IMPORTANCIA DE LA SEROLOGIA Y EL MANEJO DE UNA LINEA BASE.

Leonardo Alvarado MV Esp

Mayo 11 de 2017.

LA INDUSTRIA AVICOLA

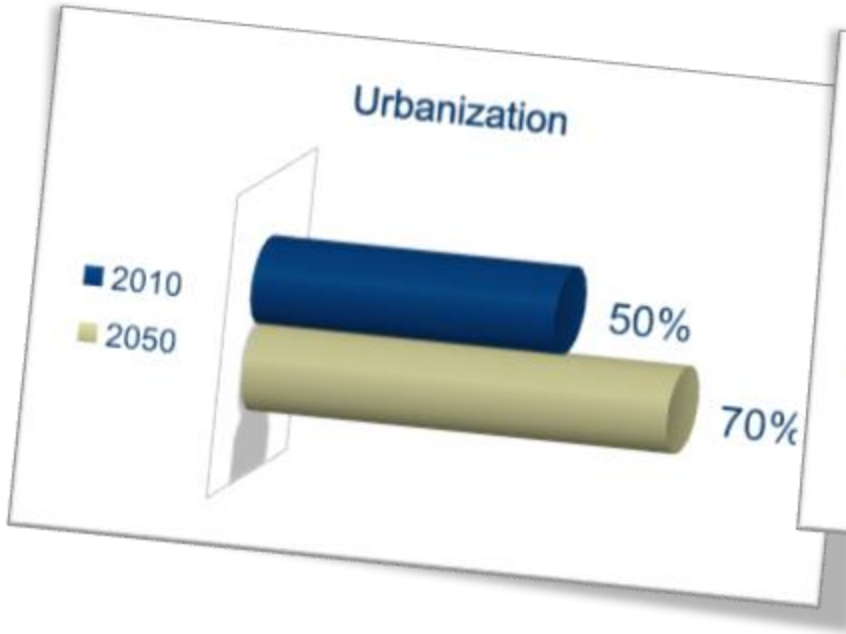
± 60 años

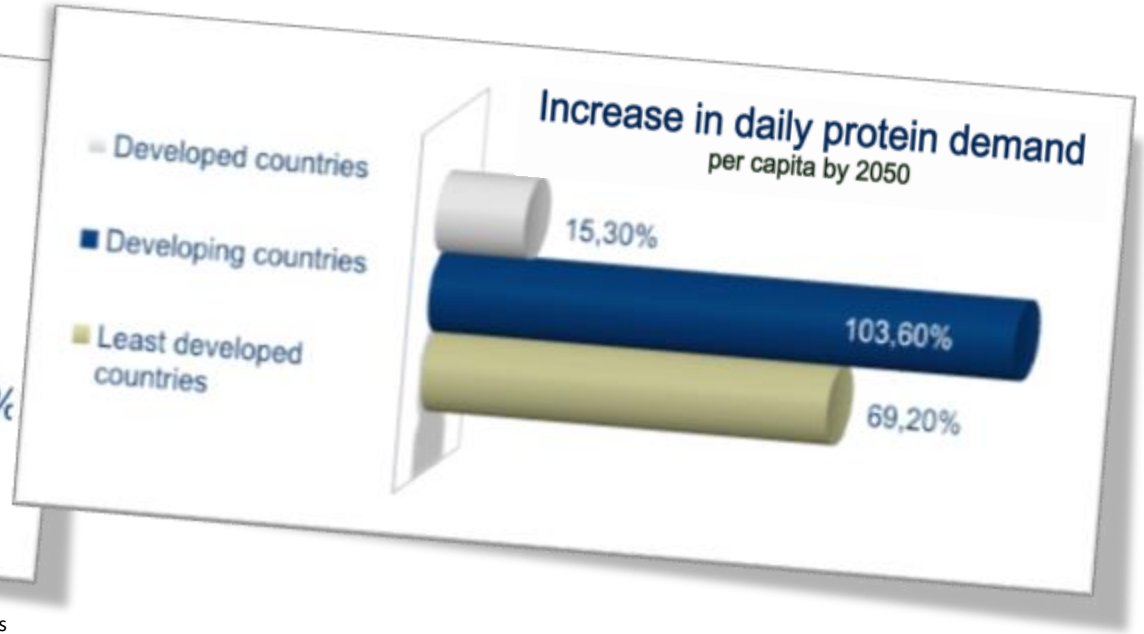
Cambio Demográfico

DE 7 A > 9 BI

+35%

POBLACIÓN MUNDIAL
2010 / 2050





Source: UN world Population and Urbanization Prospects, The 2010/2011 Revisions

Cambio Demográfico

DEMANDA DE ALIMENTOS

+50%

DEMANDA TOTAL DE ALIMENTOS 2010 / 2050

UN MUNDO QUE DEMANDA MAS!

Source: FAO World Food and Agriculture towards 2030/2050; FAO Expert Meeting on How to Feed the World in 2050

Cambio Demográfico

DEMANDA DE LACTEOS

X 2

DEMANDA TOTAL
DE LACTEOS
2010 / 2050

UN MUNDO QUE DEMANDA MAS!

Cambio Demográfico

DEMANDA DE CARNES

X 2

DEMANDA TOTAL
DE CARNES
2010 / 2050

UN MUNDO QUE DEMANDA MAS!

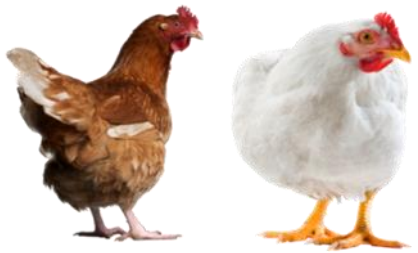
Un mundo de oportunidades

+45%

DEMANDA TOTAL DE CARNES 2010 / 2030

>60%

DEMANDA TOTAL DE CARNE DE AVE 2010 / 2030

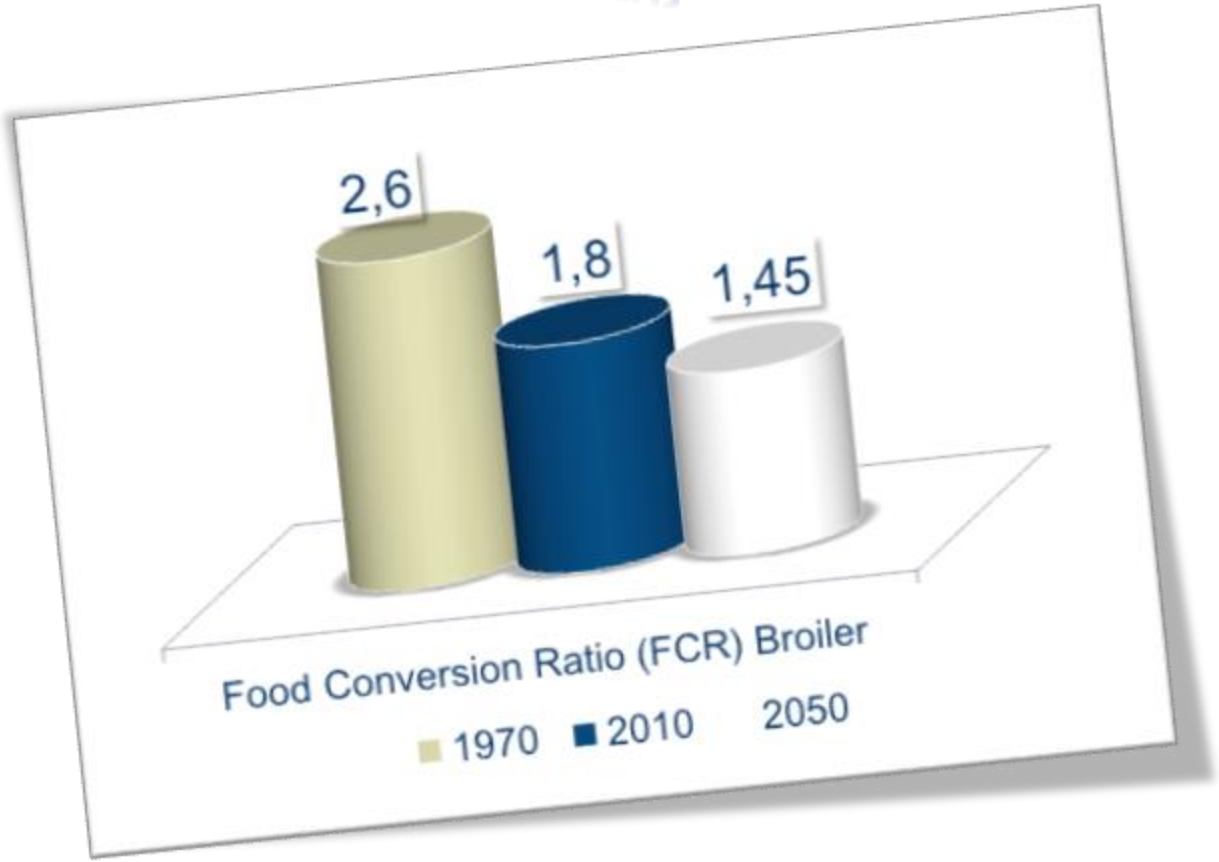


Source: Rabobank, Crossroads for Growth – The International Poultry Sector Towards 2020

Conclusión

La Carrera por la Productividad

- DISMINUIR ICA
  - RECURSOS
  - PRECIOS DE INSUMOS



Source: IFIP, ITAVI

INTENSIFICACIÓN

- GENÉTICA
- INCUBACIÓN
- NUTRICIÓN
- EQUIPAMIENTOS
- SALUD ANIMAL

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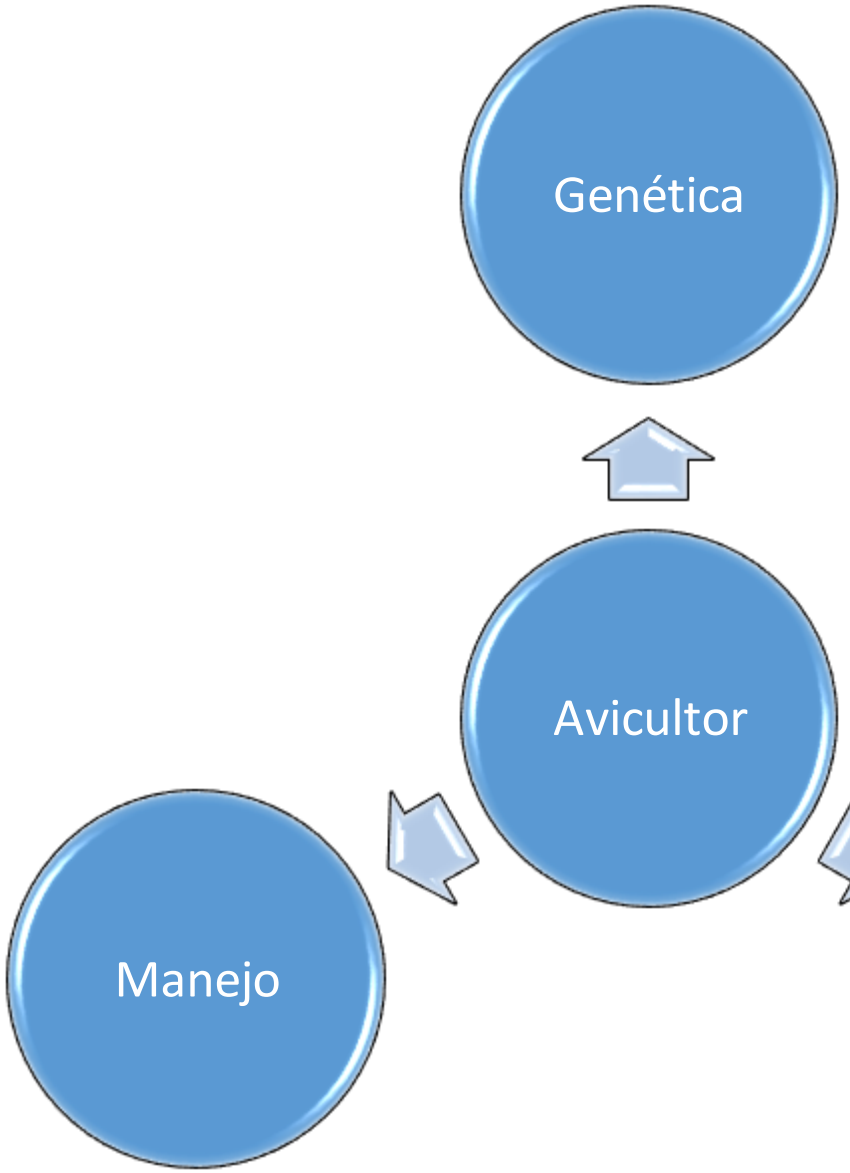
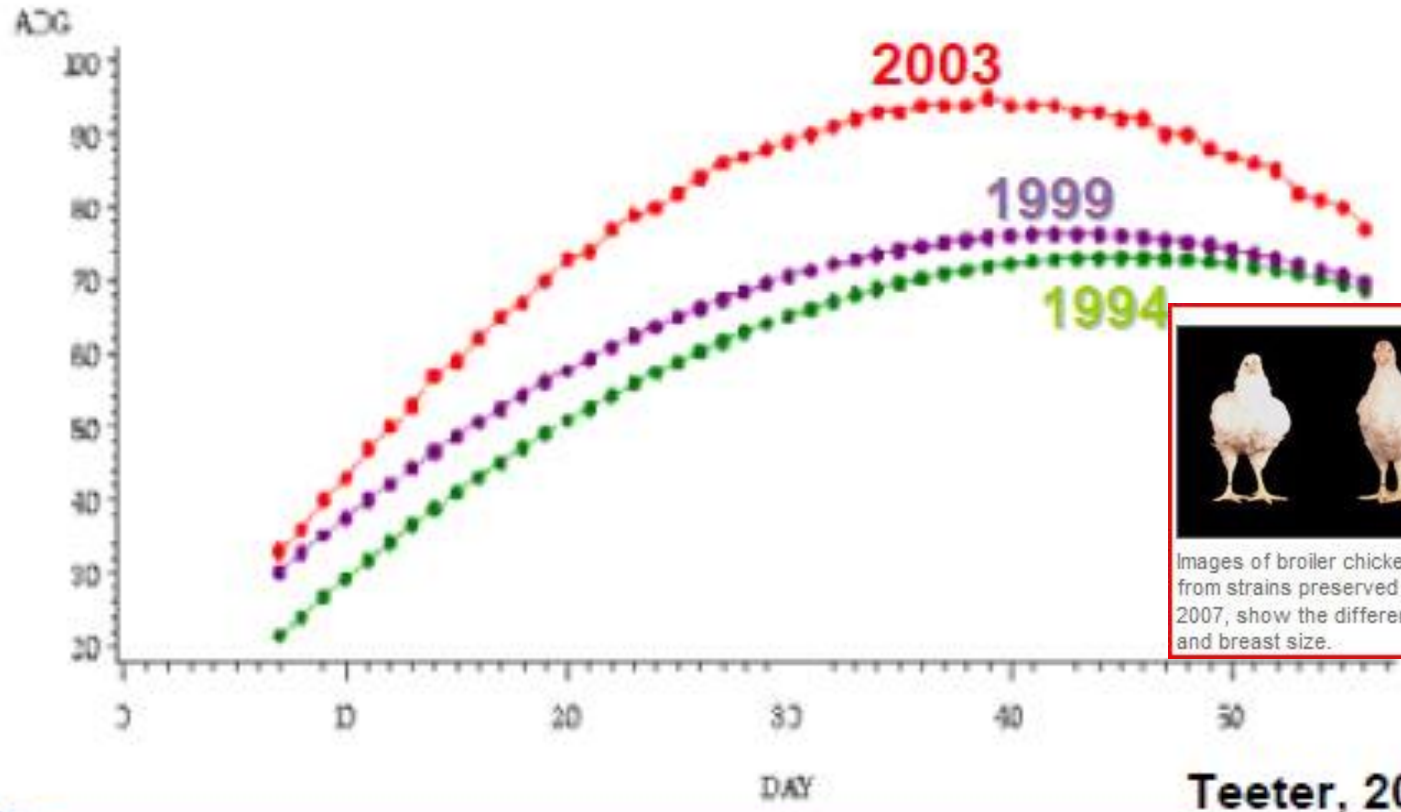


