

National Farm Animal Identification & Records

National FAIR Status Report

Winter 2004-2005

Five years since its inception, National FAIR continues to demonstrate and educate on how a national animal ID system can work in the U.S. Thanks to Congressional Appropriations, and the support of USDA/APHIS/VS, our research of electronic ID and animal tracking has made important strides in helping protect the health of our valuable U.S. animal agriculture industry.

This report details the progress made and the viability of the methods used, to track animals in the National FAIR program. Recent milestones have been reached with the enrollment of more than 1.7 million animals from 12,000 farms in the National FAIR system from across the country.

We are proud to have been working with the development of the US Animal Identification Plan (USAIP) and what has become known as National Animal Identification System (NAIS) today. Our experience with RFID, particularly in the state of Michigan, has been an excellent testing ground for many of the standards set in the USAIP. From our standpoint, we are proud to say we have proven it works and we are excited for the future of national animal ID.

Finally, National FAIR has continued as a leader to help educate all interested on the importance of national identification. We are encouraging all farmers to tag their bovines at birth to prepare themselves for the future.



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Inside the numbers

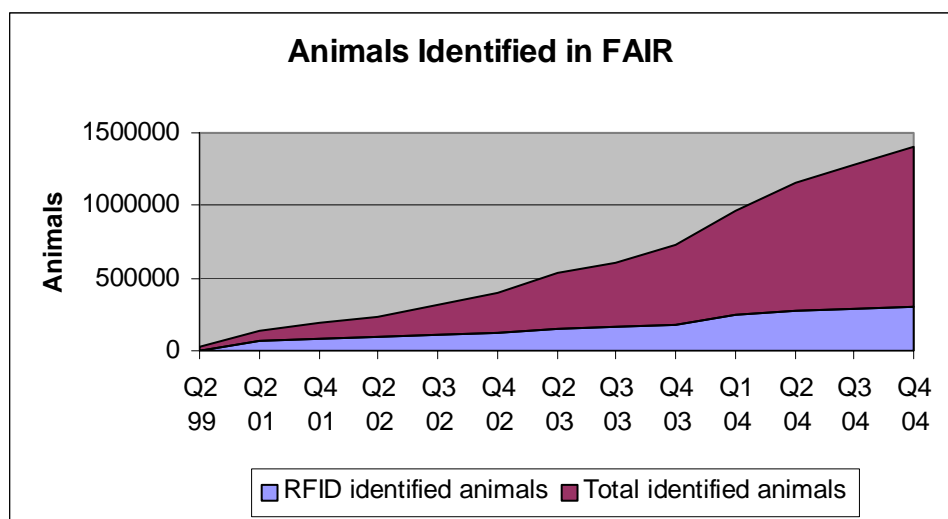
Herd enrollment

Table 1 shows the number of active premises enrolled in National FAIR by state. A total of 48 states now have herds that have been issued FAIR tags.

State	# Premises w/ Visible tags	# Premises w/ Visible & RFID tags	# Premises Market	# Premises Slaughter
Alabama	3			
Arkansas	6			
Arizona	2			
California	149	21	1	1
Colorado	10			
Connecticut	10			
Delaware	11			
Florida	5	2		
Georgia	11			
Iowa	128	1		
Idaho	33			
Illinois	100	4		1
Indiana	61	1		
Kansas	44			
Kentucky	31			
Louisiana	3			
Massachusetts	10			
Maryland	82	1		
Maine	17			
Michigan	8424	1877	18	18
Minnesota	198	3		
Missouri	54	4		
Mississippi	5			
Montana	4			
North Carolina	15			
North Dakota	14			
Nebraska	24	1		
New Hampshire	15			
New Jersey	14			1
New Mexico	17	1		
Nevada	3			
New York	358	41	2	
Ohio	165	5		
Oklahoma	27			
Oregon	30			
Pennsylvania	536	18	1	3
Rhode Island	1			
South Carolina	8			
South Dakota	38	1		
Tennessee	27			
Texas	53	1		
Utah	26			
Virginia	51	1		
Vermont	84	5		
Washington	57			
Wisconsin	672	37	2	6
West Virginia	10			
Wyoming	1			
Total	11,647	2,025	24	30

Animal enrollment

The number of animals identified in the National FAIR database continues to increase substantially. In 2004, FAIR identified* 489,992 animals. Total number of animals identified since the start of the FAIR program is up to 1,098,527, of which 307,027 have an RFID tag. The animals identified in FAIR represent animals from 87 different breeds, which include the 7 major dairy breeds and 78 beef breeds including purebred and crossbreeds.



