Spaying Flank Method

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There are many factors to be considered when determining the economics of spaying heifers. Some of these that might be considered are:

1. Cost of spaying
2. Market value of spayed and non spayed heifers
3. Gaining ability of each
4. Maintaining open heifers
5. Cost of heat suppressing drugs
6. Pregnancy problems
   a. Cost of examination
   b. Cost of aborting
   c. Weight loss at aborting
   d. Pregnancy at slaughter

Without considering these things our first consideration is that it is something that some of our clients want done. It is a service that some demand and we are happy to provide.

Let us take into consideration some of the economics of spaying. For many years we have been told that an intact heifer would gain more than one that is spayed. If we look at Table #1 we find this to be true. Table #2 indicates that if we implant both the spayed and intact heifers there is an advantage to the spayed implanted heifer. Table #3 indicates that spayed implanted heifers show marked improvement over intact non implanted heifers.

Another consideration along this line is the fact that the spayed heifer will, if not implanted, finish out at a lighter

TABLE 1. Gain Data Summary of 26 Trials Comparing "Spayed-non-implanted" and "Non-Spayed-non-Implanted" Heifers.

Trial	Animals/Group*	Type Ration	Average Daily Gain (lbs.)		ADG	Source of Information - Year
			Spayed Non-Implanted	Non-Spayed Non-Implanted	Difference	
1	5	Finishing	2.07	1.99	+ 3.86	Wilson and Curtis - 1896 - Iowa State
2	5	Finishing	1.70	1.86	− 8.60	University
3	14	Finishing	1.89	2.15	−12.09	Gramlich and Thalman - 1930 - University of
4	17	Finishing	1.66	1.92	−13.54	Nebraska
5	12	Finishing	1.86	1.77	+ 4.84	Hart, et al - 1936 - University of California
6	12	Finishing	1.79	1.99	−10.05	
7	5	Finishing	1.91	2.07	− 7.73	Dinusson, et al - 1950 - Purdue University
8	7	Finishing	1.80	1.87	− 3.74	Clegg and Carrol - 1956 - University of California
9	6	Finishing	1.86	1.92	− 3.13	Langford and Douglas - 1956 - North Dakota State University
10	10	Growing	1.45	1.74	−16.67	Smith, et al - 1957-58 - Kansas State Uni-
11	10	Finishing	1.66	1.79	− 7.26	versity
12	10/11	Growing	1.41	1.69	−16.57	
13	11	Finishing	1.66	1.78	− 6.74	
14	10	Finishing	1.79	1.96	− 8.67	Kercher, et al - 1960 - University of Wyoming
15	10	Grazing	1.28	1.47	−12.93	
16	10	Finishing	1.62	1.93	−16.06	
17	24	Growing	0.93	1.04	−10.58	Nygaard and Embry - 1966 - South Dakota
18	23	Finishing	1.82	2.15	−15.35	State University
19	16	Finishing	1.74	2.08	−16.35	Ray, et al - 1969 - University of Arizona
20	75/25	Grazing	1.94	2.07	− 6.28	Cameron, et al - 1977 - Montana
21	29	Finishing	2.44	2.35	+ 3.69	Yamamoto, et al - 1978 - Colorado State Uni-
22	115	Finishing	3.76	3.88	− 3.09	versity Rupp, et al - 1982 - Colorado State University
23	47	Grazing	1.55	1.56	− 0.64	Rush and Reece - 1961 - University of
24	47	Finishing	2.06	2.04	+ 0.98	Nebraska
25	36	Grazing	1.74	1.75	− 0.57	
26	36	Finishing	2.39	2.28	+ 4.60	
27	54/27	Grazing	1.47	1.57	− 6.37	Shoop, et al - 1983 - USDA Exp. Sta.
27	657/579				= − 7.9	

(Range from +4.84 to −16.57)
(81% of trials favored Non-Spayed Heifers)

* Two values indicate unequal group size, Spayed/Non-Spayed.

TABLE 2. Gain Data Summary of 17 Trials Comparing "Spayed-Implanted" and "Non-Spayed-Implanted" Heifers.

