

THE ERADICATION PROGRAM FOR AUJESZKY'S DISEASE IN THE NETHERLANDS

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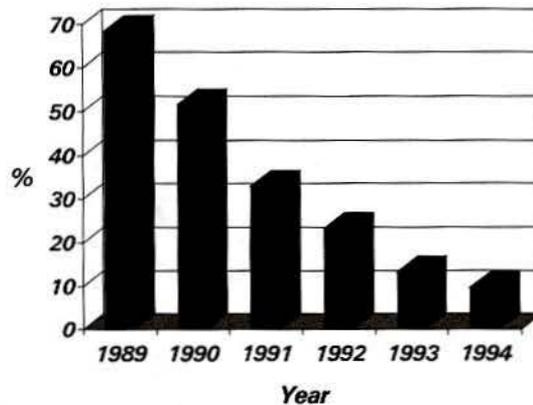
Introduction

In The Netherlands a plan for the eradication of A.D. has been drawn up under the responsibility of a specially appointed steering group containing representatives of both the Ministry of Agriculture and of the Industry.

This plan is started in September 1, 1993, with the introduction of compulsory vaccination on all holdings. A field trial was carried out previously on about 320 holdings (Diessen-trial). The results were very encouraging. The incidence of gE-positive sows went down from 69% in 1989 to 9.6% in 1994 and for fatteners the decline was even more pronounced, from 49% to 4%. See figure 1.

Figure 1.

% gE-POSITIVE SOWS WITHIN THE TRIAL AREA



The eradication program is structured in three stages.

First stage

The measures include:

1. compulsory vaccination since Sept. 1, 1993

The vaccination scheme is as follows:

- * sows and boars: 3 times a year
- * gilts: 1st: at 10 weeks of age
2nd: at 14 weeks of age
3rd: at 6 months of age
- * fatteners: before 16 weeks of age

The vaccines approved since May 1, 1995 are only attenuated live vaccines based on an oil/water-emulsion and on the NIA3-783- or Begonia strain (see table 1).

Table 1

Manufacturer

Vaccine

Intervet

- * Nobi-Porvac Aujeszky live Begonia + Diluvac Forte
- * Nobi-Porvac Aujeszky live 783 + Diluvac Forte

Duphar

- * Suvaxyn Auj. NIA3-783 + Suvaxyn O/W-emulsion
- * Suvaxyn Auj. IN/IM + Suvaxyn O/W-emulsion

Hoechst

- * Arravac Auj. NIA3-783 + adjuvans O/W

Very important in this vaccination program is the purchase of the vaccines centrally by the Animal Health Service (AHS) and distributed only via 2 distribution centres.

All vaccination data are carried out by a local vet and written on a special form. All these data are stored in a central data-base at the AHS (see table 2).

Table 2. Vaccination dosages

Year	Dosage
1993*	3,722,840
1994	35,275,130
1995	35,648,440
1996	34,826,595
1997	26,254,520
1998	25,322,815

* since September 1993

2. certification of all holdings
3. Since December 1, 1993, it is possible to gain the status Free of A.D.
4. At first breeding, commercial and rearing herds started with this program and
5. since half 1996 also the fattening herds.
6. To become certified a herd has to fulfil the following requirements:
7. * supplying animals from holdings with at least the same status.
8. * no clinical symptoms of A.D.
9. * three screening tests (for numbers of animal see table 3) at intervals of 4
10. months or testing all sows at once, with negative results.
11. Also this blood sampling is carried out by local vets.
12. * all boars are sampled.
13. * serum and colostrum samples are permitted.
14. * all gE-positive sows have to be slaughtered after weaning and after 3
15. months again 50-60 samples have to be examined. If negative, then the
16. herd can be certified.

