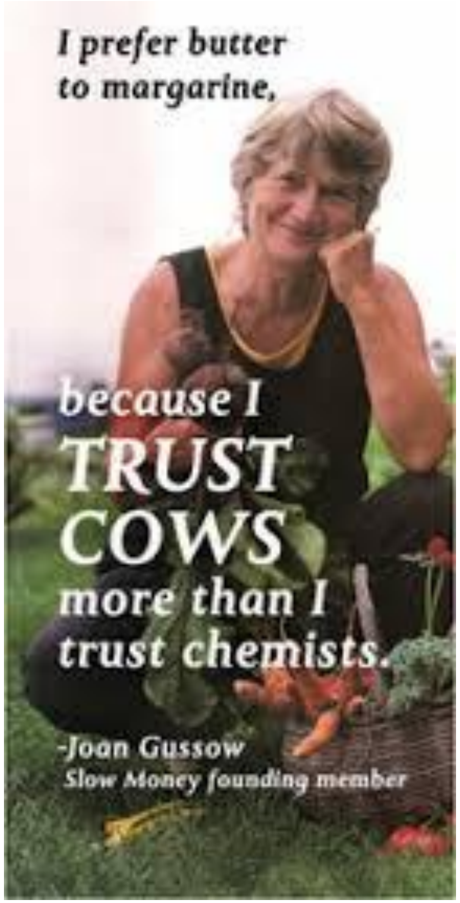
Lecherías a Pastoreo:

Caracterización de producción lechera en sistemas pastoriles Sur de Chile.

Congreso Lechero Costa Rica, 20 de octubre de 2015.

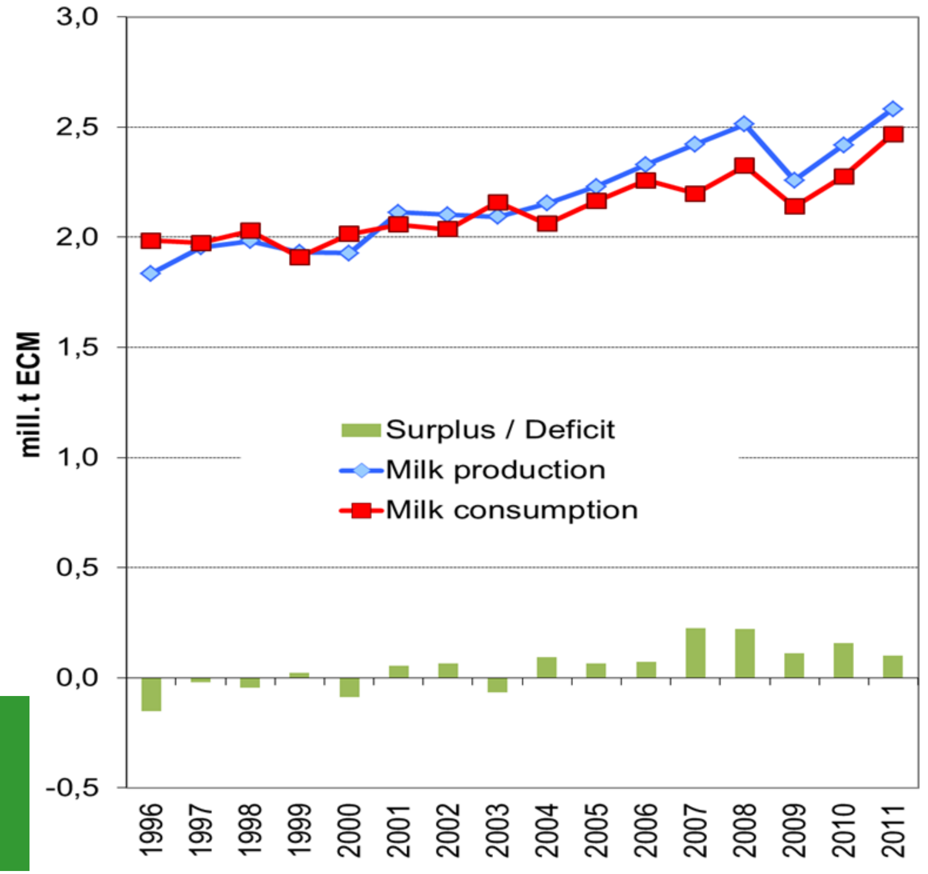


“YO PREFIERO MANTEQUILLA ANTES QUE MARGARINA, PORQUE CONFIO MAS EN LAS VACAS DE LO QUE CONFIO EN LA QUIMICA…..” ~Joan Gussow

The Dairy Market

Chile reach 0,3% of the total eq. lts of milk produced in the the world,
(INE, FAO)

Chile's producing milk yields of approximately 5,700 kgs per cow per year.