Ganancia Día Media



Images of broiler chickens at 55 days, raised from strains preserved in 1957, 1977 and 2007, show the difference in growth rate and breast size.

Teeter, 2004

Nutrición

Infraestructura

Mayores densidades..

Conventional houses	Environmental controlled houses	Broilers in cages
		
22 to 30 kg/m^2	34 to 43 kg/m^2	Up to 50 kg/m^2 in each level
		Four-tier cage → 200 kg/m^2

Infraestructura

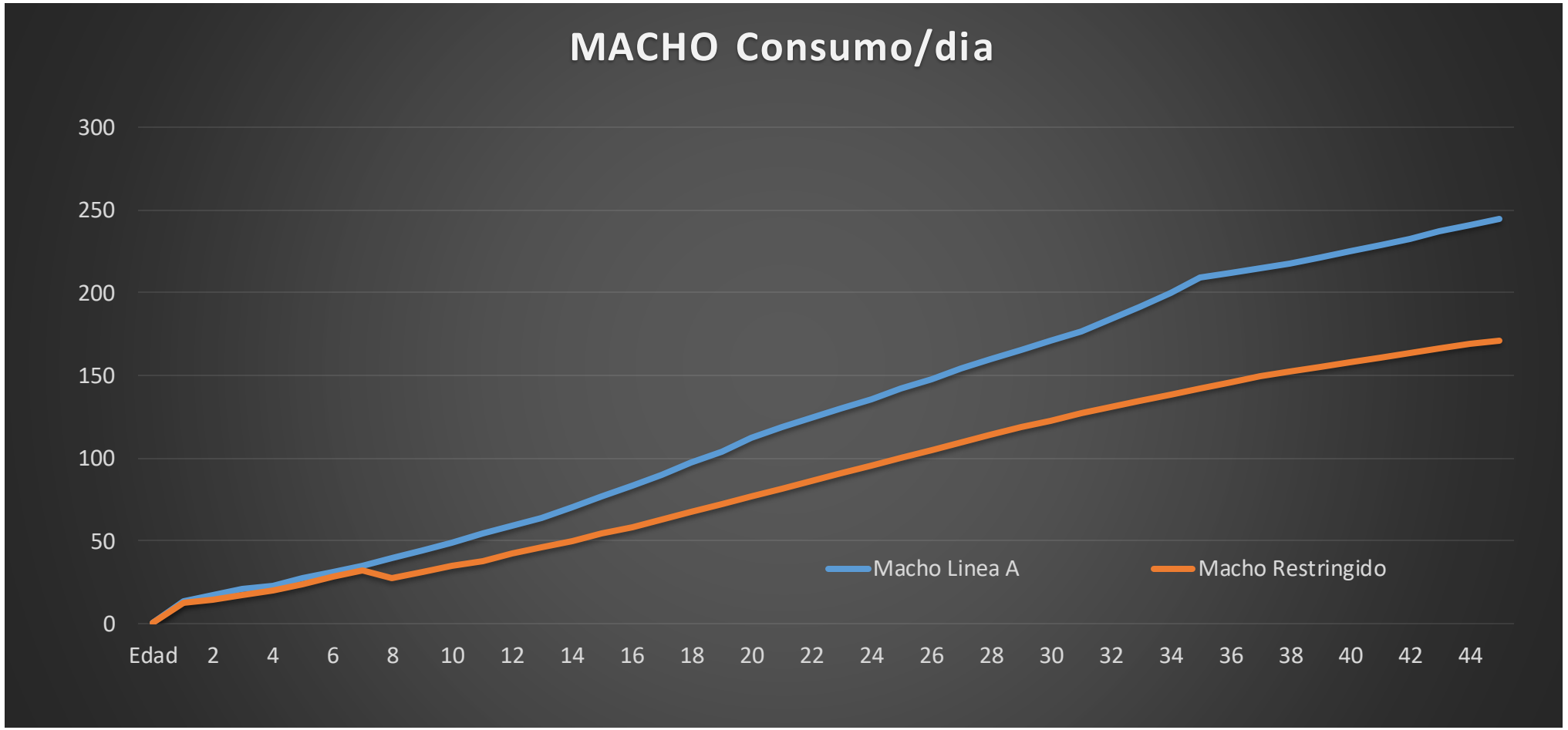
Grandes núcleos de producción.

Sources: http://ian.umces.edu; http://www.poultryhub.org; http://www.airphotona.com

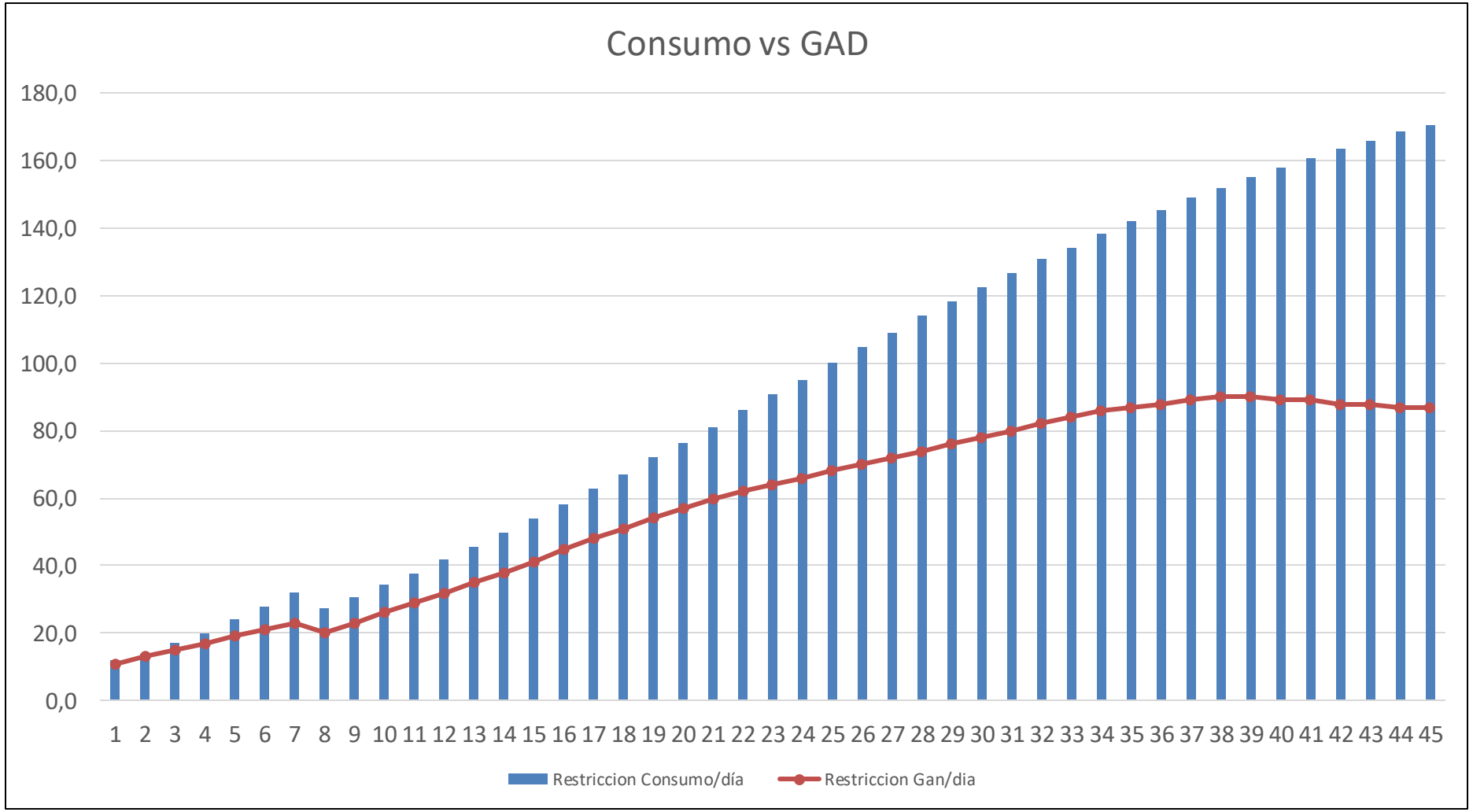
Genética y Nutrición (Guía de Desempeño)

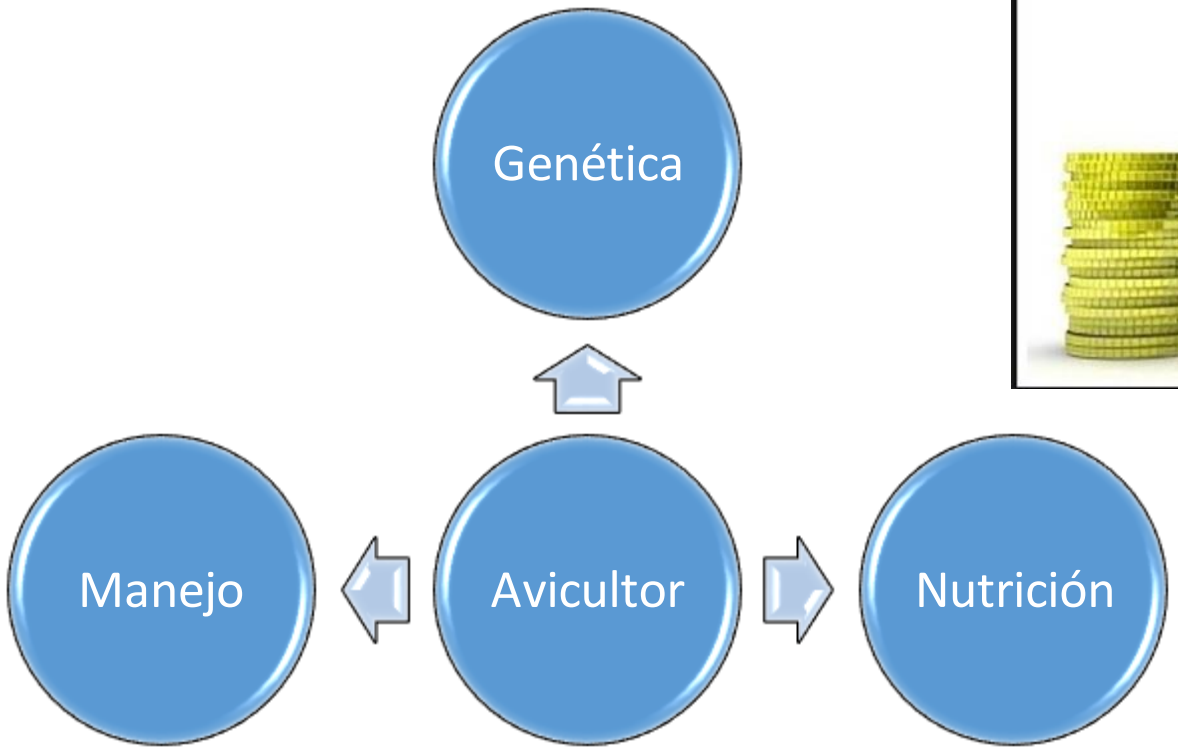
MACHOS						
Edad en dias	Peso para la edad (g)	Ganancia diaria (g)	Ganancia diaria promedio (g)	Conversión alimenticia acumulada	Consumo diario de alimento (g)	Consumo de alimento acumulado (g)
0	42	0				
1	56	14		0,232	13	13
2	72	16		0,417	17	30
3	89	17		0,573	21	51
4	109	20		0,679	23	74
5	131	22		0,771	27	101
6	157	26		0,841	31	132
7	**186**	**29**	**26,6**	**0,898**	**35**	**167**
8	217	32	27,1	0,949	39	206
9	250	33	27,8	1,000	44	250
10	286	36	28,6	1,046	49	299
11	324	38	29,5	1,089	54	353
12	368	43	30,6	1,121	59	412
13	416	48	32,0	1,144	64	476
14	**470**	**54**	**33,6**	**1,162**	**70**	**546**
15	528	58	35,2	1,180	77	623
16	590	62	36,9	1,197	83	706
17	656	66	38,6	1,213	90	796
18	727	71	40,4	1,228	97	893
19	803	76	42,3	1,242	104	997
20	884	81	44,2	1,255	112	1109
21	**971**	**87**	**46,2**	**1,265**	**119**	**1228**
22	1058	87	48,1	1,278	124	1352
23	1145	87	49,8	1,294	130	1482
24	1233	88	51,4	1,312	136	1618
25	1321	88	52,8	1,332	142	1760
26	1409	88	54,2	1,354	148	1908
27	1497	88	55,4	1,377	154	2062
28	**1585**	**88**	**56,6**	**1,402**	**160**	**2222**
29	1677	92	57,8	1,423	165	2387
30	1773	96	59,1	1,443	171	2558
31	1873	100	60,4	1,460	177	2735
32	1978	105	61,8	1,476	184	2919
33	2085	107	63,2	1,492	192	3111
34	2192	107	64,5	1,510	200	3311
35	**2299**	**107**	**65,7**	**1,531**	**209**	**3520**
36	2406	107	66,8	1,551	212	3732
37	2513	107	67,9	1,571	215	3947
38	2620	107	68,9	1,590	218	4165
39	2726	106	69,9	1,609	221	4386
40	2832	106	70,8	1,628	225	4611
41	2938	106	71,7	1,647	229	4840
42	**3044**	**106**	**72,5**	**1,667**	**233**	**5073**
43	3150	106	73,3	1,686	237	5310
44	3256	106	74,0	1,705	241	5551
45	3362	106	74,7	1,724	245	5796

