

FIELD TRIAL RESULTS ON THE USE OF A VACCINE BASED ON
LT TOXIN OF E. COLI IN THE IMPROVEMENT OF THE PIGLETS
PRODUCTION

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INTRODUCTION.- In order to evaluate the incidence of the use of a vaccine containing LT - toxin (1), controls in 16 farms with colibacillar - enterotoxemia diagnosis were carried out, along the country. Parameters such as: Mortality with - - - evaluation of the survival rate were analyzed in the first week and at weaning.

MATERIAL AND METHODS.- The control of the results was performed in the 16 - farms, using a total of 997 sows. From them 479 were maintained as unvaccinated controls being the - - - vaccinated 518, according with the following - - - vaccination schedule:

	Vaccinated Group	Control Group
N° of sows.....	518	479
Dosage	5 c.c.	-
N° of Applications* 2 (Sub. and Intr.)	-	-

Subcutaneous 4 weeks before farrowing,
Intramammary 3/4 days after farrowing.

PARAMETERS OBSERVED: 1) N° of piglets per litter;
2) N° of piglets dead during the first week of life;
3) N° of weaned piglets; 4) Rate of survival at the end of the first week; 5) Rate of survival at - - - weaning.

RESULTS.- In Table 1 and 2 the survival of the - - piglets at the end of the first week of life as well as the whole period of the trial - from birth to weaning - was increased by 3.4% and 5.5%, respectively. It supposes that the number of weaned piglets from vaccinated sows, was 0.54% higher per litter than the one of the control group.

DISCUSSION AND CONCLUSIONS.

1) **Safety.**- The use of the vaccine had not any - - incidence on the rate of piglets born per sow - The obvious conclusion is that the vaccine was safe and did not have any untoward effect on - the size of the litters.

2) **Efficacy.**- The average number of piglets at - - weaning from vaccinated sows compared with the control group it shows an increase of 0.54 of weaned pigs from the vaccinated group. A - - - reduction in mortality during the first week as well as in the whole period - from birth to weaning - occurred.

This reduction is evaluated by 31.87% in the deads - appeared at the first week of life of the piglet - Table 1 - and by 36.4% for the whole period of the trial - 16 farms of the Table 2 - . From the practical point of view, and under the field conditions used in this study it is concluded that - the use of a vaccine containing LT toxin (1) - - - increased significantly the number of weaned piglets per litter, reducing the mortality rate for piglets during the first week of live as well as the whole production period of the piglet.

REFERENCES: Renault, L, Ann. Rech. Vétér. 6 (3) 241-258 (1975); Renault, L, Reç. Med. Vet. 152 (3) 197-202 (1976); Bourne, J, Vet. Rec. 98 499-501 (1976); Dobrescu, L, 4th Int. Cong. IPVS. (1976); Aalund, O, 5th Int. Cong. IPVS (1978); Renault, L, Bull. de la Soc. Vet. Practique de France (1976); Bradley, P; J. Vet. Rusc. (1976); Brown, P. J, J. Vet. Res. (1976); Williams, R.C; Gibbons, R.J., Advances in Exp. Biol. & Med. (1974); Renault, L, Dossier de L'eleveage vol. 2 (1977); Dobrescu, L, Expoaviga, Barcelona (1979).

TABLE 1 : DATA FROM BIRTH TO WEANING.

FARM	SOWS		PIGLETS/ALIVE		BORN/SOW		WEANED		
	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°	
1	15	7	130	70	8.66	10	7.66	8.42	
2	5	3	54	34	10.80	11.30	10.60	10.60	
3	10	12	101	123	10.10	10.25	9.50	9.50	
4	9	12	94	123	10.40	10.25	10	9.50	
5	50	100	470	950	9.40	9.50	7.50	7.38	
6	30	15	297	148	9.90	9.86	9.70	8.06	
7	10	10	98	95	9.80	9.50	8.50	8	
8	106	11	1085	119	10.23	10	9.13	8.72	
9	34	21	278	167	8.18	7.95	7.79	7.09	
10	114	124	1000	1214	8.77	9.79	8.32	8.84	
11	25	25	225	223	9	8.92	8.28	8.24	
12	45	71	429	693	9.53	9.76	8.27	8.58	
13	26	23	307	253	11.81	11	10.92	9.43	
14	17	18	167	177	9.82	9.83	8.35	8.17	
15	13	13	128	121	9.85	9.21	8.77	8.15	
16	9	14	87	123	9.67	8.79	8.22	5.5	
TOTAL	518	479	4950	4633	9.56	9.67	8.64	8.21	
		SURVIVAL DIFFERENCE		... 5.49					

FARM	DEADS AT WEAN.		SURVIVALS		I SURVIVAL								
	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°							
1	15	11	115	59	88.66	84.28							
2	1	2	53	32	98.14	94.12							
3	6	9	95	114	94.05	92.68							
4	4	9	90	114	95.76	92.68							
5	91	212	379	738	80.64	77.68							
6	6	27	291	121	97.98	81.76							
7	13	15	85	80	86.73	84.21							
8	117	23	968	96	99.22	80.67							
9	13	18	265	149	95.32	89.22							
10	52	105	948	1109	94.80	91.35							
11	28	27	207	226	92.00	87.89							
12	64	114	365	579	85.08	83.55							
13	23	36	284	217	92.51	85.77							
14	25	30	142	143	85.03	83.05							
15	16	15	114	106	89.06	87.80							
16	13	46	74	77	85.06	92.00							
		475		699		4475		3934		90.40		84.01	

TABLE 2 : DATA - END FIRST WEEK - FROM NINE FARMS -

FARM	SOWS		PIGLETS/ALIVE BORN		BORN/SOW		
	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°	
1	15	7	130	70	8.66	10	
2	5	3	54	34	10.80	11.30	
3	10	12	101	123	10.10	10.25	
4	9	12	94	123	10.40	10.25	
5	50	100	470	950	9.40	9.50	
6	30	15	297	148	9.90	9.86	
7	106	11	1085	119	10.23	10	
8	25	25	223	223	9	8.92	
12	45	71	429	693	9.53	9.76	
TOTAL	295	256	2385	2483	9.78	9.70	
		SURVIVAL DIFFERENCE		... + 3.39			

FARM	DEADS 1st WEEK		SURVIVALS		I SURVIVAL								
	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°	WITH N°	WITHOUT N°							
1	4	3	126	67	96.92	85.71							
2	0	2	54	32	100	94.11							
3	3	4	98	119	97.03	96.74							
4	2	4	92	119	97.87	96.74							
5	48	103	422	847	89.36	89.15							
6	4	18	293	130	98.65	87.83							
7	84	16	1001	103	92.25	86.55							
8	15	19	201	204	93.33	91.48							
12	49	95	380	576	88.58	86.29							
		209		264		2676		2219		92.75		89.36	