National Farm Animal Identification & Records

National FAIR Status Report — Summer 2006

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 3 million animals from over 15,000 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 them for the future.

FAIR
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Inside the numbers

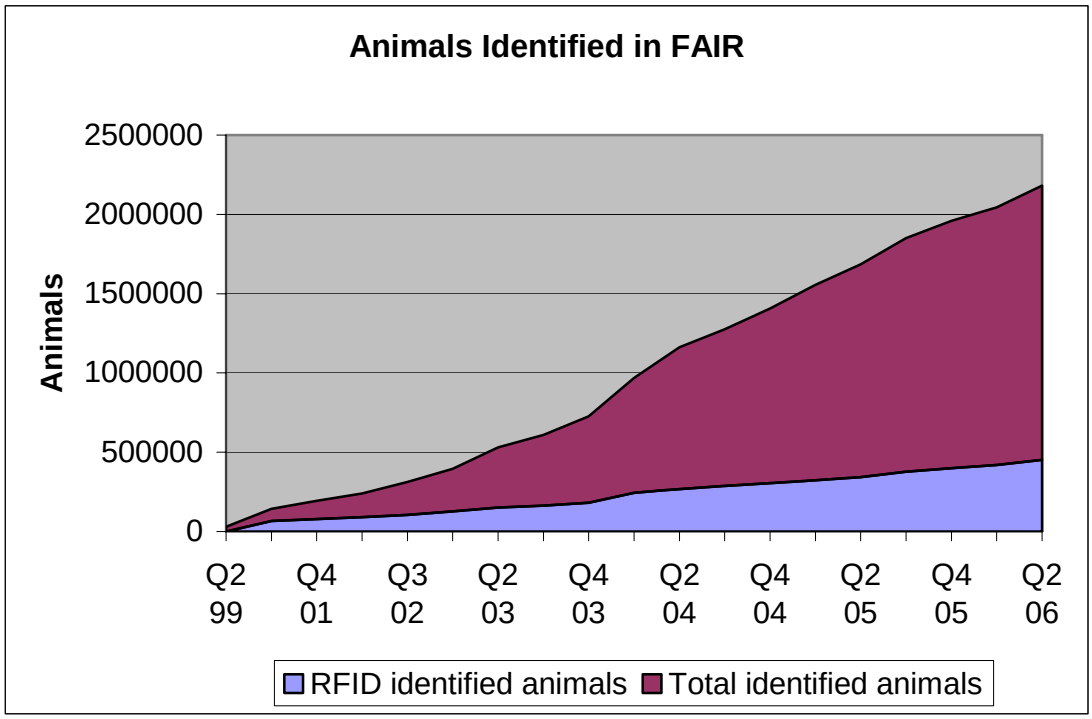
Herd enrollment

Table 1 shows the number of active premises enrolled in National FAIR by state. A total of 49 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	11	1		
Arizona	3			
California	251	121	2	1
Colorado	11			
Connecticut	18			
Delaware	17			
Florida	8	2		
Georgia	25			
Hawaii	1	1		
Iowa	192	9		
Idaho	43	4		
Illinois	149	23		1
Indiana	93	2		
Kansas	54	7		
Kentucky	44	1		
Louisiana	6			
Massachusetts	19	2		
Maryland	100	3		
Maine	26	1		
Michigan	10,774	3,499	15	22
Minnesota	279	18		
Missouri	75	7		
Mississippi	7			
Montana	6			
North Carolina	31			
North Dakota	19			
Nebraska	29	2		
New Hampshire	25			
New Jersey	18			1
New Mexico	20	2		
Nevada	3	1		
New York	482	53	2	
Ohio	236	6		
Oklahoma	35	3		
Oregon	37	2		
Pennsylvania	765	40	1	3
Rhode Island	1			
South Carolina	10			
South Dakota	51	5		
Tennessee	34			
Texas	69	6		
Utah	31	2		
Virginia	69	1		
Vermont	114	7		
Washington	72	2		
Wisconsin	964	82	2	6
West Virginia	14			
Wyoming	1			
Total	**15,345**	**3,915**	**22**	**34**

Animal enrollment

The number of animals identified in the National FAIR database continues to increase substantially. So far in 2006, FAIR identified* 169,064 animals. Total number of animals identified since the start of the FAIR program is up to 1,727,830, of which 452,859 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 crossbreds.



