

RESULTS AND INCIDENCES OF PORCINE PARVOVIRUS IN PRODUCTION FARMS.

A. ROBRES SERRANO and R. CAMPOS RODRIGUEZ*

NEW ASSOCIATION FOR NUTRITION AND FEEDING TECHNIQUES, (NANTA)

NANTA, S.A. Vista Alegre, 4 y 6 - MADRID-19 - ESPAÑA.

INTRODUCTION.-

In a pig hybridation program consisting in selection, multiplication and production farms, were detected during the first months of 1980, clinical features producing reproductive failures characterized by metritis, returns to estrus, abortions, mummified fetuses and -- stillborn piglets.

In the present paper they have exposed the works done, to study the possible etiological agent.

MATERIAL AND METHODS.-

Out of 6 farms were affected involving 1.670 sows, distributed as follows (fig.1)

Farm	nº Sows.	Reproductive Failure.	Geographical Situation.
GPS - 1	430	Jan.1.980	North-East
GPS - 2	350	Sep.1.979	Middle.
Ps - 1	280	Aug.1.980	West.
PS - 2	240	Aug.1.980	South-West
B.H.-1	250	Aug.1980	South-West.
B.H.-2	120	Nov.1.980	Middle.

GPS: Grand Parent Stock.

PS: Parent Stock.

BH: Breeding Herd.

CLINICAL FINDINGS:-

The clinical findings appeared under the form of:

Metritis: From clear to muco-purulent vaginal secretions. Bacteriological analysis (58) yielded a wide range of bacterial agents involving E.Coli (25,9%), Streptococcus (22,4%), Staphylococcus (12,1%), Pseudomonas (6,9%), Fungi (6,9%), Corynebacterium (1,7%) Aerobacter (1,7%) and Bacilli and others (10,3%).

Returns to estrus: In a variable percentage ranging from 25 to 50% within total of matings.

Abortions: Always during the last third of pregnancy, having or not mummified fetuses and reaching 13.8% of the total pregnant sows.

Farrowings: were observed three different types: a) Normal farrowings with no symptoms in sows nor litters (62,6%); b) Normal farrowing with litter including normal and no-viable piglets (35,1%); c) Farrowings with all no-viable litters (2,3%).

POST-MORTEM EXAMINATION OF AFFECTED SLAUGHTERED SOWS.-

As a result of the performed analysis, and in order to get more information about the problem, 25 suspected sows from two herds were

slaughtered and necropsied being observed macroscopically (fig. 2)

nº Sows	Necropsy findings.
2	Normal, pregnant sows (8 and 9 fetuses).
3	Ovarian cysts.
12	Purulent endometritis.
3	Vaginal affection.
1	Persistent Luteous body.
4	Normal with no macroscopical lesions

From the above list, obviously 6 sows - 2 pregnant and 4 normal - are not representative of the problems. As all the performed investigations- clinical, bacteriological, macroscopical works- gave no clearance on the causative agents, we suspect that in a porcine parvovirus (ppv) infection having that previously had been discarded leptospira and miyagawanaella infections.

SEROLOGICAL SURVEYS.-

We proceeded to take serum samples of some affected sows and gilts from each of 6 farms to determine by the haemagglutination inhibition test (HIT) the serological status against PPV (fig. 3 and 4)

HIT Titer	NO of farrowing						gilt	total
	0	1	2	3	4	5		
1:160	9	1	1	1	0	1	8	22
1:320	0	4	2	0	1	2	1	11
1:640	3	4	1	2	2	0	0	12
1:1280	6	8	4	4	3	4	1	30
1:2560	3	6	8	5	5	1	1	31
1:5120	1	5	3	2	1	0	0	13
1:10240	0	0	4	0	1	1	1	7
Total	22	28	23	14	14	8	5	126
Farrowings	1:320		1:320/1:1280		1:1280			
0	40,9		40,9		18,2			
1	3,6		57,1		39,3			
2	4,3		30,4		65,3			
3	7,1		42,8		50,1			
4	7,1		42,8		50,1			
5	0		75		25			
6	20		40		40			
	H I T T iters.							

CONCLUSIONS:- I/- In the absence of specific symptoms and lesions on herds affected with ppv it is necessary for a correct diagnosis to perform serological techniques in laboratory. II/- Even in the absence of previous serological study and with no references of seroconversion, it is possible to establish a relation between reproductive failure and serological results obtained. III/- The dispersion and range of HIT titers obtained confirm the suspected ppv infection in the reproductive failures studied.