

# National Animal Identification System (NAIS)

## *Strategies for the Implementation of NAIS*

*April 2006*

### **INTRODUCTION AND EXECUTIVE SUMMARY**

As part of its ongoing efforts to safeguard U.S. animal health, the U.S. Department of Agriculture (USDA) initiated the implementation of a National Animal Identification System (NAIS) in 2004. The NAIS is a cooperative State-Federal-industry program administered by USDA's Animal and Plant Health Inspection Service (APHIS). The main objective is to develop and implement a comprehensive information system, which will support ongoing animal disease programs and enable State and Federal animal health officials to respond rapidly and effectively to animal health emergencies such as foreign animal disease outbreaks or emerging domestic diseases. Some components of the NAIS are already operational and available for producer participation; the final component will be operational in early 2007.

The ultimate long-term goal of the NAIS is to provide State and Federal officials with the capability to identify all animals and premises that have had direct contact with a disease of concern within 48 hours after discovery.

The NAIS is a voluntary program. Producers and other stakeholders can now participate in the program to test the system and offer feedback to help ensure that practical solutions evolve. The NAIS establishes standards for producers to identify their animals and to report animal movements that will support the needs of animal health officials to track animals for the purposes of managing animal diseases. Animal movement information will be maintained by the industry and will provide the traceback and trace forward information for animal health officials while, at the same time, maintaining other information the industry deems necessary for marketing purposes.

The NAIS is being established through a phased-in approach by implementing these key components:

- Premises Identification
- Animal Identification
- Animal Tracking

Premises registration, the foundation of NAIS, is critical to rapidly detecting and evaluating the scope of animal disease outbreaks and improving emergency response efficiency. The availability of nationwide premises registration data provides for a more timely gathering of information to help manage animal diseases and saves manpower, time, and logistical support. Fifty States, five Tribes, and two Territories, as of March 2006, registered 235,000 premises accounting for approximately 10 percent of the national total.

Animal identification will streamline emergency response efforts and enhance existing disease surveillance, control, and eradication programs. Identifying each animal, with a unique identifier, at its birthplace and linking that identifier to the premises of origin gives animal health officials a "starting point" for epidemiologic investigations. Group/lot identification also provides equivalent capabilities for species that typically move through the production chain as a group of animals. Without that starting point, weeks and, too often, months of manual tracebacks are required to determine the source of the disease.

Animal tracking databases that maintain the movement records of animals will be owned and managed by the industry and States. These information systems will provide the locations of a subject animal and the records of other animals that the subject animal came into contact with at each premises. The data collection infrastructure is a major element of the animal tracking component. The completeness of animal movement records will directly affect the effectiveness of the response to a detected disease and the reliability for achieving the long-term 48-hour traceback/trace forward goal.

### **IMPLEMENTATION PLANS**

#### **Immediate Participation Milestones**

Much of the NAIS, from a systems perspective, is operational; remaining systems elements soon will be. The following are key NAIS milestones:

- June 2004: Cooperative agreements established with the States and Tribes
- August 2005: Premises registration systems operational in 50 States and 2 Territories
- March 2006: Individual animal identification begins
- June 2006: Cooperative Agreements (CA) with Private/State Animal Tracking Databases (ATDs)
- Early 2007: Private/State ATDs operational

Premises registration, the foundation of the system, has been implemented in all 50 States and 2 Territories. Several Tribes are also registering their premises. An enhancement to the Standardized Premises Registration System will be deployed mid-year 2006 that will provide the opportunity for more Tribes to administer premises registration activity on their reservations.

The animal identification phase is being implemented in March 2006. The animal identification number (AIN) will be authorized for use on AIN tags to support individual animal identification. The use of the Group/Lot identification number is also a viable option when animals move through the production chain as a group or lot of animals.

The next phase of NAIS implementation relates to animal tracking. To facilitate the integration of private and State animal tracking databases with the NAIS, APHIS has developed, as part of the implementation process, a metadata portal that will allow interested organizations to participate in early 2006. APHIS' Veterinary Services (VS) has initiated the design of the metadata portal, referred to as the Animal Trace Processing System (ATPS); its design, development, and testing of the system will continue throughout 2006, with deployment anticipated in early 2007. APHIS will enter into a CA with organizations that have databases that meet the ATD requirements and that wish to participate in the advancement of the private and State ATDs with the NAIS. By April 2006, APHIS will publish (on its webpage) information on how organizations can enter into a CA. Producers may participate in this industry-administered component in the very near future.