Genética y Nutrición (Guía de Consumo)



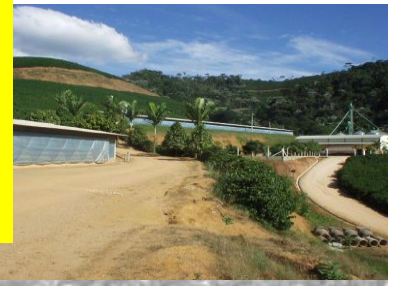
Genética y Nutrición (Guía Desempeño)




Genética
Manejo
Avicultor
Nutrición

“Una cadena es tan fuerte como su eslabón mas débil”

Como tener aves mas productivas ?



Jornada Avícola
Eje Cafetero y Norte del Valle

Genetica

Ubicación y control de transito

Educación Continuada

Limpieza y Desinfección

Nutrición

Infraestructura

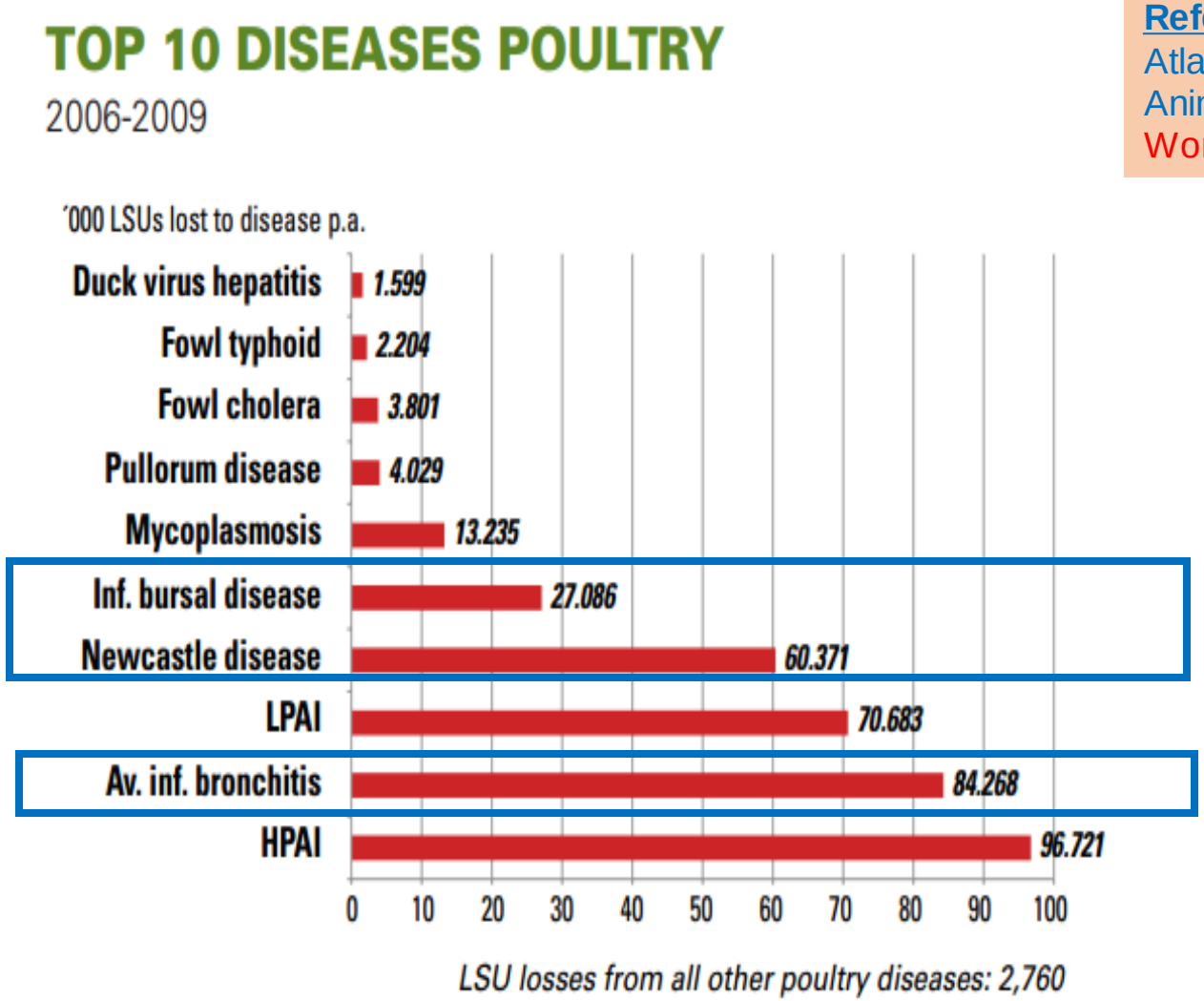
Plan de Contingencia

VACUNACION

Registros de Resultados

MONITOREO

Newcastle y Gumboro



Reference: World Livestock Disease Atlas:" A Quantitative Analysis of Global Animal Health Data (2006-2009)". The World Bank. 2011.

1 Poultry bird = 0,015LSU (Livestock Unit)

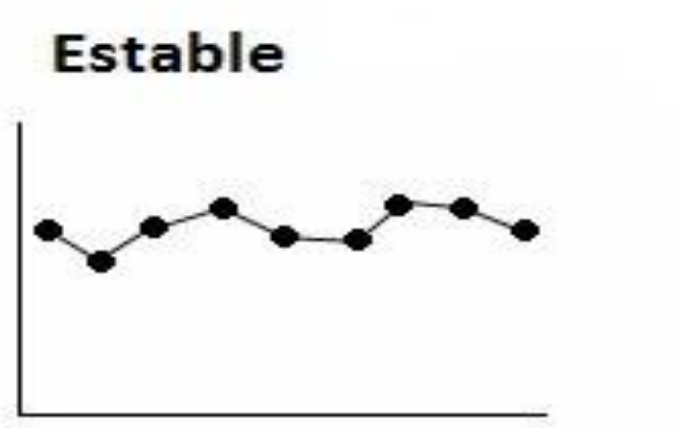
EFICACIA DE LAS VACUNAS

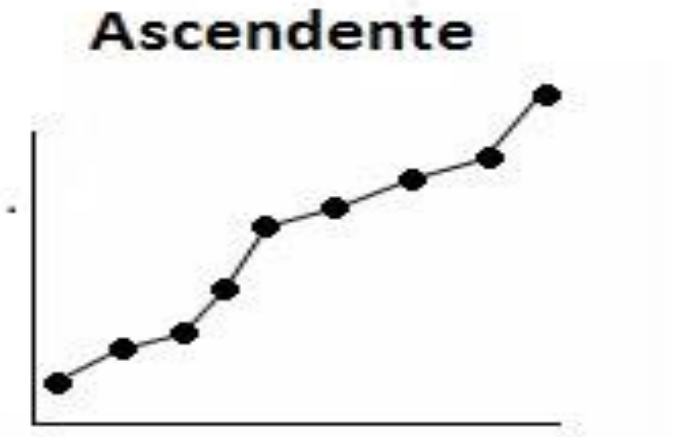
Application of H120 on day of hatch, field trial

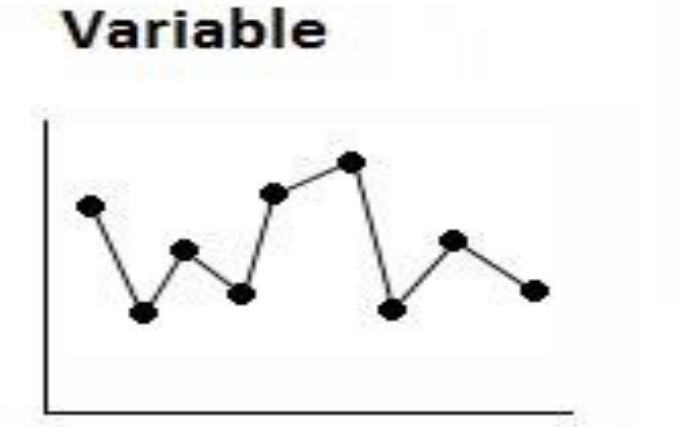
Vaccine application	% of protection against M41 after		
	2 weeks	3 weeks	4 weeks
Eye drop	100	100	100
In rings on farm	< 25	50	100
In chicken box on farm	Nd	50	100
Automatic spray at hatchery	93	97	Nd
Handspray at hatchery	32	86	Nd

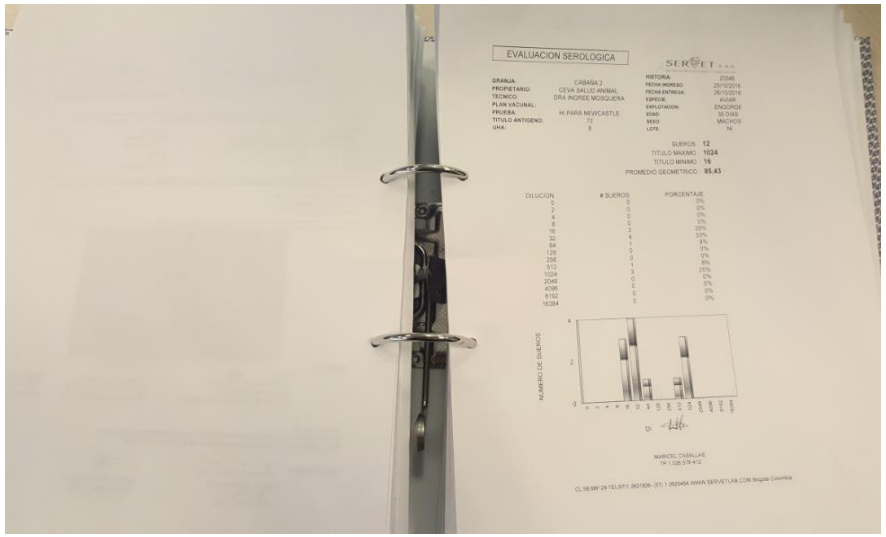
J.J. (Sjaak) de Wit, DVM, PhD
GD Deventer, the Netherlands

