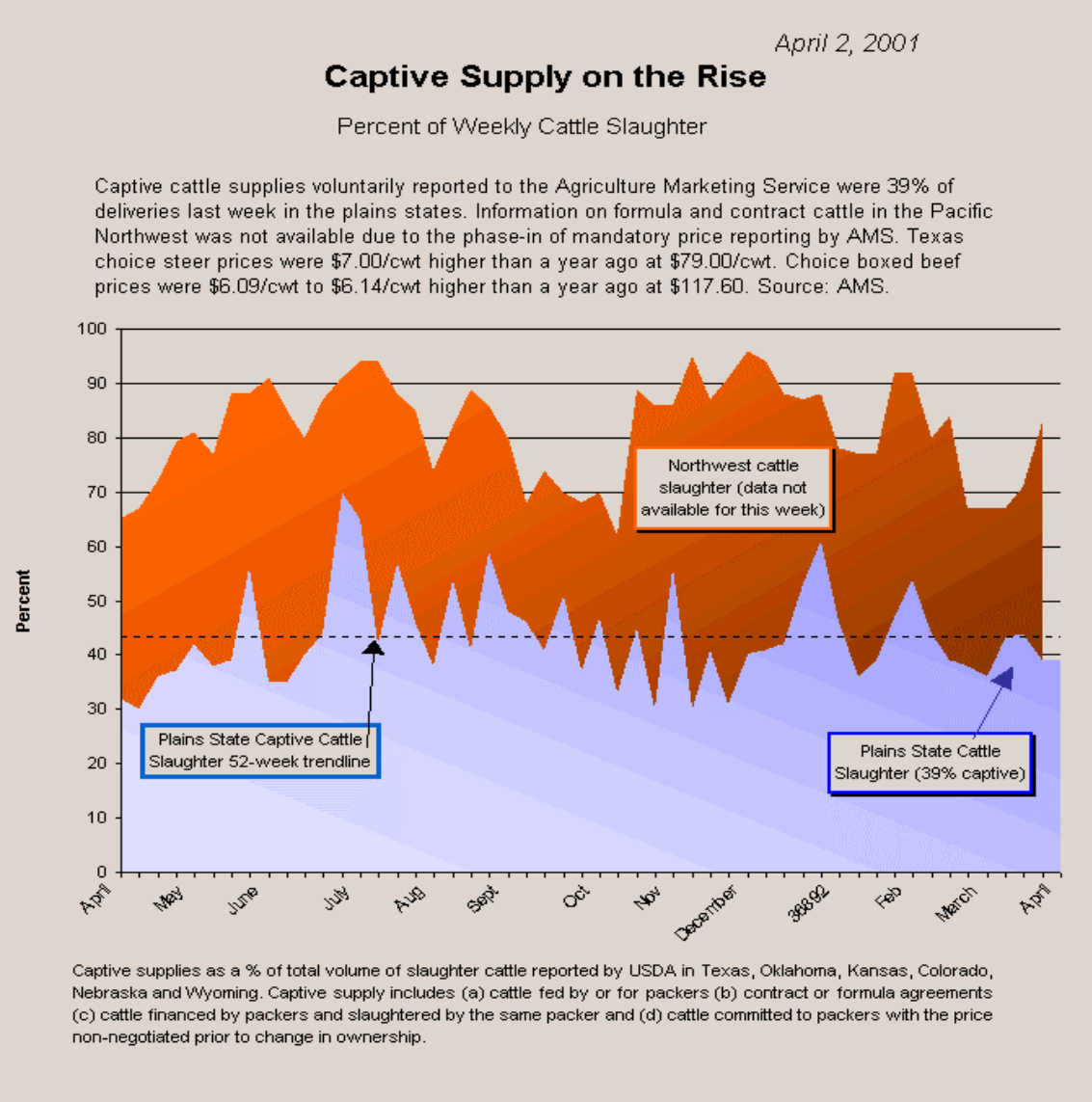
Western Organization of Resource Councils

The Western Organization of Resource Councils (WORC) publishes a captive supply graph on its website. Until recently, the graph reported WORC's captive supply through April 2, 2001 (Figure 4), the date when the availability of the AMS data used by WORC to develop the graph ended. WORC's current website reports the same graph through September 14, 2000.