APHIS will work with stakeholders throughout 2006 to develop the complete requirements for the integration of private and State animal tracking databases with the NAIS. It is anticipated that the requirements for compliance will be completed by late 2006, and the actual integration of such systems with the ATPS is targeted for early 2007.

#### **Achieving a Successful Level of Participation**

Producers and affected industry segments will need to participate in NAIS for it to be successful in supporting the animal disease management programs. Market demands (age, source and process verification, traceability, etc.) are becoming of greater importance for certain species and could become a primary "driver" for achieving a successful level of participation in the NAIS. Allowing market forces and industry needs to drive producer participation in the NAIS is preferable to mandatory Federal regulations.

As more producers participate in the system, and as the number of animals registered in the system increases, our ability to track animals will increase as well. The system will require a high degree of producer participation in order to achieve its goal of 48-hour traceability. The animal movement information maintained by the industry will provide the traceback and trace forward information for animal health officials.

Measurable benchmarks of participation rates for key program activities are defined with timelines necessary to reach full participation by the target dates. Participation levels will be evaluated and studies will be conducted to determine factors affecting participation.

## NAIS Implementation Strategies

### Contingency Plan

This NAIS implementation strategy provides the opportunity for the stakeholders to take a proactive approach to achieve full industry participation in the NAIS. If the marketplace, along with State and Federal identification programs, does not provide adequate incentives for achieving complete participation, USDA may be required to implement regulations. USDA will evaluate whether the participation levels are increasing at rates that will achieve full participation by 2009. Based on that analysis, USDA will determine if the market-driven incentives, along with industry “buy-in” for improved animal disease programs, is resulting in adequate participation and growth rates for NAIS to be successful by the established target dates. If participation rates are not adequate, the development of regulations through normal rulemaking procedures will be considered to require participation in certain aspects of the program. The public would have the opportunity to comment on any proposed regulations.

### Summary of Operational Milestones and Participation Benchmarks

The following summarizes APHIS estimates of the key operational milestones and benchmarks for participation. The chart illustrates the timelines for the implementation plan for the NAIS.

#### Operational Milestones:

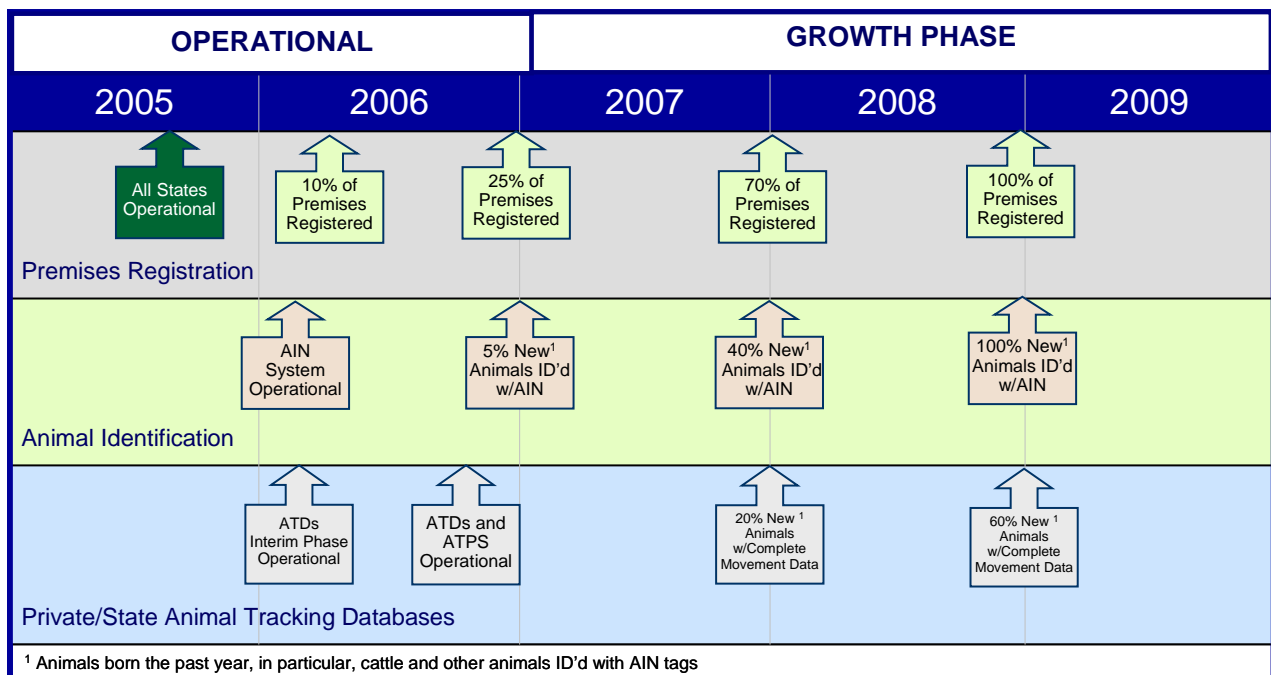
August 2005: Achieved Operational Premises Registration Systems  
 March 2006: AIN Management System Operational  
 June 2006: Cooperative Agreements with Private/State ATDs  
 February 2007: Private and State ATDs and ATPS Operational