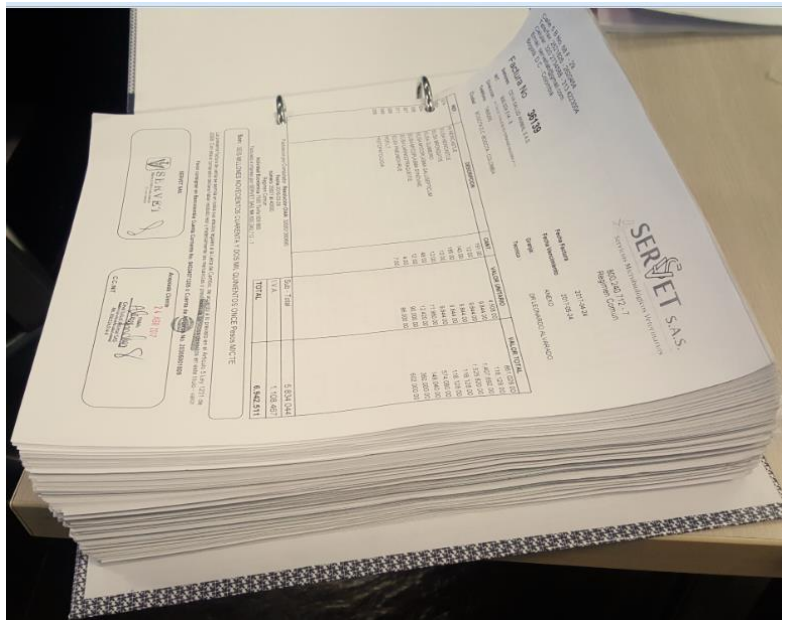
Por que tener una línea base

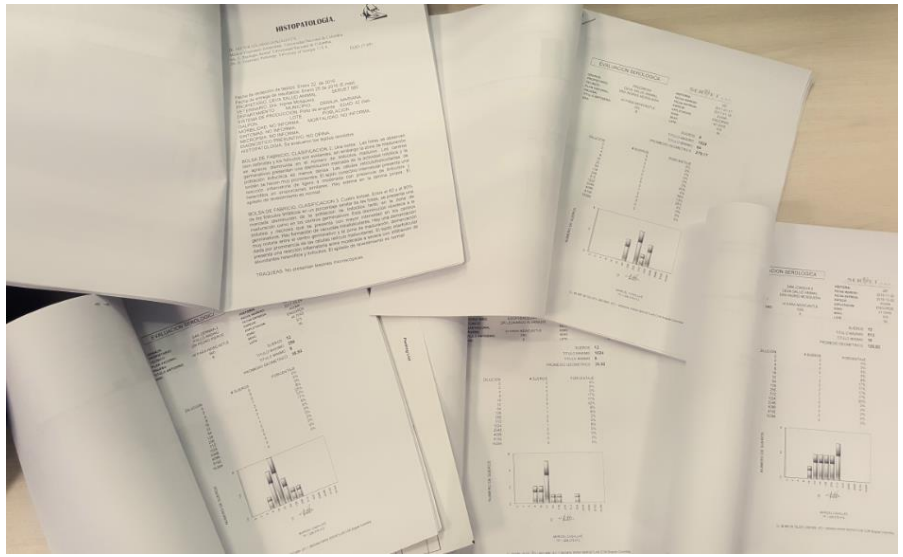







EVALUACION SEROLOGICA
SERVET S.A.S.
GRANJA: CABAÑA 2
PROPIETARIO: CEVA SALUD ANIMAL
TECNICO: DRA INGREE MOSQUERA
PLAN VACUNAL:
PRUEBA: HI PARA NEWCASTLE
TITULO ANTIGENO: 70
UHA: 8
HISTORIA: 27246
FECHA INGRESO: 25/10/2016
FECHA ENTREGA: 26/10/2016
ESPECIE: AVIAR
EXPLOTACION: ENGORDE
EDAD: 35 DIAS
SEXO: MACHOS
LOTE: NI
SUEROS 12
TITULO MAXIMO 1024
TITULO MINIMO 16
PROMEDIO GEOMETRICO 85,43
DILUCION
SUEROS
PORCENTAJE
NUMERO DE SUEROS
MARCEL CABALLAS
TP: 1.026.579.412


SERVET S.A.S.

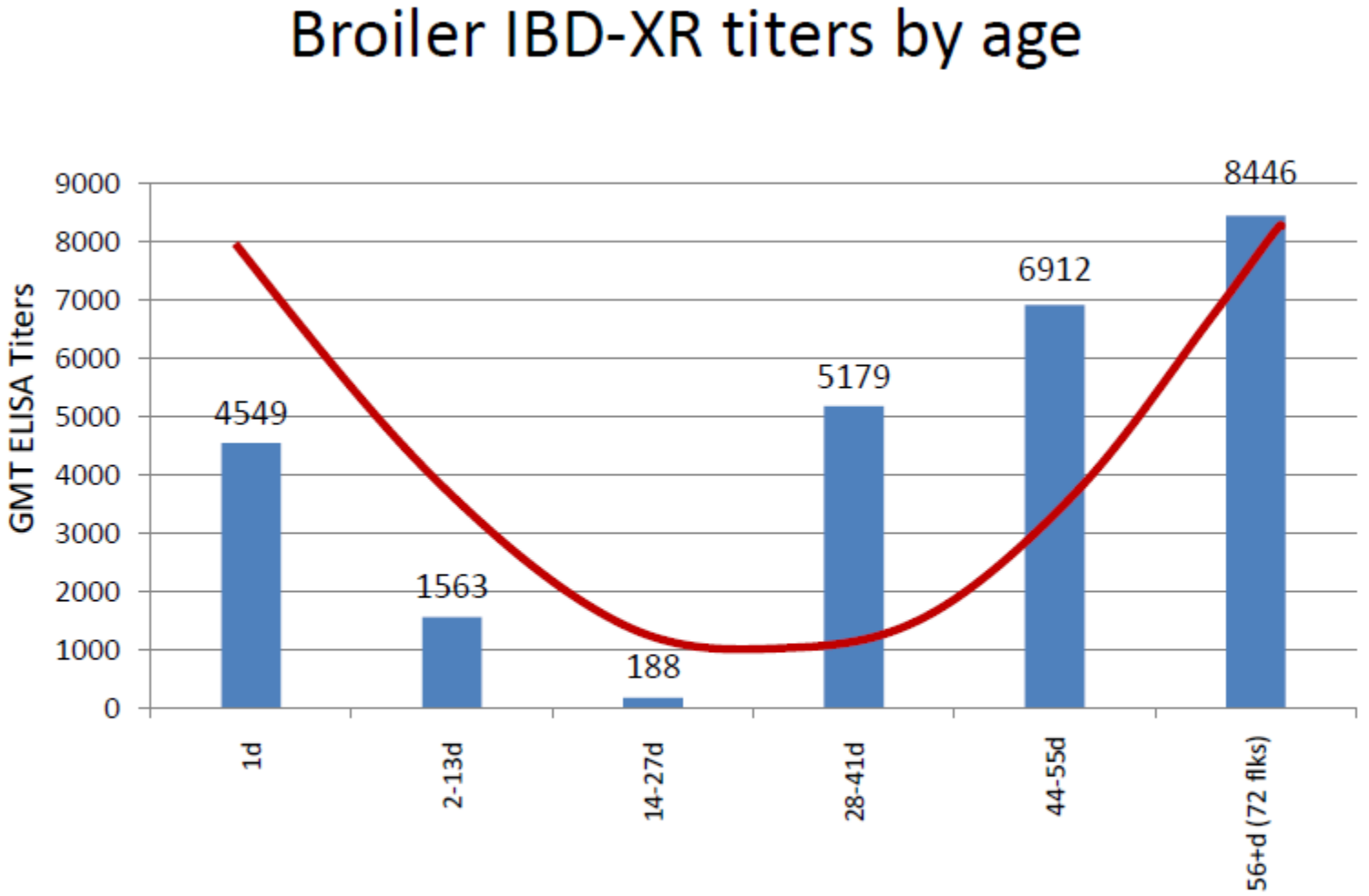

HISTOPATOLOGIA.
EVALUACION SEROLOGICA


FENAVI
XVII
Jornada Avícola
Eje Cafetero y Norte del Valle

Por que tener una línea base. (Serología)

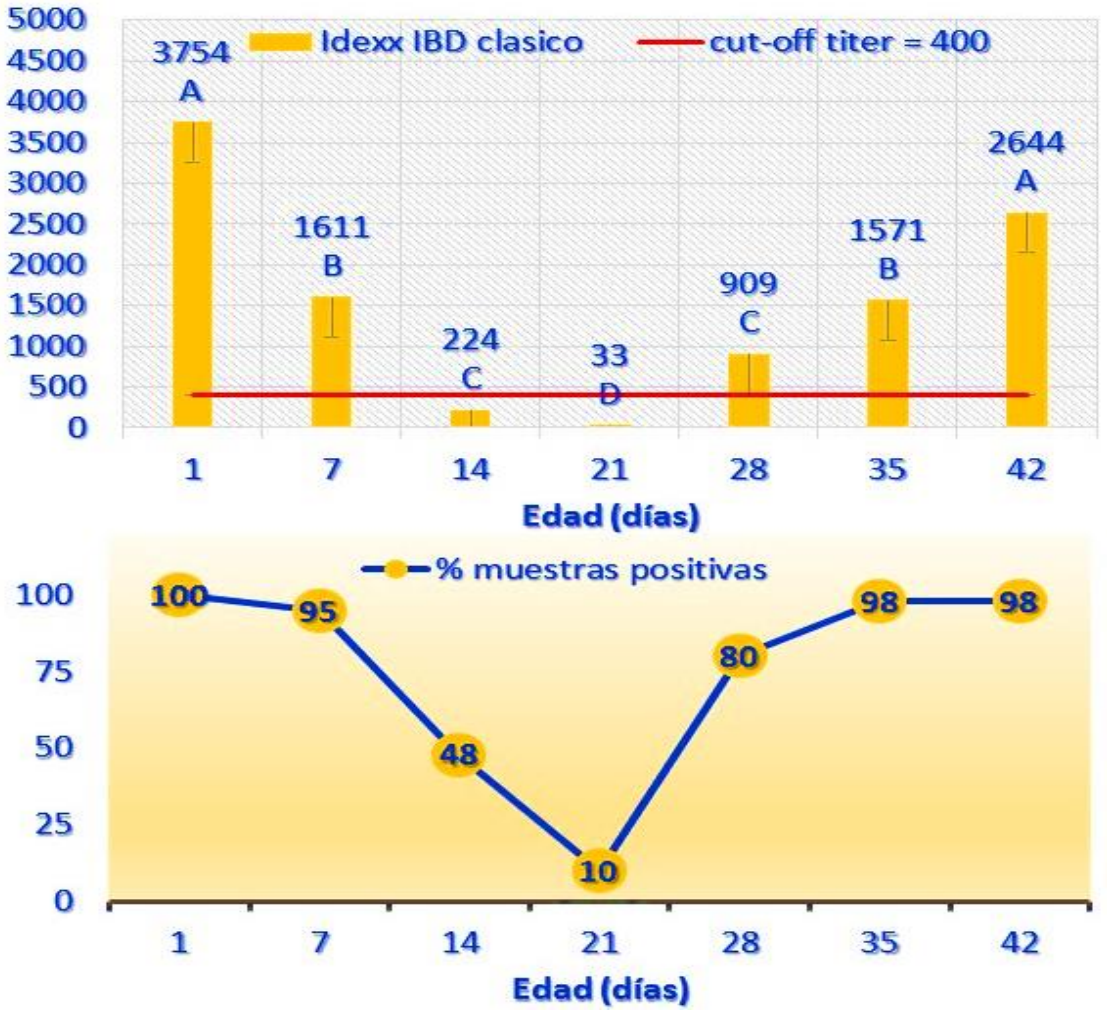
- Evaluar administración vacuna / eficacia
- Monitoreo de Enfermedades (Vigilancia Epidemiológica)
- Apoyo en diagnostico