WORC's "Plains States Captive Supply" ranged from approximately 32 percent to 68 percent over the twelve months from April 2000 to April 2001, the period covered by the graph currently posted on WORC's web page. WORC's "Northwest cattle slaughter" showed captive supply in the Northwest ranging from 30 percent to 95 percent over the same period.

Since "Plains States Captive Supply" is AMS's additional movement, the source, geographic scope, reporting coverage, and reporting intent represented by WORC's "Plains States Captive Supply" are addressed in the previous section on AMS's additional movement. So, too, are comparisons of WORC's captive supply measurement (i.e., AMS's additional movement) for the Plains States with GIPSA's captive supply statistics for the Plains States. (See pp. 13-16.)

Figure 4. WORC's Graph of Captive Supply



WORC's graphic representation of "Northwest cattle slaughter" was based on AMS's Market News report from Moses Lake, Washington (AMS's ML LS135). Prior to USDA's implementation of mandatory price reporting, AMS's Moses Lake, Washington Market News office reported weekly cattle slaughter sales in Washington, Oregon, and Idaho. AMS reported "direct sales" and "formula sales." WORC's graph used AMS's formula sales as a percent of AMS's total sales to depict captive supply in the Northwest. AMS, however, never reported Northwest formula sales as a percentage of total sales in its additional movement series. The Moses Lake series for 1999 is shown in Table 11.

WORC's use of the Moses Lake formula sales data in combination with AMS's Plain States' Additional Movement to produce a graph entitled "Captive Supply on the Rise" significantly misrepresents the actual level of captive supply on a national basis, especially when the resulting

graph portrays captive supply frequently exceeding 90 percent. GIPSA data suggest WORC's graph also misrepresents the actual level of captive supply in the Pacific Northwest.

The WORC graph in Figure 4 shows Plains States captive supply at 39 percent. AMS data on captive supply in the Plain States, which account for 79 percent of the national steer and heifer slaughter, is more representative of the national captive supply than is AMS's Moses Lake data, which captures sales in states accounting for only 4 percent of the national steer and heifer slaughter.

Table 11. Slaughter Sales for Moses Lake, Washington, 1999

	Direct Sales	Formula Sales	Total	% Formula
January	15,400	101,800	117,200	86.9
February	24,900	114,350	139,250	82.1
March	34,380	115,330	149,710	77.0
April	32,570	97,470	130,040	75.0
May	18,500	80,300	98,800	81.3
June	13,440	80,000	93,440	85.6
July	18,660	112,200	130,860	85.7
August	27,660	110,040	137,700	79.9
September	54,740	96,210	150,950	63.7
October	39,350	112,600	151,950	74.1
November	22,600	128,100	150,700	85.0
December	16,100	125,450	141,550	88.6
Total	318,300	1,273,850	1,592,150	80.0

Source: USDA, AMS, 1999

Confidentiality restrictions preclude publishing comparisons of the Moses Lake series with data on the use of captive supply by plants operated by the largest 15 firms in Washington, Oregon, and Idaho that report to GIPSA. Only three plants operate in the region, and one packer owns two of them. However, reporting packers in the region reported use of captive supply considerably below the number of cattle sold through formula sales as reported in AMS's Moses Lake data in 1999.

Washington State slaughters more fed cattle than it produces, which is typical in the Pacific Northwest in general. Accordingly, Washington State imports a relatively high percentage of its slaughter from Canada, and procures a significant portion of its domestic slaughter through captive supply arrangements.

AMS's Moses Lake data is not broken down by the class of cattle selling in the Pacific Northwest, but a comparison of federally inspected slaughter in the Pacific Northwest with AMS's Moses Lake data suggests the Moses Lake data captures sales of cows, bulls, and possibly calves and feeder cattle in addition to finished steers and heifers. AMS's report of Moses Lake sales of 1,592,150 head in 1999 was 32 percent, or 384,000 head, larger than the total steer and heifer slaughter in Washington, Oregon, and Idaho during the year.