Table 3

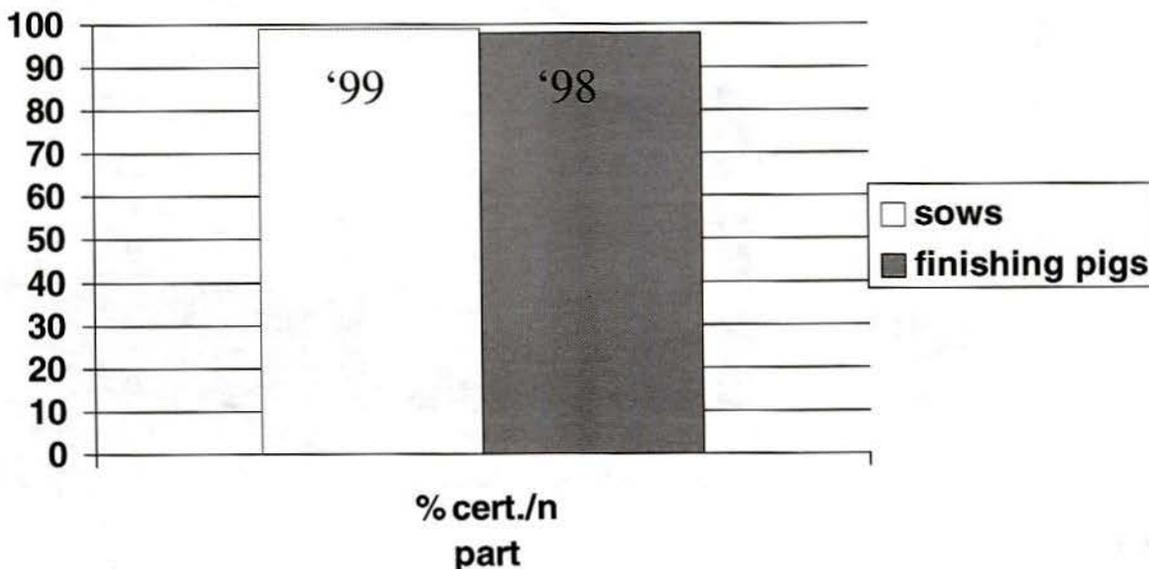
How many samples?		
Number of sows and boars	Screening	Control
-80	-40	-15
81 - 150	50	20
151- 400	60	20
152- 401-1200	60	5%
153- > 1200	5%	5%

Control samples also 3 times a year.

The results of this certification program (01-03-'00) are summarised in figure 2.

Figure 2

PARTICIPATION IN PRV CERTIFICATION (March 2000)



3. monitoring of the A.D.-status

4.

5. This monitoring is based on the S.V.D.-sampling. Three times a year (up to) 12 samples are collected from each holding. These samples are examined on S.V.D. and since 1994 partly on gE-antibodies also.

6. From these 12 samples 2 are collected from \pm 1.400 holdings, sow herds as well as fattening herds. From these \pm 10.000 samples a year the gE-status in the Netherlands is calculated. The results are summarised in figures 3 and 4.

7.

8.

9.

10.

Figure 3

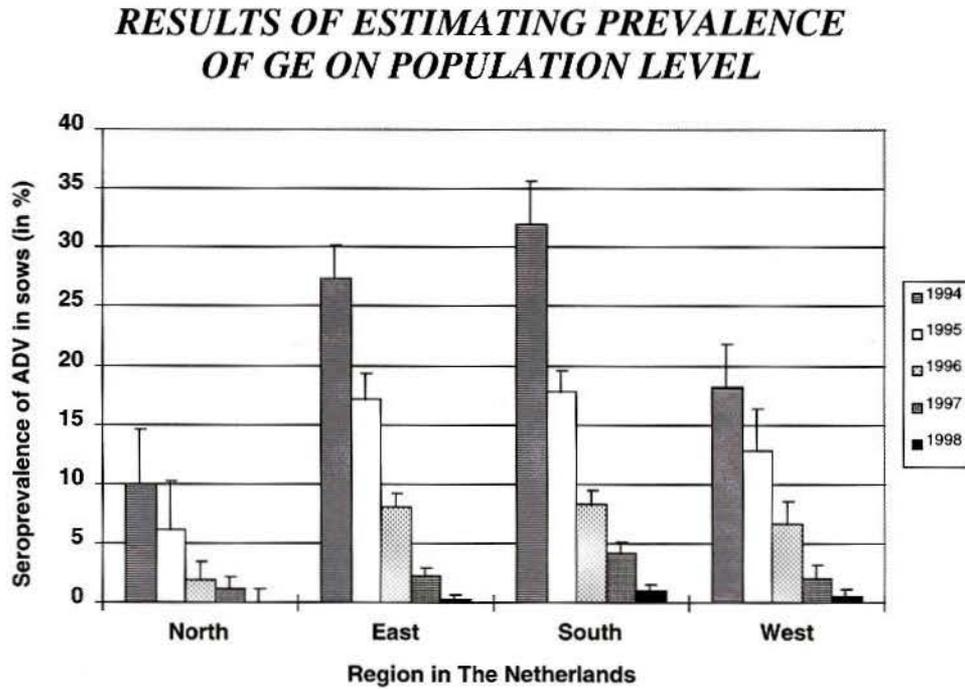
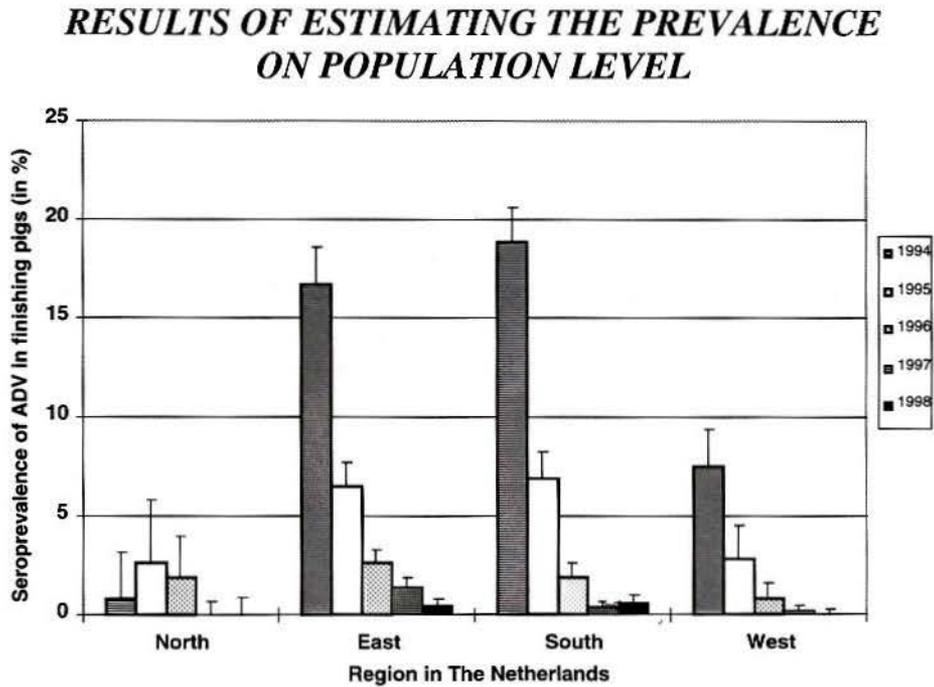