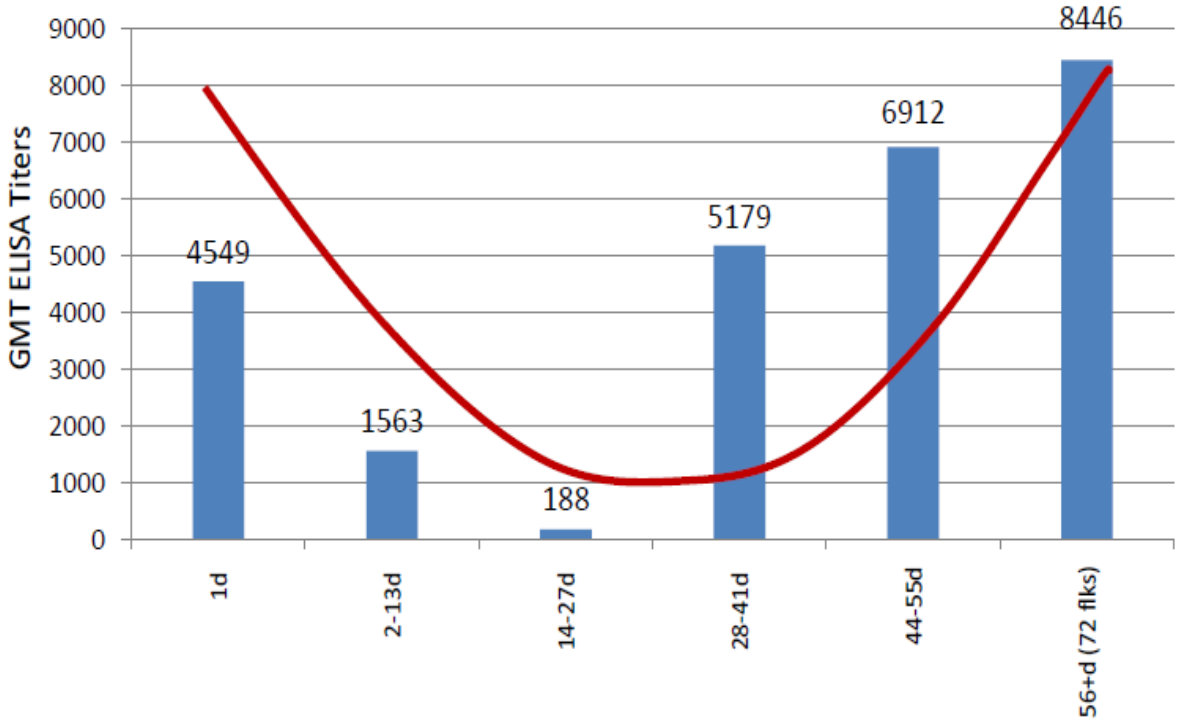
Evaluar Aplicación / Eficacia



GA Poultry Laboratory Network, Oakwood, GA

Evaluar administración vacuna / eficacia

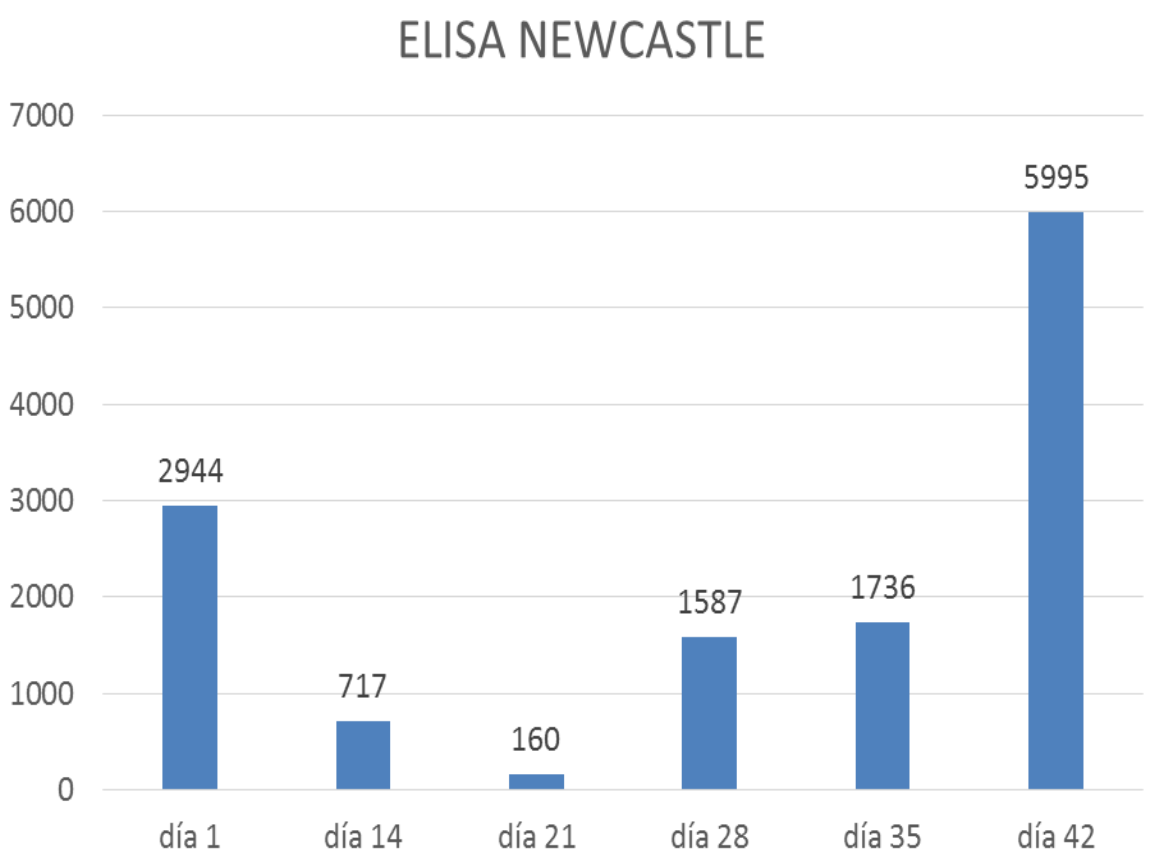


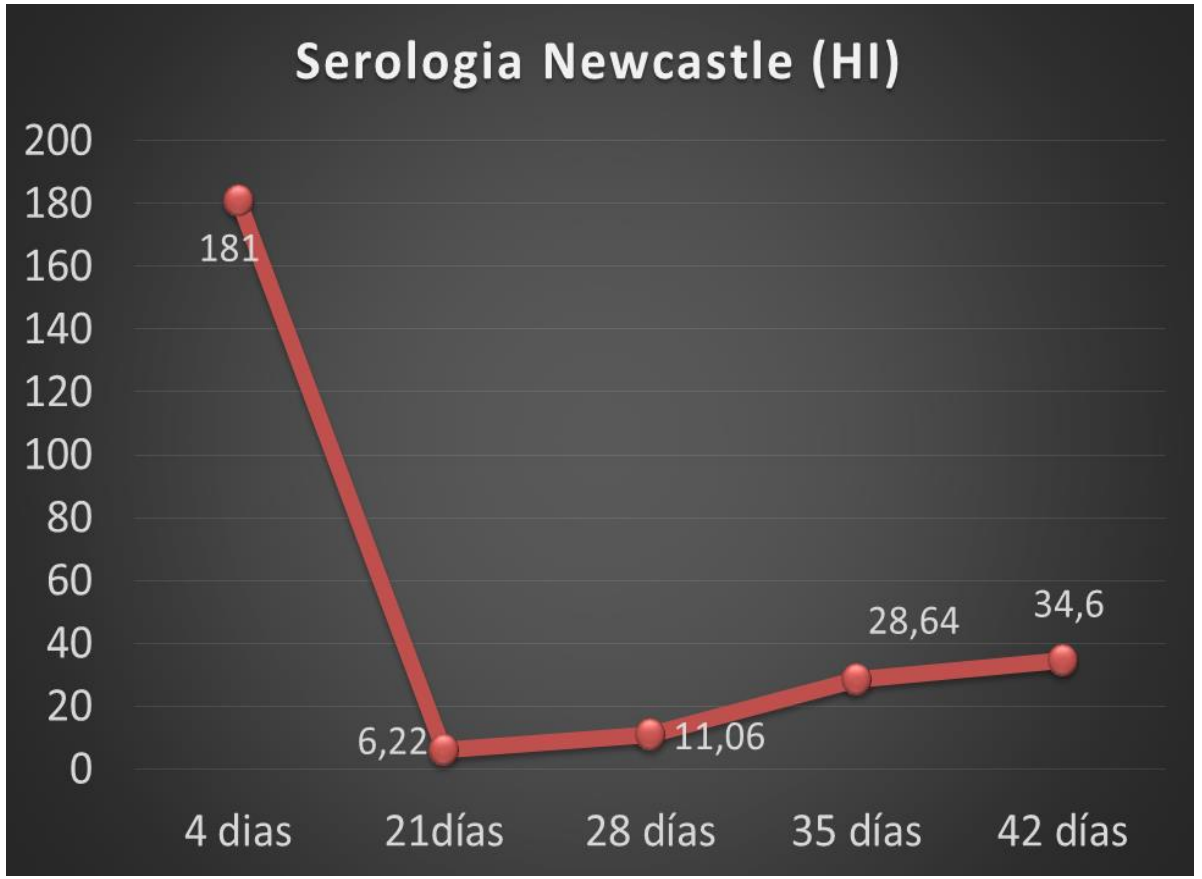


GUMBORO IDEXX CLASICO

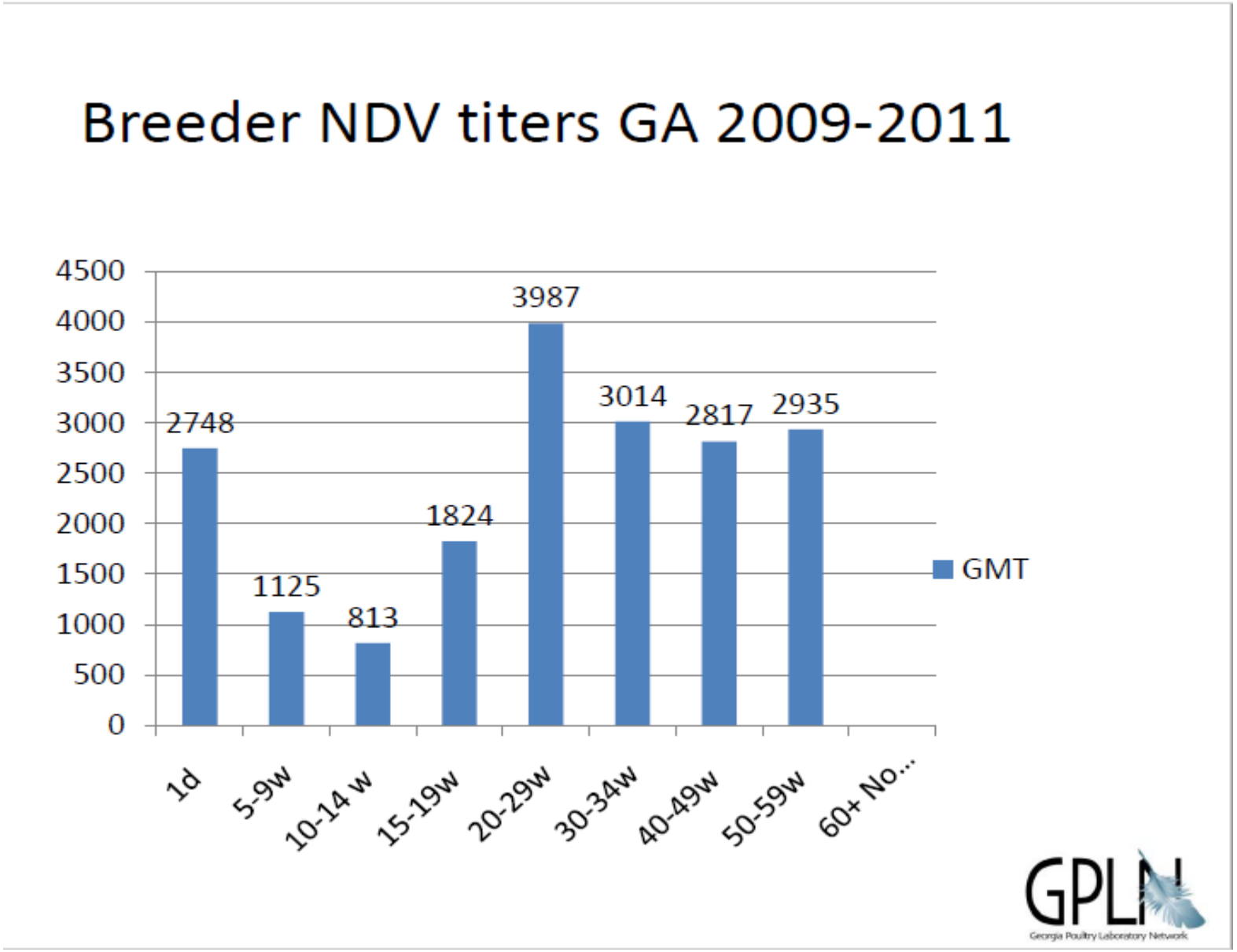
GUMBORO IDEXX XR

Evaluar administración vacuna / eficacia





Evaluar administración vacuna / eficacia



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Eje Cafetero y Norte del Valle

Evaluar administración vacuna / eficacia

How can ELISA monitoring for titers improve your vaccination results?

by Dr Bart van Leerdam, BioChek BV, Burg. Bracklaan 57, 2811 BP Reeuwijk, The Netherlands.

This brings us to a very important point, when conducting ELISA monitoring; one has to be prepared to take proper action on results.

Although these are general guidelines applicable to most live and inactivated vaccine applications, one should keep in mind that application

bility of titers during the production period of breeders and layers after inactivated vaccination.

Good priming (positive and uni-

International Hatchery Practice — Volume 23 Number 2

Evaluar administración vacuna / eficacia

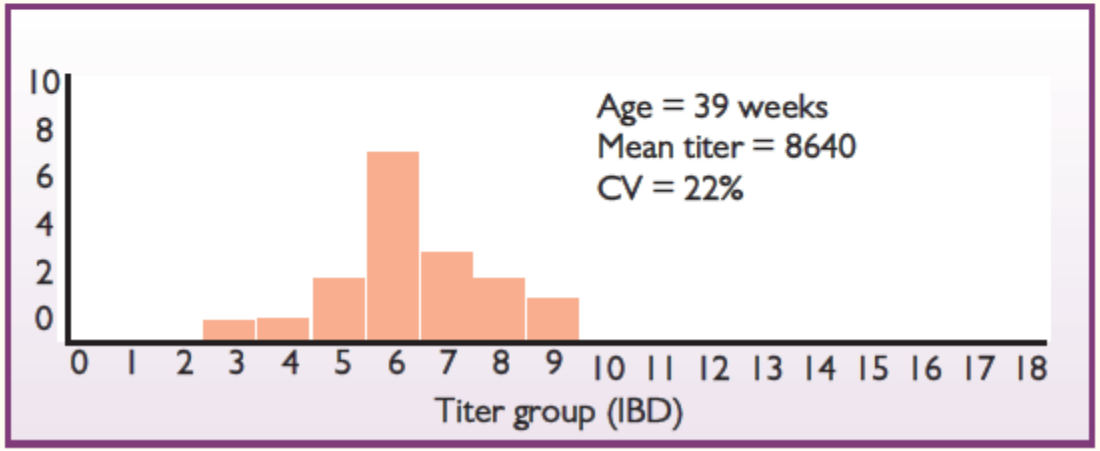
Case history: Inactivated vaccination of broiler breeders

Broiler breeder flocks were vaccinated at 18 weeks with inactivated ND+IB+IBD vaccine. ELISA results at 39 weeks revealed some major differences between flocks. Throughout most of the year, the ELISA results were good, until during the summer holiday when the results began to show suddenly very poor and non-uniform titers.

Further investigation revealed that during the summer holiday the regular vaccination crew was replaced by a temporary vaccination crew, which explained the poor quality of vaccination during summer holidays. The flocks vaccinated by the regular vaccination crew had high and uniform (CV<40%) titers, whereas other flocks vaccinated by a temporary holiday crew, revealed very poor and non-uniform (CV>65%) titers. The results are shown below.