#### Benchmarks for Progress:

January 2007: 25% of premises registered  
 January 2008: 70% of premises registered  
 40% of animals identified  
 January 2009: 100% of premises registered  
 100% of “new” animals identified  
 60% of animal <1 year of age have complete movement data

These benchmarks are participation levels APHIS believes are necessary for the industry, State, and Federal partnership to successfully achieve the goals and objectives of NAIS.

### NAIS Implementation Timelines



## NAIS Implementation Strategies

### Benchmarks for Progress

The following charts reflect participation levels that USDA believes necessary to meet full participation in the NAIS to achieve the 48-hour traceback goal. While outreach and promotional efforts do encourage greater levels of participation in the NAIS, it is acknowledged that market incentives will be required to achieve these participation levels.

#### 1. Premises Registration

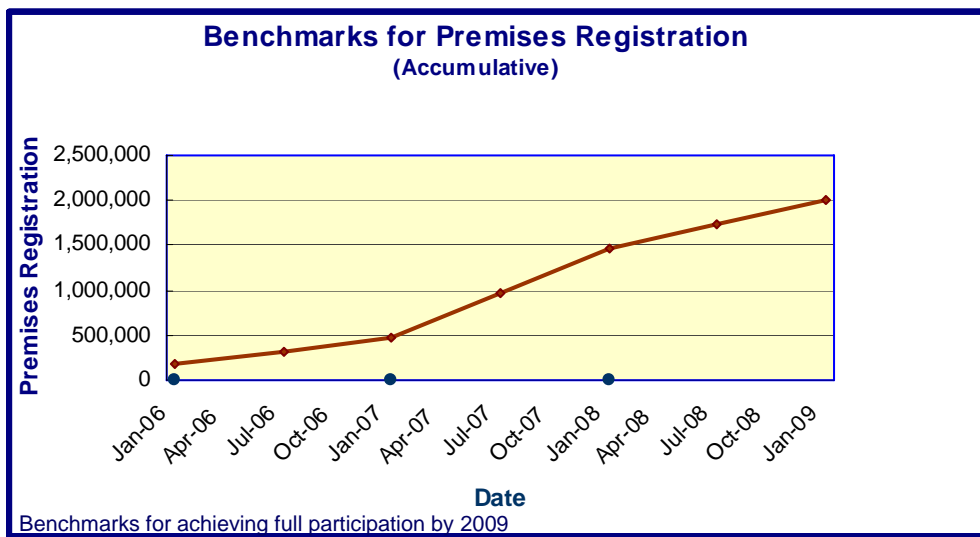
It is APHIS' estimate that 2 million premises exist in the United States that need to be registered by 2009. This includes all locations that manage and/or hold livestock and poultry. As of March 2006, over 235,000 premises have been registered and it is projected that 475,000 premises will be registered by year's end. The plan reflects annual registration rates to achieve 2 million premises registered by January 2009.