Number of animals identified in the four pilot states

State	# Animals identified	# Animals identified with RFID
Wisconsin	141,845	59,014
California	130,400	38,581
New York	90,771	41,308
Pennsylvania	108,954	16,050
Total	471,970	154,953

* To declare an animal as identified in the past has required the animal to have a date of birth recorded in the system. As of the report, any animal identification information beyond the FAIR tag numbers will constitute an animal as identified.

Market and Slaughter Plant Update

Existing RFID readers:

The readers at all the markets and slaughter plants are fully operational, and files are being transmitted on a regular basis. With every RFID reader set-up being unique, National FAIR has been continually trying to improve upon the file transmission process - finding an ideal mix of automation and human oversight to keep the RFID readers, laptop equipment, phone lines up and running, and the file transfer occurring regularly and seamlessly.

RFIDs read at markets

Quarter	Dryden (NY)	Pavilion (NY)	Reedsville (WI)	Gaylord (MI)	St Louis (MI)	Clare (MI)	Cass City (MI)	Battle Creek (MI)	Napoleon (MI)	Bonduel (WI)	Manchester (MI)	Martella (CA)	Total
Q2 '99	15												15
Q3 '99	146												146
Q4 '99	99		2										101
Q1 '00			34										34
Q2 '00	40	28	22										90
Q3 '00	47	91	51										189
Q4 '00	93	43	62										198
Q1 '01	70	22	121										213
Q2 '01	53	86	88										227
Q3 '01	34	57	92										183
Q4 '01	29	100	121										250
Q1 '02	49	140	116										305
Q2 '02	76	169	93										338
Q3 '02	63	176	126	174	39								578
Q4 '02	103	N/A	133	1327	162	49	49						1823
Q1 '03	65	94	20	983	295	150	5						1612
Q2 '03	56	27	9	1727	442	28	80	1	22				2392
Q3 '03	11	0	69	1154	419	68	54	15	10	3			1803
Q4 '03	0	0	107	3242	548	131	0	24	48	6	13		4041
Q1 '04	9	0	6	1244	323	144	1	11	38	122	22	7	1866
Q2 '04	0	48	0	2134	380	181	83	53	54	109	6	14	2984
Q3 '04	0	143	16	2046	238	294	75	71	85	138	6	18	3130
Q4 '04	0	0	19	4254	281	239	0	75	37	69	9	24	5001
Total	1058	1224	1307	18285	2767	1284	347	250	294	448	56	63	

RFIDs read at slaughter plants

Quarter	Taylor (PA)	Embers (WI)	Murco (MI)	Packerland (WI)	Moyers (PA)	Tyson/IBP (IL)	Dress Beef (WI)	Beef Packers (CA)	Total
Q2 '99	2								17
Q3 '99	193								339
Q4 '99	206								307
Q1 '00	167								201
Q2 '00	176	194							460
Q3 '00	281	250							720
Q4 '00	265	21							484
Q1 '01	352	99							664
Q2 '01	452	170							849
Q3 '01	1,072	179							1,434
Q4 '01	602	290							1,142
Q1 '02	690	362							1,357
Q2 '02	3,458	317	237						4,350
Q3 '02	4,399	431	563	157					6,128
Q4 '02	6,910	556	633	136	857				10,796
Q1 '03	6,571	614	872	573	1,664	930	1083		12,307
Q2 '03	3,983	596	1,168	321	2,227	1,437	1,156		11,509
Q3 '03	1,316	654	502	153	993	103	495		4,216
Q4 '03	960	328	194	603	519	255	661	73	3,593
Q1 '04	990	31	208	184	792	300	945	198	3,648
Q2 '04	935	0	388	374	15	444	1,036	126	3,337
Q3 '04	1,390	449	628	540	9	988	1,378	133	5,515
Q4 '04	1,401	779	705	286	0	840	1151	80	5,262
Total	36,771	6,340	6,098	5,962	2,675	6,568	7,641	610	

RFID Tracking

Beyond the RFID information collected directly from the Taylor, Embers, Murco, Packerland, Moyers, Tyson/IBP and the American Foods (Dress Beef) processing plants, RFID tags have been returned to the FAIR office from animals that moved through other processing plants such as the Nichols, PA, and various small processing plants in Michigan. The number of RFID reads at Taylor, Murco, Moyers and Dress Beef have been relatively higher than other plants due to a large number of Canadian animals read until the ban on Canadian cattle in the US. FAIR has been collecting RFID reads at all the packing plants from cattle originally tagged in Canada and shipped to the US.