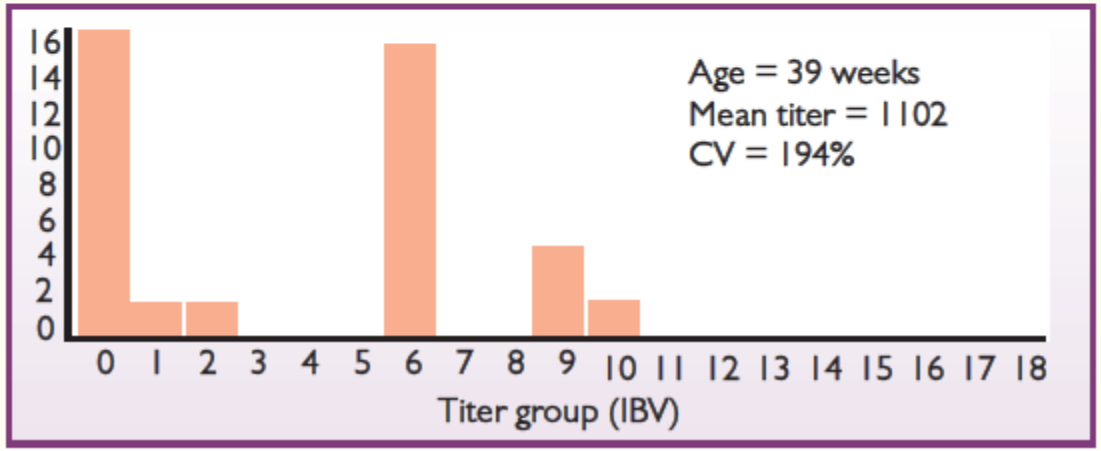
Good vaccination: Normal vaccination crew

Infectious bursal disease



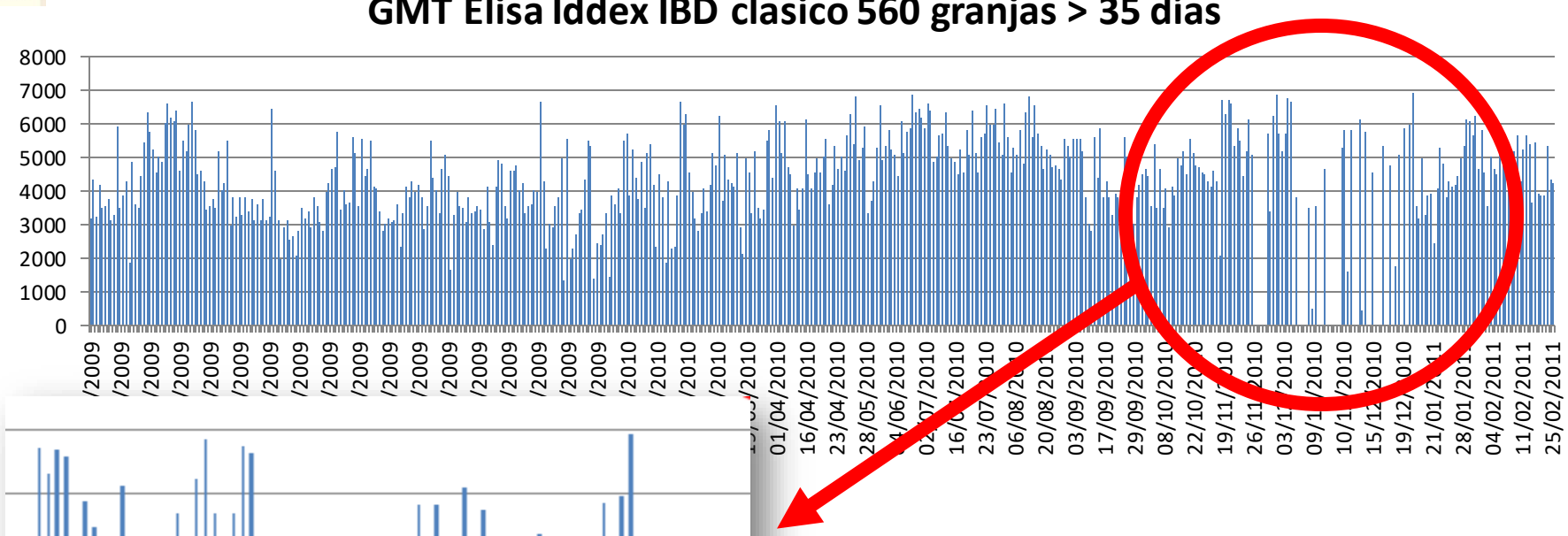
Poor vaccination: Holiday replacement crew

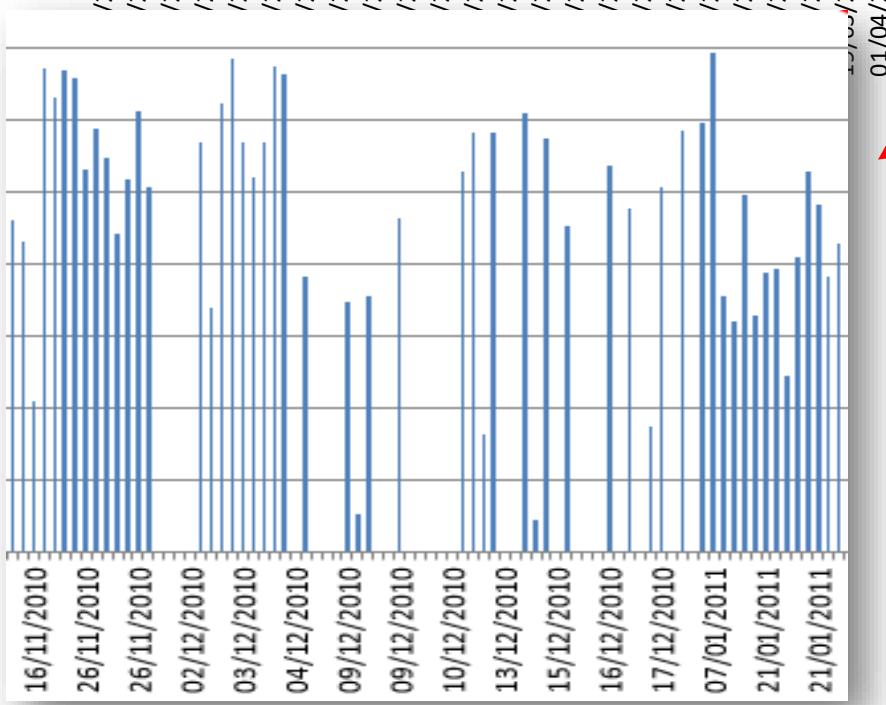
Infectious bursal disease



International Hatchery Practice— Volume 23 Number 2

Evaluar administración vacuna / eficacia

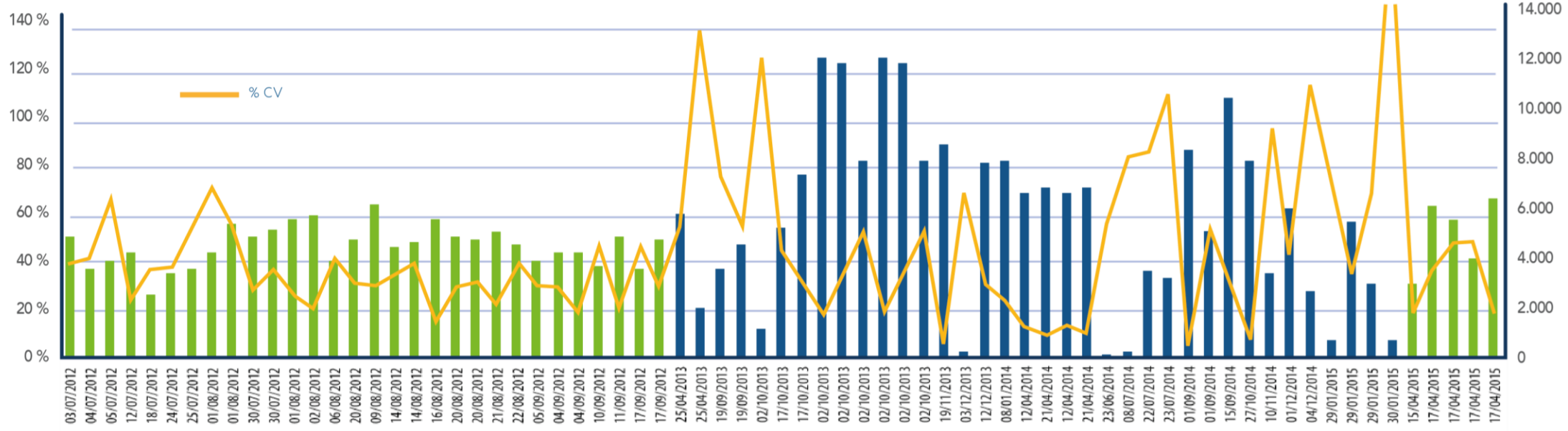




- 1 mes vacunación a campo
- 58 lotes
- 28 negativos a los 35 días **(48%)**

Evaluar administración vacuna / eficacia

Monitoreo de Campo – Serología IBDV: España (2012 – 2015)

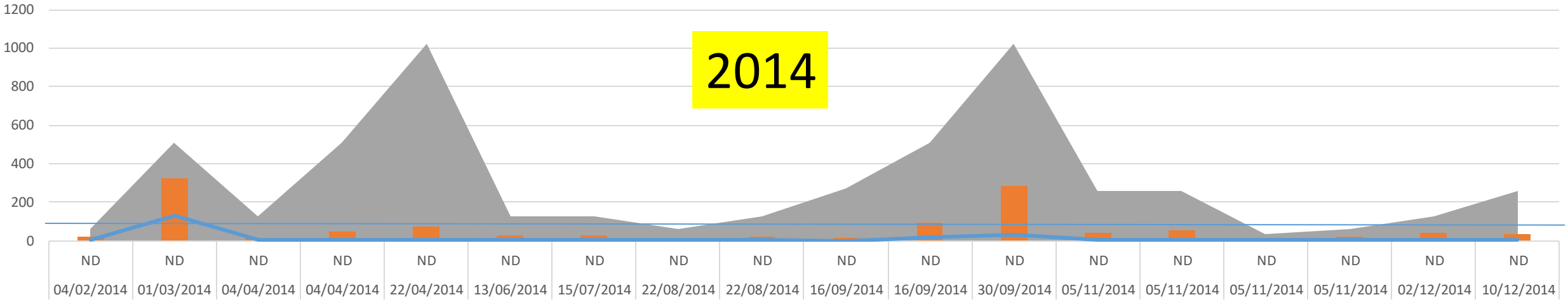


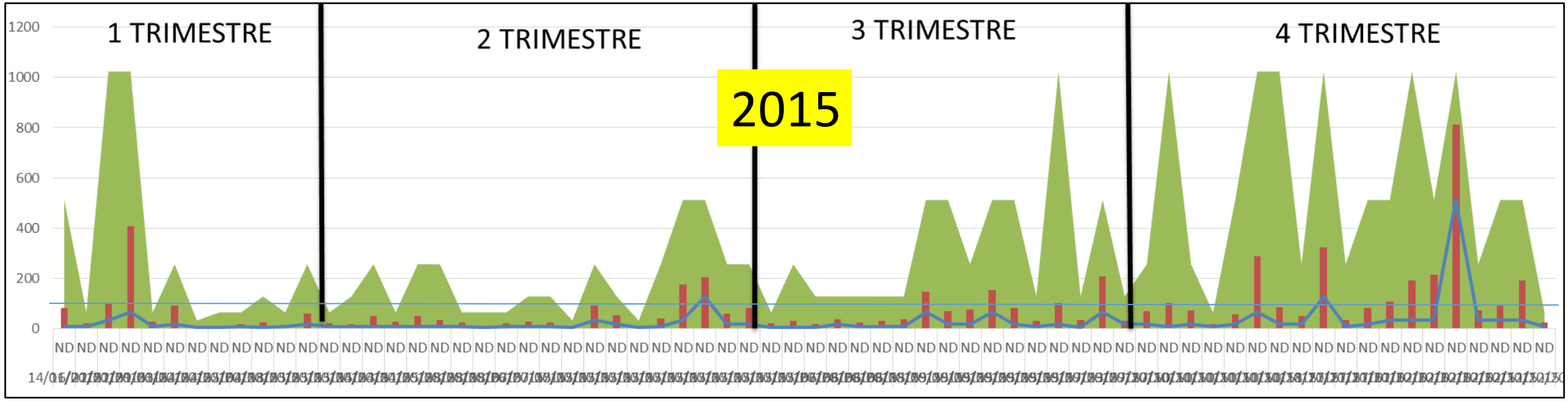
35 Lotes vacunados en Incubadora IBD – CV: 17%