### Benchmarks<sup>1</sup> for Premises Registration

**Total Premises Estimate: 2,000,000**

<u>Annual Goal</u>			<u>Timelines Projections</u>		
Year	% Reg./Yr.	Annual Registrations	Date	Accumulative Total	
< 2006		175,000			
2006			Jan-06	175,000	9%
	15%	300,000	Jul-06	325,000	16%
2007			Jan-07	475,000	24%
	50%	1,000,000	Jul-07	975,000	49%
2008			Jan-08	1,475,000	74%
	25%	500,000	Jul-08	1,725,000	86%
2009		25,000	Jan-09	2,000,000	100%

<sup>1</sup> Benchmarks for achieving full participation by 2009



**2. Animal Identification**

Two types or levels of animal identification are necessary to support animal disease management programs: individual animal and “group/lot” identification. Individual animals may be identified in the NAIS by means of the AIN.

Group/Lot identification is accomplished through the use of a Group/Lot Identification Number (GIN). The GIN is created by the producer using the premises identification number of the location where the animals are found and the date the group or lot was created.

- **Allocation of AINs**

The AINs are allocated to companies that manufacture and/or provide official identification devices or technologies. Other individuals and organizations may perform roles that support the distribution of official identification devices to producers. The complete and accurate recording of the AINs distributed and assigned to each premises is imperative.

The allocation of AINs to a premises, in most cases, provides the point of origin of the animal, and therefore is another activity that warrants the establishment of goals. It is assumed that producers will apply AIN devices to their animals as the devices are purchased. The cattle industry represents the species with the largest population with approximately 33 million calves born each year. Other species groups that will identify animals individually (primarily sheep, goats, deer, and elk) with visual AIN tags account for another 7 million animals. A benchmark of 40 million AIN tags distributed to premises in the calendar year of 2009 has been established. This benchmark reflects having all new animals officially identified that are born in 2009. The following provides benchmarks in the distribution of AIN tags to achieve the 2009 goal.

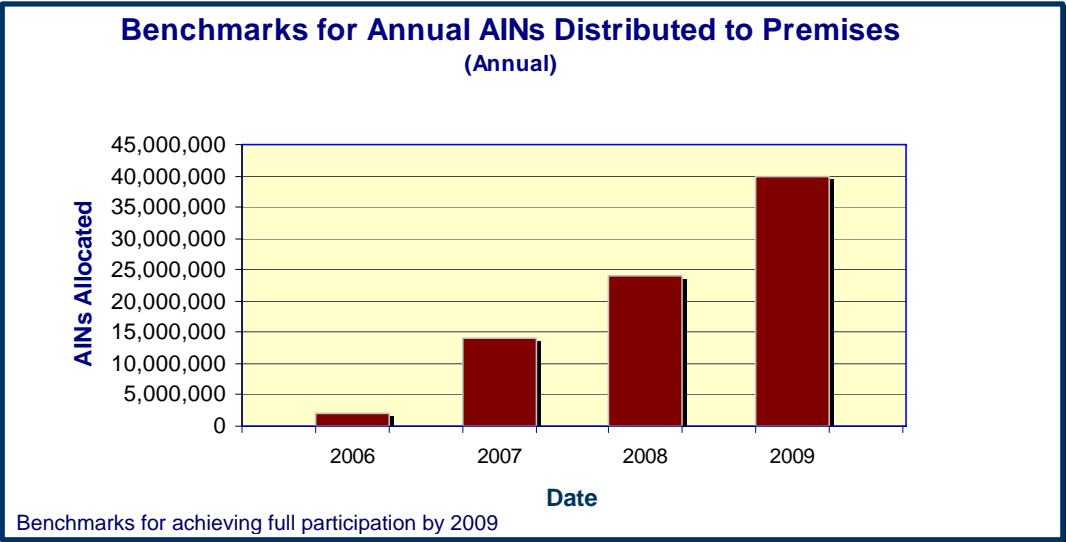
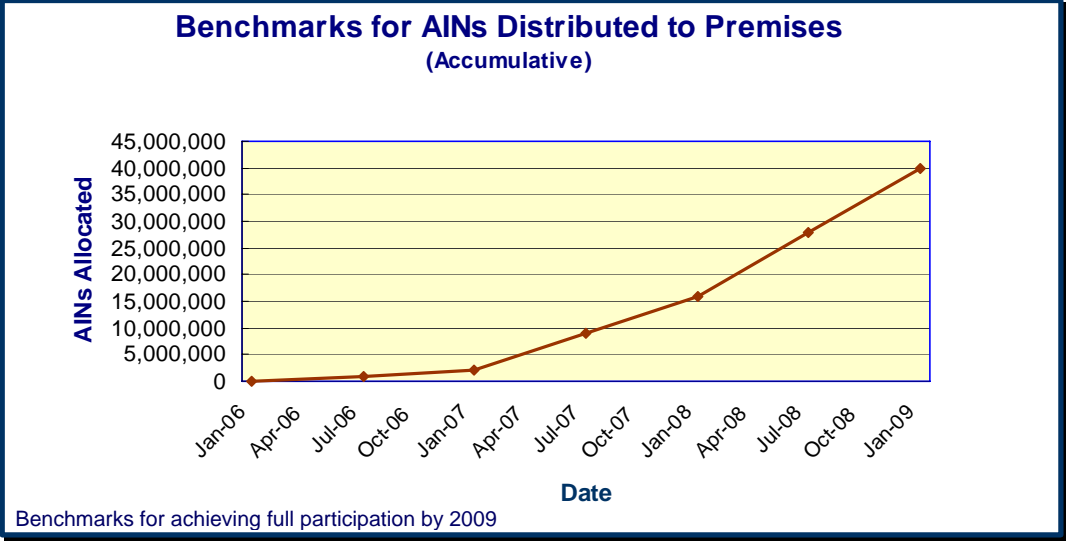
**Benchmarks<sup>1</sup> for AIN Distribution to Premises**