Figure 4

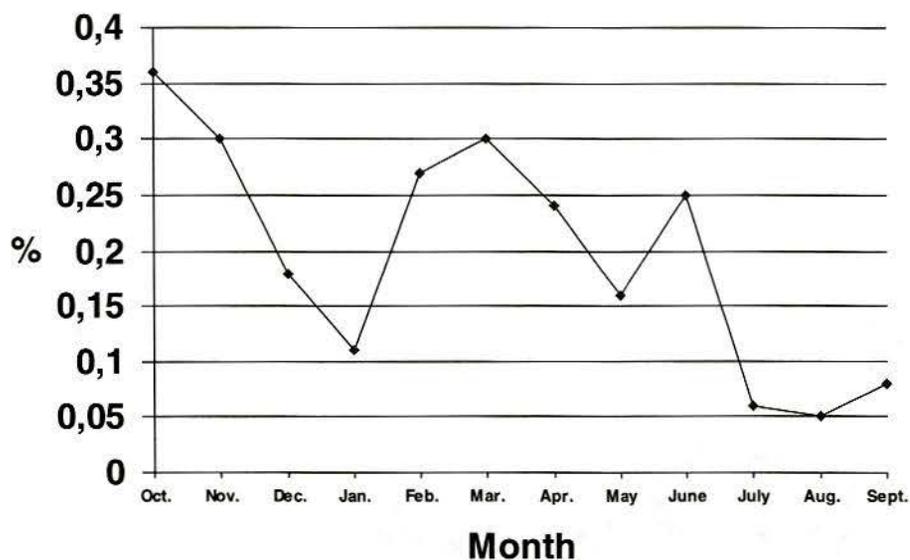


Since 01-01-1996 all S.V.D.-samples are also examined on gE-antibodies: on a yearly basis about 750.000 samples.

In July 1998 less than 0,3% of these samples is gE-positive (see figure 5).