36 Lotes vacunados en Campo IBD – CV: 61%

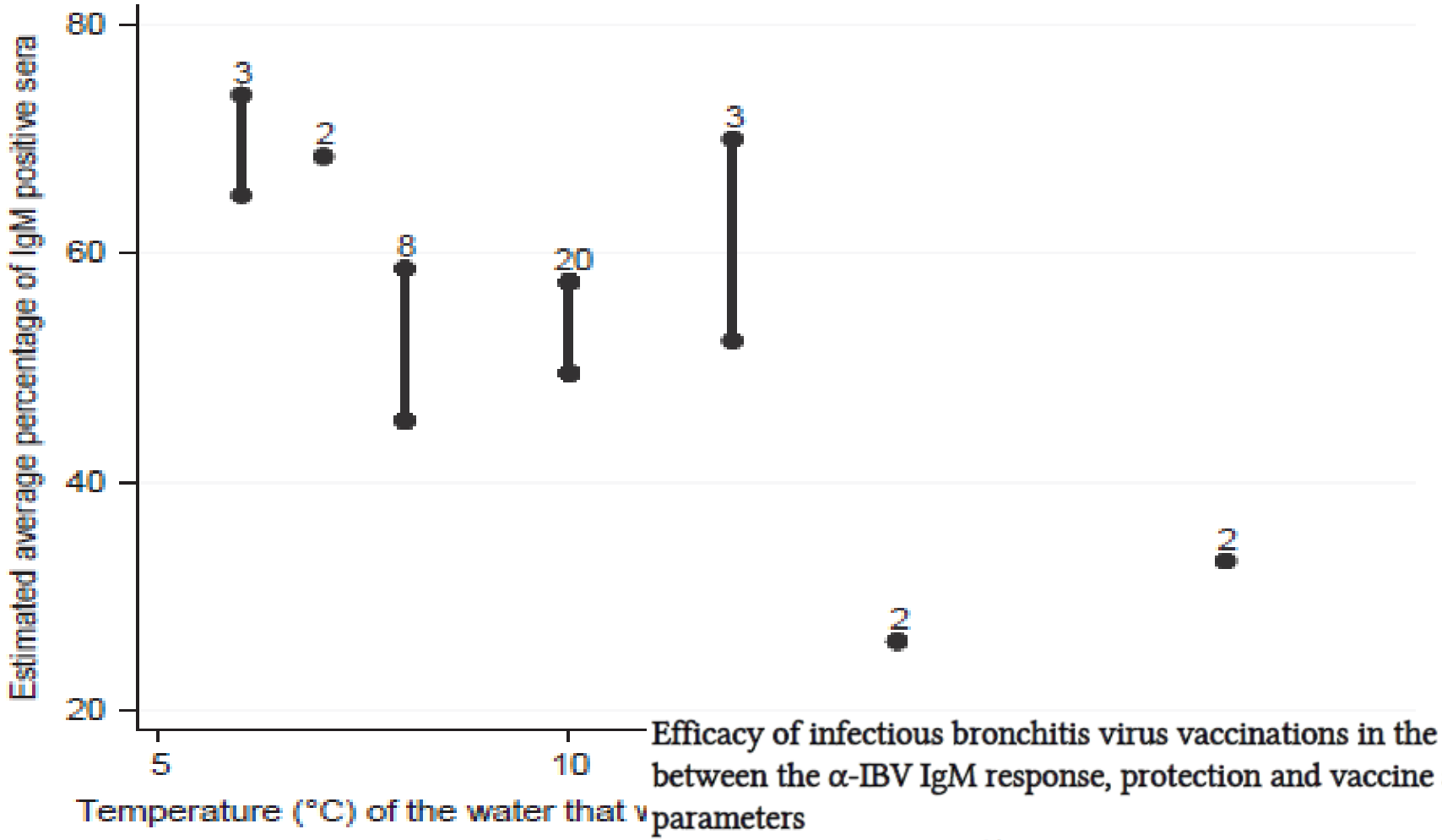
FENAVI XVII Jornada Avícola Eje Cafetero y Norte del Valle

Vigilancia Epidemiológica



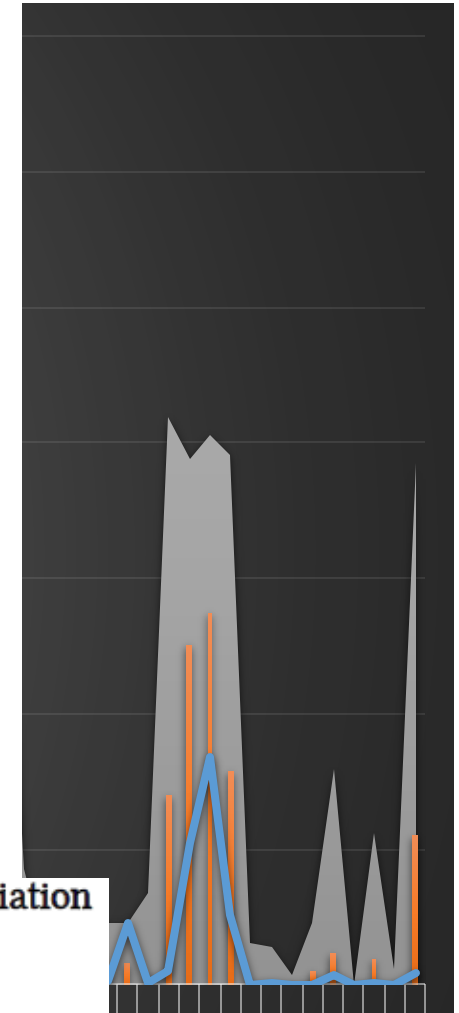


Vigilancia Epidemiológica. Bronquitis

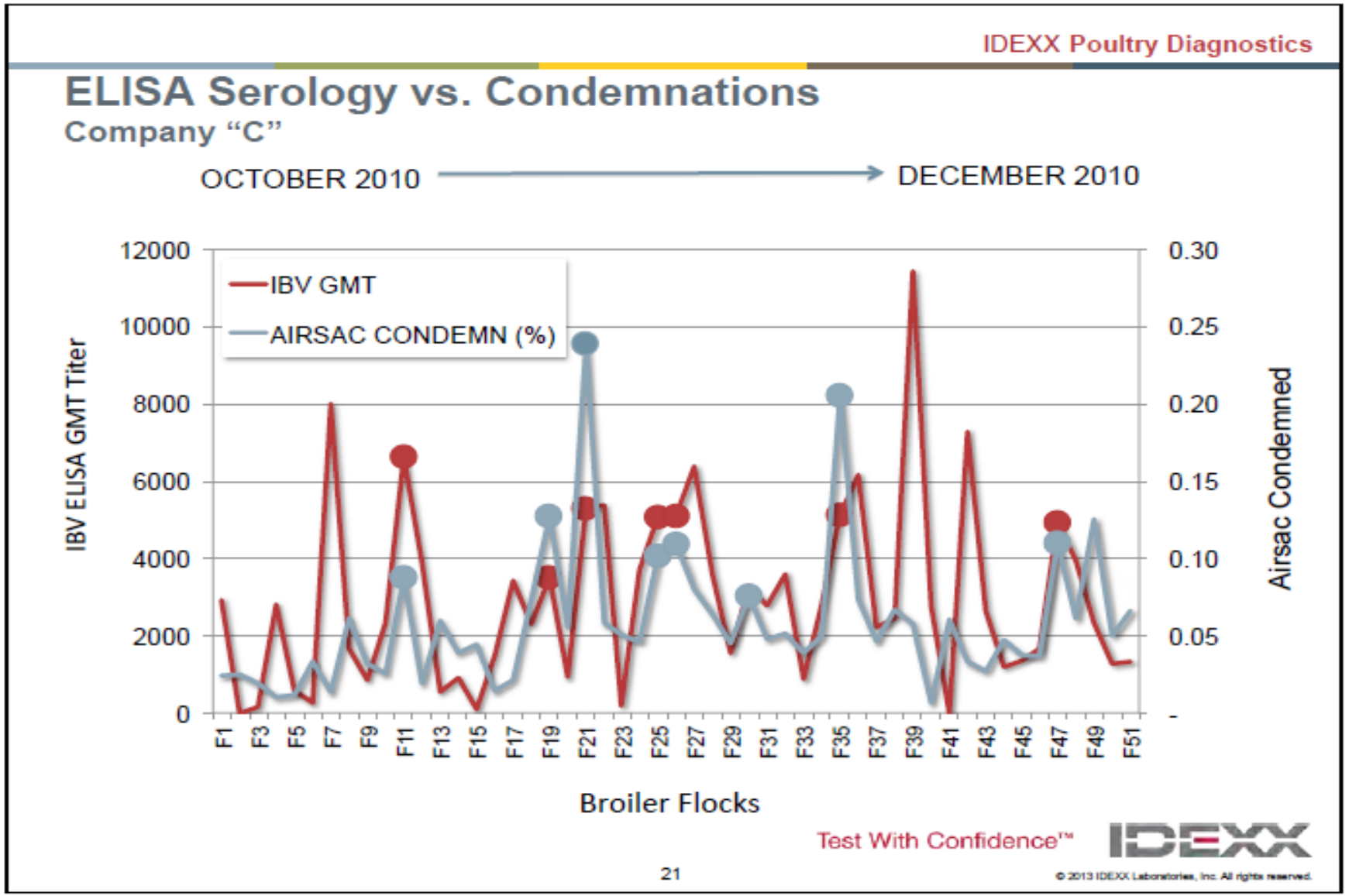


Efficacy of infectious bronchitis virus vaccinations in the field: association between the α-IBV IgM response, protection and vaccine application parameters

J. J. De Wit [a]; W. A. J. M. Swart [a];T. H. F. Fabri [a]
[a] GD (Animal Health Service), Deventer, the Netherlands



CORRELACION LINAS BASE vs OTROS DATOS



% DECOMISOS

GMT BRONQUITIS

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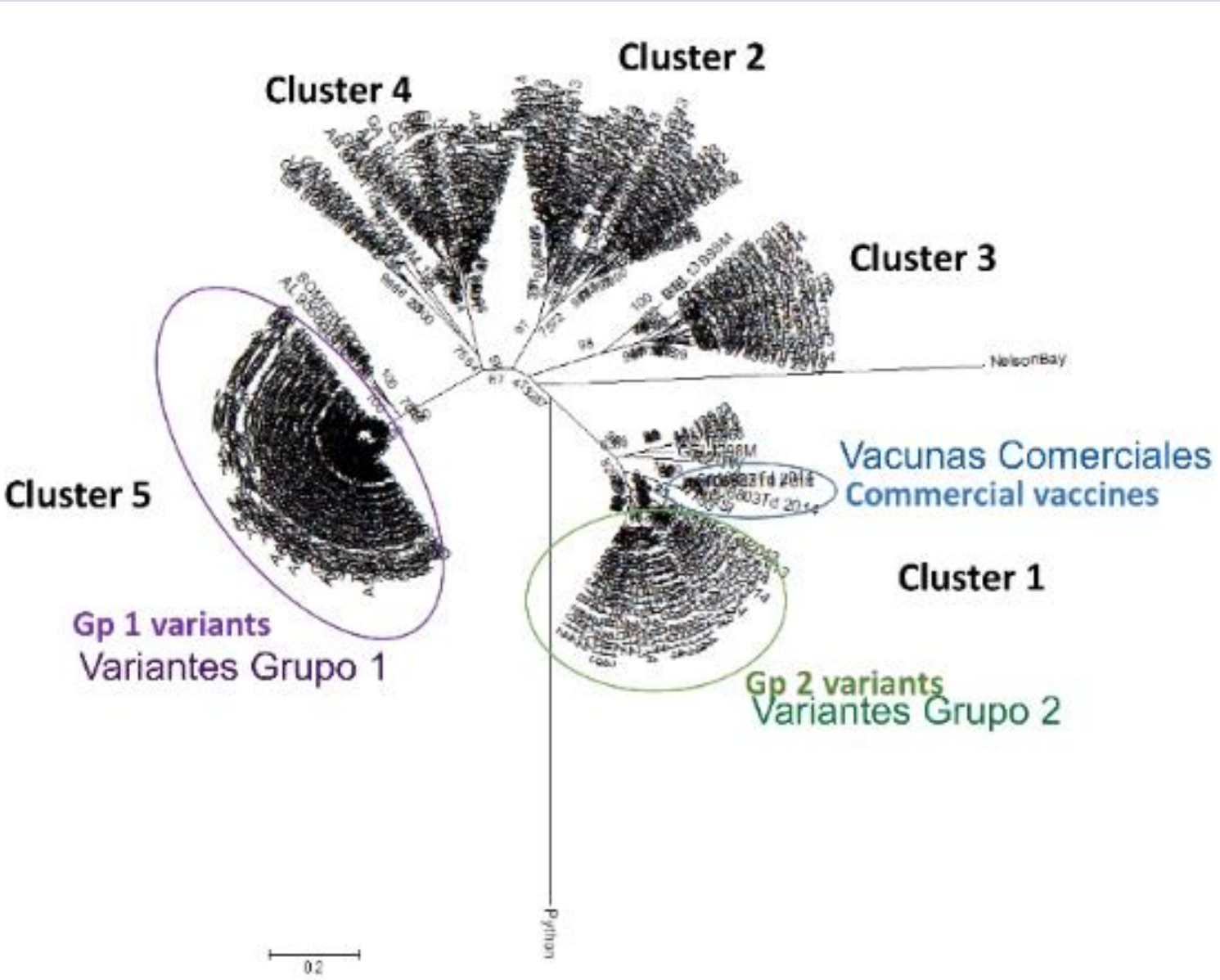
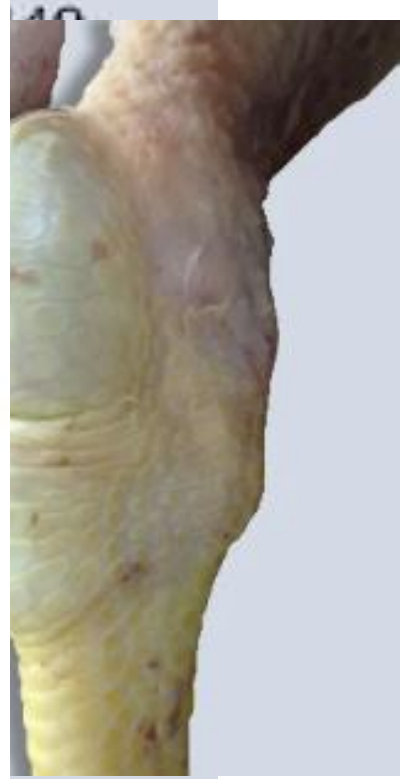
Eje Cafetero y Norte del Valle