**Total Annual New Born Animals Estimate: 40,000,000**

Year	Annual Goal		Timelines Projections	
	% New Animals ID'd	New Animals ID'd Annually <sup>2</sup>	Date	Accumulative Total
< 2006		0		
			Jan-06	0
2006	5%	2,000,000	Jul-06	1,000,000
			Jan-07	2,000,000
2007	35%	14,000,000	Jul-07	9,000,000
			Jan-08	16,000,000
2008	60%	24,000,000	Jul-08	28,000,000
			Jan-09	40,000,000
2009	100%	40,000,000		

<sup>1</sup> Benchmarks for achieving full participation by 2009

<sup>2</sup> Animals Identified as individuals (not Group/Lot ID)



## NAIS Implementation Strategies

- Termination Records**

The collection of termination records can provide another critical piece of information. Determining the number of animals with AINs at termination will help determine the rate at which the AIN devices are maintained on the animals and confirm the number of animals actually identified with an AIN.

Approximately 35,000,000 cattle are harvested each year. The measure for this activity will be specific to the cattle industry and the benchmarks are provided in the following chart reflecting the goal of having all cattle identified at harvest with an AIN.

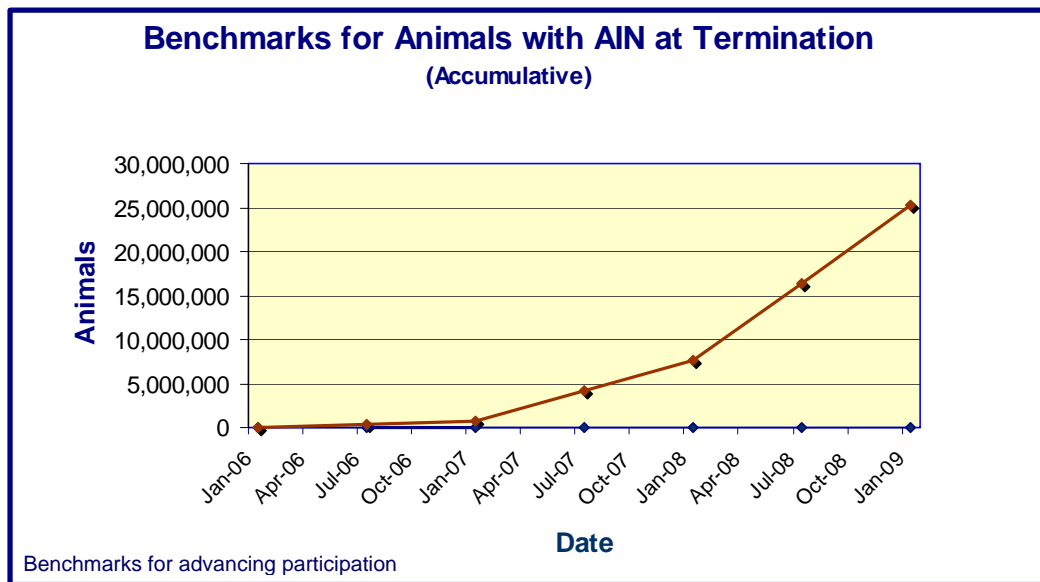
### Benchmarks<sup>1</sup> for Animals ID'd with AINs at Termination