Animals tracked from state of origin to slaughter

Plant	VT	MI	NY	CA	WI	PA
Taylor	809	2828	7049	3	3	12,276
Embers	3	776	72	5	5429	15
Packerland		233	1		1063	
Murco	1	2782	53		12	14
Moyers	60	1227	460			1803
Dress Beef		4013	11	2	6121	4
Tyson/IBP		1079	5		5	
Nickels			228			832
BPI				478	1	1
Total	873	12,938	7,879	488	12,634	14,945

(NOTE: Excludes all Canadian and animals that were not identified by FAIR)

Validation

The FAIR pilot program checks animals for proper tag location and tag retention and codes each animal accordingly:

- 1) Animal has an RFID in the ear; verify the RFID can be read
- 2) Animal has an RFID in the ear; measure the location in the ear
- 3) Animal does not have an RFID; however it could not be established that the animal was ever tagged with an RFID
- 4) Animal does not have an RFID in the ear, however a hole in the ear is visible from tagging with an RFID that appears to have been lost

Results:

Herd reviews on FAIR pilot herds include checks on 8700 animals with RFID eartags to date. From these, 4194 have data on the tag's location in the ear. As shown in the table below, 66 (0.7%) RFID's could not be read, 132 (1.5%) animals lost the RFID, and 196 (2.3%) animals did not have an RFID with no evidence of having been tagged initially. The tag location data shows that from the 4194 animals that have location data, 3739 (89.2%) are properly tagged close to the head, while 402 (9.6%) animals had a location that was more central in the ear, and 53 (1.3%) animals had the RFID tag placed on the outside of the ear which could be the major cause for tag loss at a later date. When comparing these numbers to the initial numbers reported in previous newsletters, the numbers remained about the same.

RFID tags observed/read on the farm

	# Animals	%
RFID read correctly	8306	95.5%
RFID does not read	66	0.7%
RFID lost	132	1.5%
Animals with no RFID	196	2.3%
Total:	8700	
Tagged properly	3739	89.2%
Tagged in the middle	402	9.6%
Tagged on the outside	53	1.3%
Total:	4194	

Processing Plant Stationary Readers

National FAIR is receiving tags back from a few slaughter plants in order to validate the accuracy of the stationary RFID reader. All RFID readers have been collecting data for the most of this year. The accuracy of the RFID readers will continue to be monitored throughout the year.

Processing Plant RFID Reader Accuracy

Quarter	Plant	Read	Returned w/o Read	% RFID tags Read
Q4 '01	Taylor	602	59	91%
Q1 '02	Taylor	637	53	92%
Q1 '02	Embers	358	4	99%
Q2 '02	Taylor	3100	193*	94%
Q2 '02	Embers	194	123**	--
Q3 '02	Taylor	2907	1492*	--
Q3 '02	Embers	395	36	92%
Q4 '02	Taylor	5285	1784*	--
Q4 '02	Embers	551	5	99%
Q1 '03	Taylor	5742	829*	--
Q1 '03	Embers	517	97*	--
Q2 '03	Taylor	3570	452	89%
Q2 '03	Embers	596	11	92%
Q2 '03	Packerland	333	6	98%
Q2 '03	Dress Beef	1124	33	97%
Q 3 '03	Taylor	1331	129	90%
Q 4 '03	Taylor	960	90	91%
Q1 '04	Taylor	990	87	92%
Q2 '04	Taylor	935	93	91%
Q3 '04	Taylor	1390	60	96%
Q4 '04	Taylor	1401	29	98%

* Includes RFIDs that were sent back for days no RFID's files were available or sent

** Includes all RFIDs returned for the quarter, including the 8 weeks the reader was not operational

FAIR APPLIED

The National FAIR project was started in 1999, and as the system was developed, other industry groups and entities were contacted and asked to participate in the FAIR project. As of January 2004, the following groups are using the FAIR system:

- ◆ Michigan Department of Agriculture TB Eradication Project
- ◆ New York State Cattle Health Assurance Program (NYSCHAP)
- ◆ Ohio State Department Johnes Program
- ◆ Alta Genetics Progeny Test herds
- ◆ American Veal Association
- ◆ US Ayrshire Association