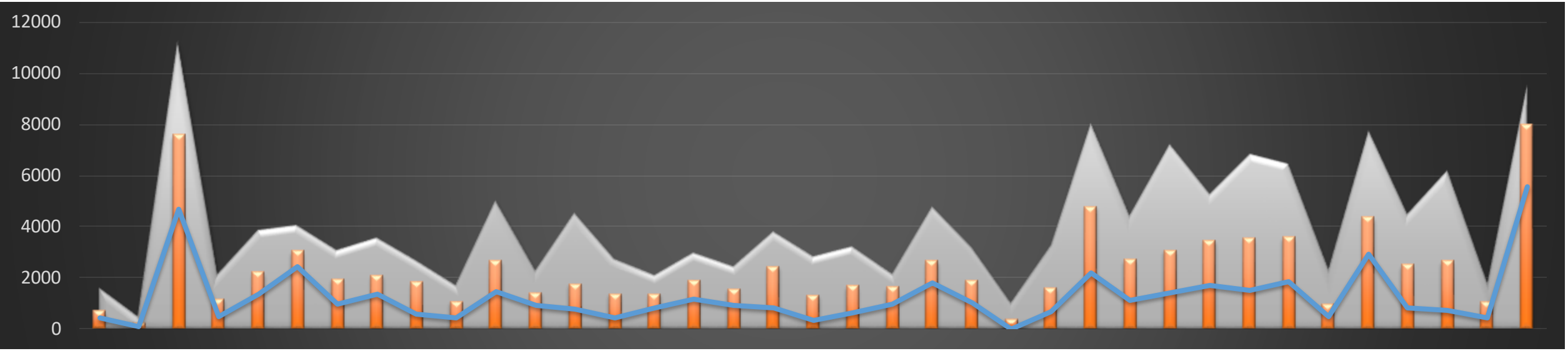
Vigilancia Epidemiológica (Chile 2014)

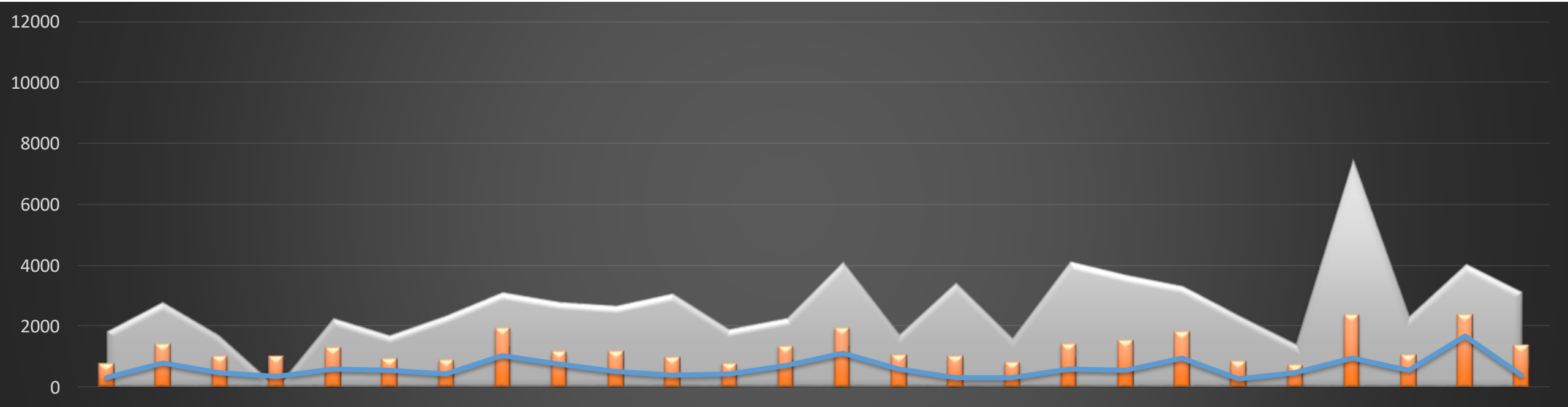




Guillermo Zabala. Scientific Forum. Ceva.Paris 2017

Comparación entre Zonas. Gumboro.





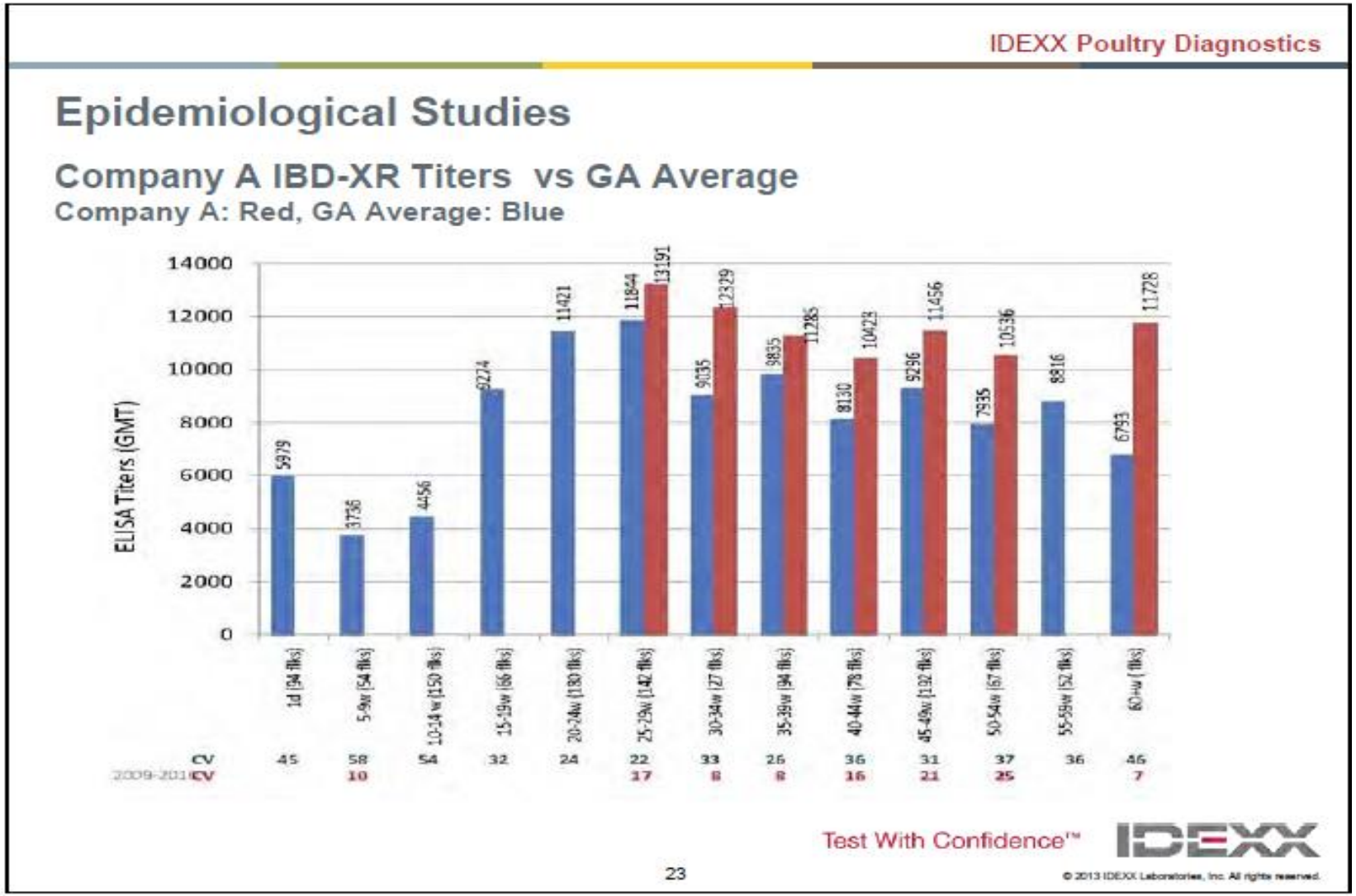
LINES BASE DE REFERENCIA

BIOCHEK VACCINATION BASELINES BROILERS

Titer values may vary according to age and type of bird , vaccine type, vaccination program, and other factors such as placement programs. You may find different results under different circumstances.

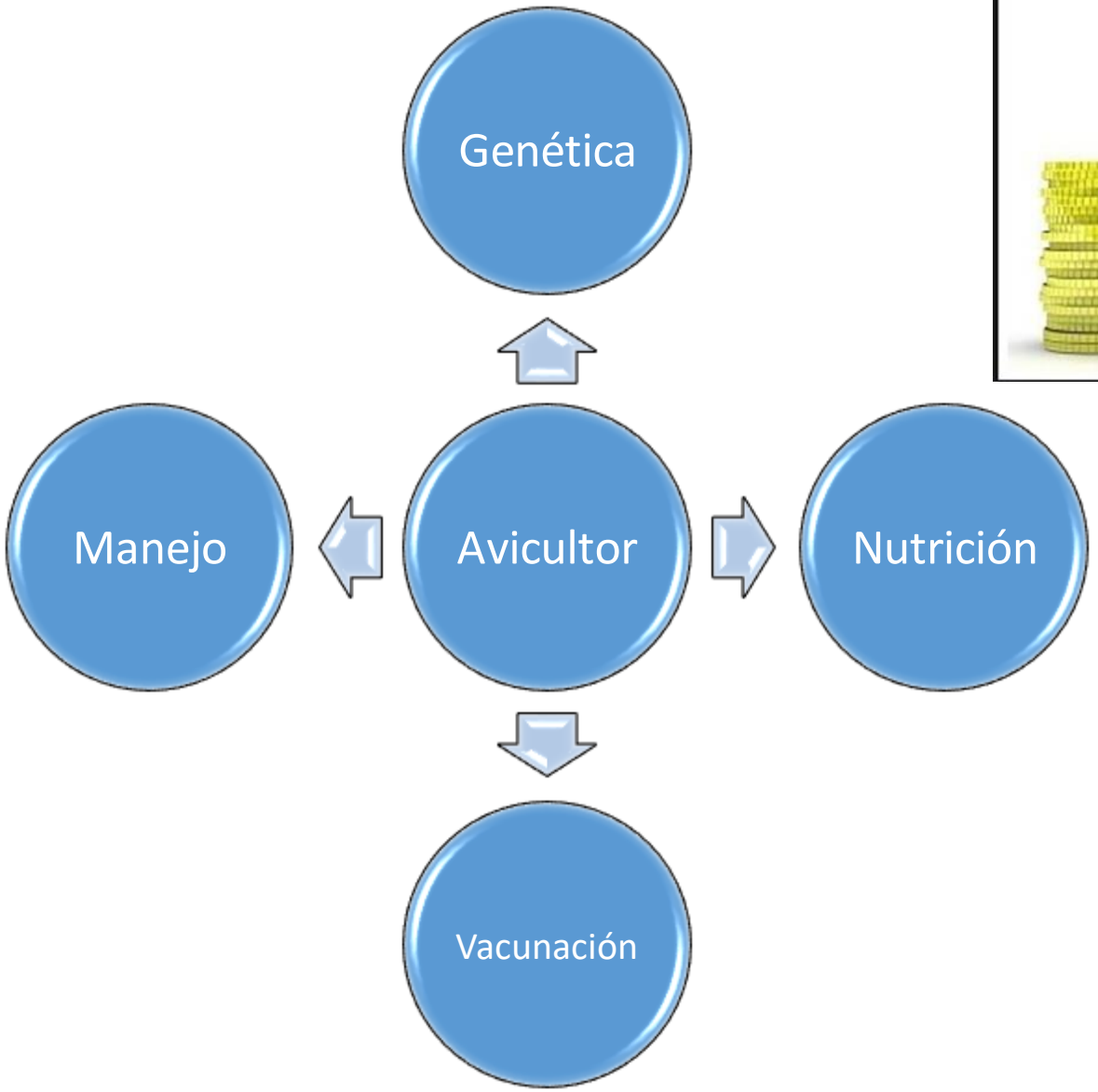
TEST	VACCINE TYPE	MEAN TITER RANGE AT PROCESSING (35D- 45D)	SUSPECT TITER INFECTION
IBV	live, 1x (H120/mild Mass, Arkansas, DE072)	300 - 1 500	> 3 000
	live, 1x (MA5, IB Primer)	1 000 - 2 000	> 4 000
	live, 2x (H120)	1 000 - 2 000	> 4 000
	live, 2x (MA5, IB Primer)	1 000 - 4 000	> 6 000
	live, 2x (H120 + 4/91. or H120 + CR88)	1 000 - 6 000	> 9 000
NDV	live , C2 strain, VG/GA, Avinew, Ulster NDW, VH	1 000 - 4 000	
	live, 2x Dr. Water (Clone 30, LaSota)	2 000 - 5 000	
	live, 2x Spray (Clone 30, NDW, LaSota)	4 000 - 8 000	
	Inact . 01D + 2x Live LaSota	8 000 - 12 000	
	r-HVT/NDV (in Ovo or S.C. 01D)	500 - 1 500 (10 – 50% Pos)	> 3000 (100% Pos)

LINES BASE DE REFERENCIA



REFERENCIA

COMPAÑÍA A


Genética
Manejo
Avicultor
Nutrición
Vacunación

CONCLUSIONES

- Los programas de vacunación deben ser monitoreados a través de pruebas serológicas que permiten evaluar tanto la calidad de la aplicación como la respuesta a la vacuna.

- Permite realizar vigilancia epidemiológica.

- Provee información que permite anticiparse a posibles brotes, evaluar tendencias y comparar planes vacunales.

CONCLUSIONES

- Ayuda a monitorear el retorno de la inversión de los programas de Bioseguridad.

- Permite comparar nuevos datos con el histórico de la empresa.