Trial	Animals/Group*	Type Ration	Implant	Average Daily Gain (lbs.)		ADG	Source of Information - year
				Spayed Implanted	Non-Spayed Implanted	Difference	
1	24	Growing	DES	1.15	1.22	−5.74	Nygaard and Embry - 1966 - South Dakota
2	24	Growing	SYN-H	1.14	1.23	−7.32	State University
3	24	Finishing	DES	2.35	2.34	+0.43	
4	24	Finishing	SYN-H	2.25	2.30	−2.17	
5	75/23	Grazing	RALGRO	2.12	2.09	+1.42	Cameron, et al - 1977 - Montana State Uni-
6	74/25	Grazing	SYN-H	2.16	2.15	+0.46	versity
7	30	Finishing	RALGRO	2.56	2.47	+3.52	Yamamoto, et al - 1978 - Colorado State University
8	101/117	Finishing	RALGRO	4.14	3.82	+7.73	Rupp, et al - 1980 - Colorado State Uni-
9	37/44	Finishing	SYN-H	4.01	3.96	+1.25	versity
10	35/38	Finishing	SYN-H	4.25	4.01	+5.65	
11	39/38	Finishing	2 RALGRO	4.06	3.91	+3.69	
12	32/33	Grazing	RALGRO	1.98	1.89	+4.55	Rush and Reece - 1981 - University of
13	15	Grazing	CYN-H	1.98	1.85	+6.57	Nebraska
14	32/33	Finishing	RALGRO	2.39	2.26	+5.44	
15	35	Finishing	SYN-H	2.25	2.39	−5.86	
16	54/27	Grazing	RALGRO	1.71	1.62	+5.26	Shoop, et al - 1983 - USDA Exp. Sta.
17	54/27	Grazing	2 RALGRO	1.74	1.62	+6.90	
17	729/601					= +1.84	

(Range from −5.86 to + 7.73)
(77% of trials favored Spayed-Implanted Heifers)

* Two values indicate unequal group size, Spayed/Non-Spayed.

TABLE 3. Gain Data Summary Comparing "Spayed-Implanted" and "Non-Spayed-Non-Implanted" Heifers.

Trial	Animals/Group*	Type Ration	Implant	Average Daily Gain (lbs.)		ADG	Source of Information - year
				Spayed Implanted	Non-Spayed Non-Implanted	Difference %	
1	23/24	Growing	DES	1.15	1.04	+ 9.6	Nygaard and Embry - 1966 - South Dakota
2	24	Growing	SYN-H	1.14		+ 8.8	State
3	20/24	Finishing	DES	2.35		+ 8.5	
4	23	Finishing	SYN-H	2.25	2.15	+ 4.5	
5	25/25	Growing	SYN-H	1.71		+ 8.2	Whetzal, et al - 1966 - South Dakota State
6	25	Growing	DES	1.64	1.57	+ 4.3	University
7	24/25	Finishing	SYN-H	2.17	2.02	+ 6.9	
8	25	Finishing	DES	2.10		+ 3.8	
9	75/26	Grazing	RALGRO	2.12	2.07	+ 2.4	Cameron, et al - 1977 - Montana State
10	74/26	Grazing	SYN-H	2.16		+ 4.2	University
11	30/29	Finishing	RALGRO	2.56	2.35	+ 8.3	Yamamoto, et al - 1978 - Colorado State University
12	101/119	Finishing	RALGRO	4.14	3.88	+ 6.3	Rupp, et al - 1980 - Colorado State Uni- versity
13	46/46	Grazing	DES	1.75		+10.9	Rush and Reece - 1981 - University of
14	45	Grazing	RALGRO	1.79	1.56	+12.8	Nebraska
15	47	Grazing	SYN-H	1.71		+ 8.8	
16	32/36	Grazing	RALGRO	1.98		+12.1	
17	35	Grazing	SYN-H	1.98	1.74	+12.1	
18	54/27	Grazing	RALGRO	1.71	1.57	+ 8.2	Shoop, et al - 1983 - USDA Exp. Sta.
18	728/407					= + 7.82	

(Range from +2.4 to +12.8)
(100% of trials favored Spayed-Implanted over Non-Spayed-Non-Implanted)

* Two values indicate unequal group size, Spayed/Non-Spayed.

weight. This may be desirable in some instances where earlier marketing is desired.

In considering the costs involved we have an out of pocket expense of about $1.50 per hundred weight for cost of spaying. This is generally more than offset if these are resold. In our experience spayed heifers usually bring $2-$3 per hundred weight over intact heifers. There is always some risk involved with abdominal surgery and the handling of cattle but our mortality has been negligible following spaying. In most tests little or no weight loss has been attributable to surgery when measured at 10 to 40 days following spaying even though the spayed heifers were the only ones taken off feed and water.

Properly identified spayed heifers can move as freely as steers. In areas where brucellosis is a problem, spaying of heifer calves makes possible free movement of otherwise quarantined cattle.

Spaying eliminates all the problems of pregnant heifers at time of sale as feeder heifers.

In handling non spayed feeder heifers there is a cost of approximately $1.50 a head for pregnancy exam and approximately $5.00 per head for inducing abortion. In the early stages we can hope for 90% effectiveness, and in the latter stages a much lower success rate. We also have a cost which is impossible to determine due to post abortion problems.

There are no reliable figures to determine the percentage of slaughter heifers that are pregnant. Some authors indicate up to 30% of some lots of heifers are pregnant. A more realistic figure would probably be 5% of all slaughter heifers are found to be pregnant. This loss which is suffered by the packer is of course reflected back to the seller.

When we give consideration to all of the things previously mentioned I feel there is a place in the cattle industry for the spayed heifers. When this procedure is done properly and identification of the animals is maintained through to slaughter, I feel there will be an additional monetary return for the producer.