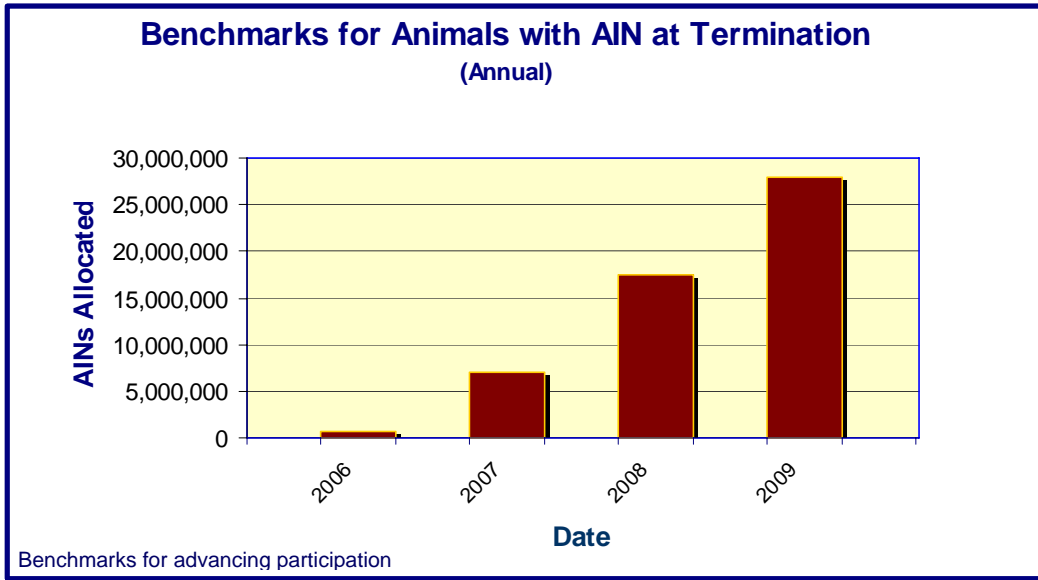
**Total Annual Animal Slaughtered Projection: 35,000,000**

Year	Annual Goal		Timelines Projections	
	% New Animals ID'd	New Animals ID'd Annually <sup>(2)</sup>	Date	Accumulative Total
< 2006		0		
2006	2%	700,000	Jan-06	0
			Jul-06	350,000
2007	20%	7,000,000	Jan-07	700,000
			Jul-07	4,200,000
2008	50%	17,500,000	Jan-08	7,700,000
			Jul-08	16,450,000
2009	80%	28,000,000	Jan-09	25,200,000

<sup>1</sup> Benchmarks for advancing participation

<sup>2</sup> Animals Identified with the AIN





**3. Animal Tracking**

To achieve high reliability with the 48-hour traceback goal, a high percentage of animal movement records need to be collected and available electronically. The ATPS will be in development in 2006 and will be used to evaluate the completeness of animal movement records.

- Animal Movement Records**

Random audits will be conducted on animals terminated to determine the number of animals with AINs that have full traceability.

**Benchmarks<sup>1</sup> for Animals with Complete Movement Records**

**Total Annual New Born Animals Estimate: 40,000,000**

Year	Annual		Timeline Projections	
	% New Animals with Complete Records	New Animals with Complete Records Annually <sup>2</sup>	Date	Accumulative Total
< 2006		0		
			Jan-06	0
2006	5%	2,000,000	Jul-06	1,000,000
			Jan-07	2,000,000
2007	15%	6,000,000	Jul-07	5,000,000
			Jan-08	8,000,000
2008	35%	14,000,000	Jul-08	15,000,000
			Jan-09	22,000,000
2009	60%	24,000,000		

<sup>1</sup> Benchmarks for advancing participation

<sup>2</sup> Animals Identified as individuals



## NAIS Implementation Strategies