Figure 5

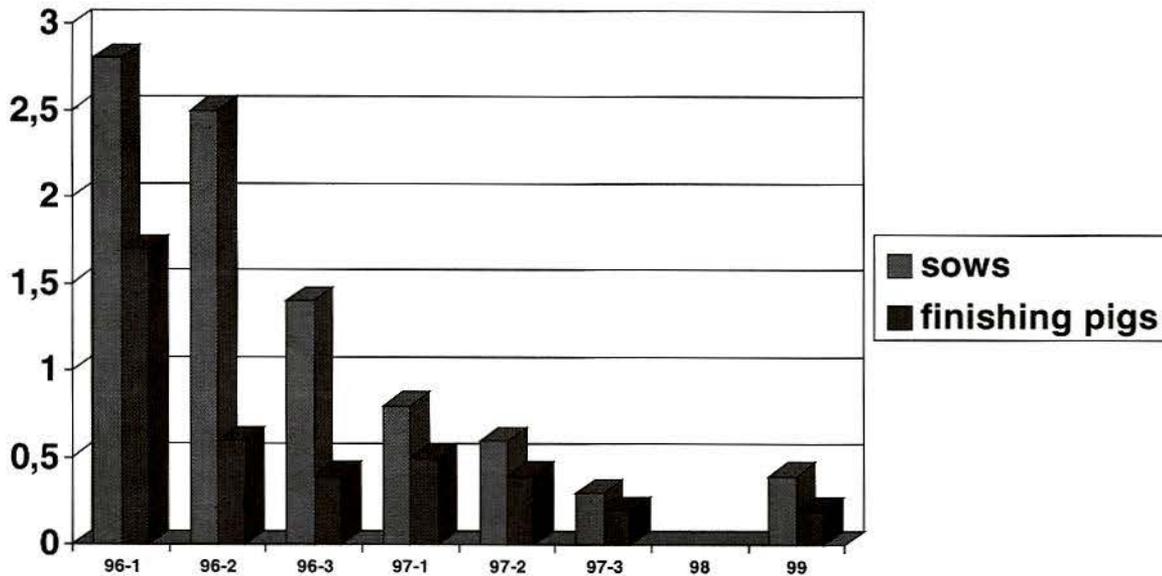
% OF POSITIVE SAMPLES ON GE IN SVD-SAMPLES FROM OCT.-SEPT.'99



By the AHS and the local vets special attention has been paid to the high prevalent herds. High prevalent are herds with ≥ 7 out of 12 S.V.D.samples being positive. During 1996 and 1997 there is a remarkable decrease in the % of high prevalent herds, sows as well as finishing pigs (see figure 6).

Figure 6

THE % OF HIGH PREVALENT HERDS DURING '96 - '99



Further details are available with regard to the evaluation of outbreaks on certified sow herds and the riskfactors on these herds (see figure 7 + 8).

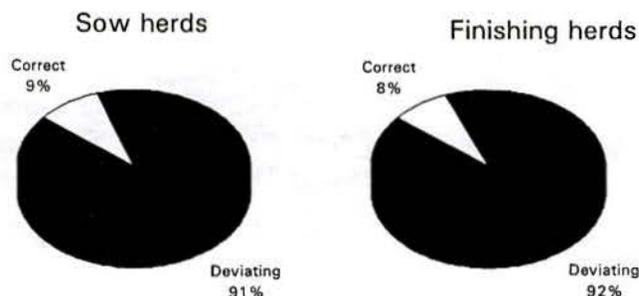
Figure 7

MAIN RISK FACTORS FOR A HIGH SEROPREVALENCE FOR PRV

- *no use of "Golden Standard" vaccines before 1995*
- *incorrect vaccination scheme for finishing pigs and gilts*
 - *only 1 vaccination*
 - *first vaccination < 10 weeks of age or > 13 weeks of age*
 - *gilts in close contact with finishing pigs on farrow-to-finish herds*
- *incorrect vaccination scheme for sows (interval > 5 months)*
- *surroundings*

Figure 8

INCORRECT VACCINATION SCHEME IN SOWS AND FINISHING PIGS ON HIGH PREVALENT HERDS



Second stage - eradication stage

From the beginning of 1999 the article 9 of Directive 64/432/EG will be applicable because of the very low % of gE-positive sows (< 0,5%) and fatteners (< 0,2%) and because of the high % of certified holdings per 01-01-1998 (\pm 85%) and per 01-10-1998 certification is obliged.

The vaccination, notification and certification remain in force during 1998. The delivering of pigs will be prohibited unless they originate from a holding "free from A.D."

To be sure that also the last positive fattening herds will become free from A.D., all fattening pigs are obliged to be vaccinated twice in week 10 and 14 after birth. In this way it is quite sure that from 01-01-1999 on there will be no viruscirculation in the units and all holdings have the status *free from A.D.*

Third stage - monitoring stage

If a region has no outbreaks in the course of one year and all herds are serologically negative, The Netherlands can proceed to the third stage.

It also depends on the AD-situation in the surrounding countries like Belgium and Germany. Vaccination is prohibited at that time: in first instance the finishing herds and afterwards the sowherds.

Herd monitoring is continued at (up to) 12 samples each four-month period.

Since recent time Germany is officially free from AD. Now only Belgium don't have the free status in our region. Due to this fact and to the experience with Hog Cholera and Foot and Mouth disease the ministry as well as the farmersunion are afraid to stop vaccinating.

Since more than 1 year now we are free from AD and to export pigs to Germany holdings have to stop at least 1 year with vaccinating. Till now more than 250 holdings fulfill this requirements and no new outbreaks occurred since that time.