Number of animals identified in the four pilot states

State	# Animals identified	# Animals identified with RFID
Wisconsin	213,361	71,599
California	277,426	74,599
New York	139,879	49,858
Pennsylvania	146,331	18,891
Total	776,997	214,605

* 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
Q1 '05	0	163	21	1867	233	0	26	0	77	31	0	15	2417
Q2 '05	53	63	40	4159	243	167	104	0	35	16	0	42	4779
Q3 '05	90	0	55	2569	250	275	60	34	91	0	5	2	3431
Q4 '05	144	76	14	5870	266	467	250	78	8	0	10	77	7260
Q1 '06	156	174	22	2621	175	172	88	0	3	60	14	59	3544
Q2 '06	123	77	21	4080	50	69	192	0	80	45	53	387	5177
Total	1624	1777	1480	39,451	3984	2434	1067	362	588	600	138	645	

RFIDs read at slaughter plants

Quarter	Taylor (PA)	Cargill (formerly 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
Q1 '05	1,103	348	580	153	3	932	1,341	1,443	5,903
Q2 '05	1,258	493	1,166	304	6	696	890	1,839	6,652
Q3 '05	942	629	1,191	564	86	616	50	2,468	6,546
Q4 '05	3,306	154	1,271	585	233	1,466	1,021	2,596	10,632
Q1 '06	2,701	139	1,259	465	100	1,364	1,352	2,939	10,319
Q2 '06	2,666	195	63	2,164	266	1,345	1,218	4,297	12,151
Total	48,747	8,298	11,628	10,197	3,369	12,987	13,513	16,192	

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 then 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	991	5,829	9,570	3	7	18,705
Cargill (formerly Embers)	3	1,134	87	5	6,586	15
Packerland		359	1		1,718	
Murco	1	7,720	164		37	20
Moyers	70	1,291	561			1,998
Dress Beef		7,454	12	2	10,578	5
Tyson/IBP		2,907	10		6	
Nickels			228			832
BPI	27			8,151	5	3
Abbeyland		630			634	
Total	1092	27,324	10,633	8,161	19,571	21,578

(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 9481 animals with RFID eartags to date. From these, 4962 have data on the tag's location in the ear. As shown in the table below, 69 (0.7%) RFID's could not be read, 150 (1.6%) animals lost the RFID, and 209 (2.2%) animals did not have an RFID with no evidence of having been tagged initially. The tag location data shows that from the 4962 animals that have location data, 4498 (90.6%) are properly tagged close to the head, while 408 (8.2%) animals had a location that was more central in the ear, and 56 (1.1%) 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	9053	95.5%
RFID does not read	69	0.7%
RFID lost	150	1.6%
Animals with no RFID	209	2.2%
Total:	9481	
Tagged properly	4498	90.6%
Tagged in the middle	408	8.2%
Tagged on the outside	56	1.1%
Total:	4962	

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%
Q1 '05	Taylor	1103	125	90%
Q2 '05	Taylor	1258	67	95%
Q3 '05	Taylor	922	223*	81%*
Q4 '05	Taylor	3306	1777	94%
Q1 '06	Taylor	2701	377	88%
Q2 '06	Taylor	2666	232	89%

* 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

NEW with FAIR

IDairy

We have been working with our partners in the dairy industry, through IDairy, to bring a united ID message to dairy farmers across the nation. We have been promoting three simple steps 1) Register your premises 2) ID your animals and 3) Enroll in a tracking database. We have been pushing premises registration hard since the group's formation in Fall of 2005. In early 2006, we agreed that the official identifier should be RFID ear tags. Most recently, the group agreed in principle to have National FAIR host the IDairy database.

Southwest Animal ID – FAIR applied

The main objective for the SWAID program is the process of tracing calves from their premises of origin to a calf ranch and then back to the dairy or to a heifer raiser for further growth. Since June '05 we have identified and traced the movements of nearly 8,000 calves in the central valley of California. We are providing software to the producers to "check-in" the calves when they return from the calf ranch.

Currently 11 of the producers participating in the program are in the process of integrating the use of RFID technology into their herd management practices and utilizing RFID readers and software to record the movement of calves back to their originating premises. This is an opportunity for cost benefit analysis of the program.

FAIR – Value Added

We will be working with Cargill/Laura Lean Beef at the Embers plant in Milwaukee to provide animal identification and traceback to the source.

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 March 2005, the following groups are using the FAIR system:

- Southwest Animal ID Pilot Project
- Michigan Department of Agriculture TB Eradication Project
- New York State Cattle Health Assurance Program (NYSCHAP)
- Ohio State Department Johne's Program
- Alta Genetics Progeny Test herds
- American Veal Association
- US Ayrshire Association