Total dairy cows

400.000

Specialized cows

280.000

70%

Source: Mario Olivares, IFCN.

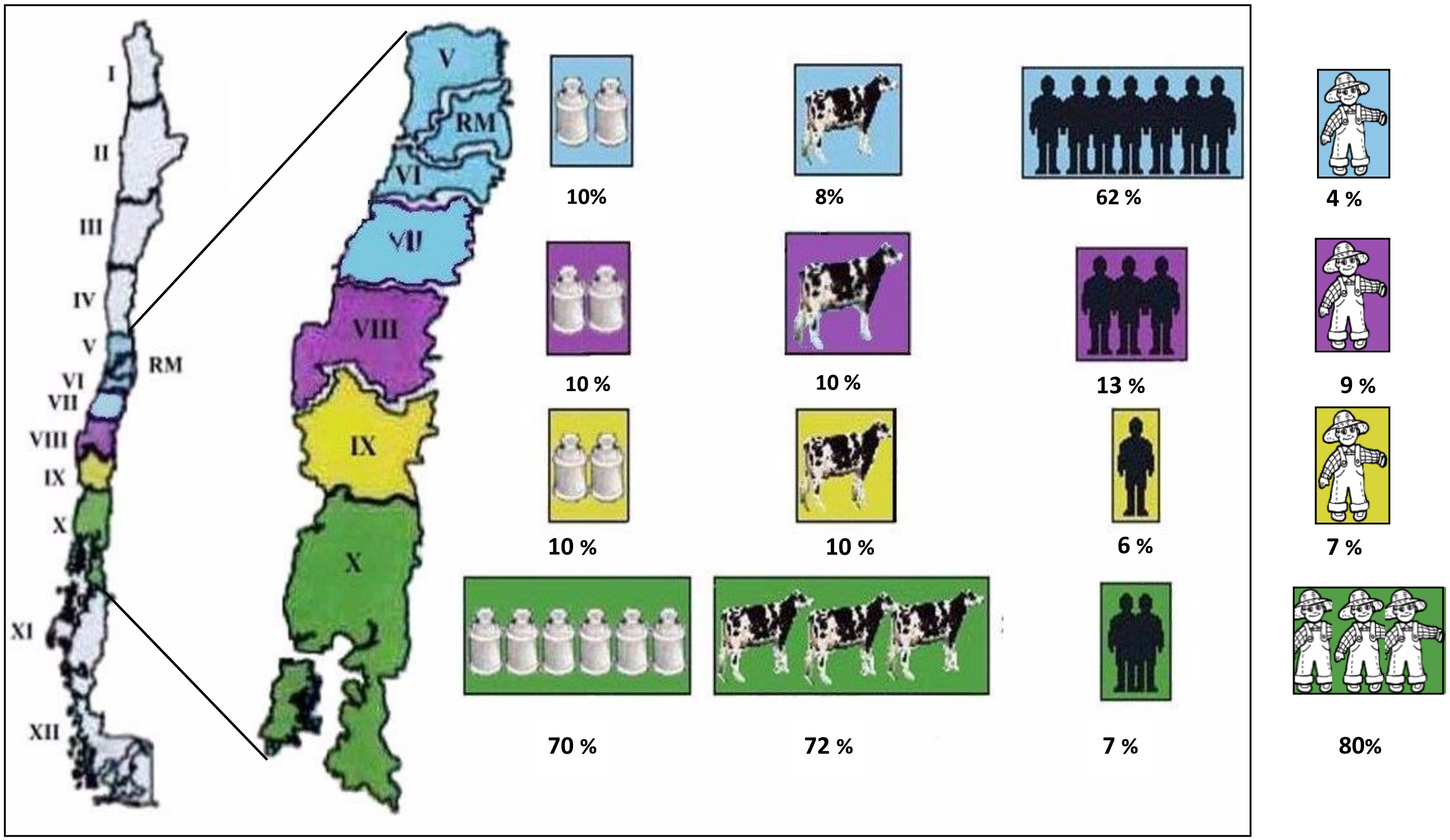
The Dairy Cattle distribution

Milk
2,150 mill.
liters

Specialized Herd
280.000
cows

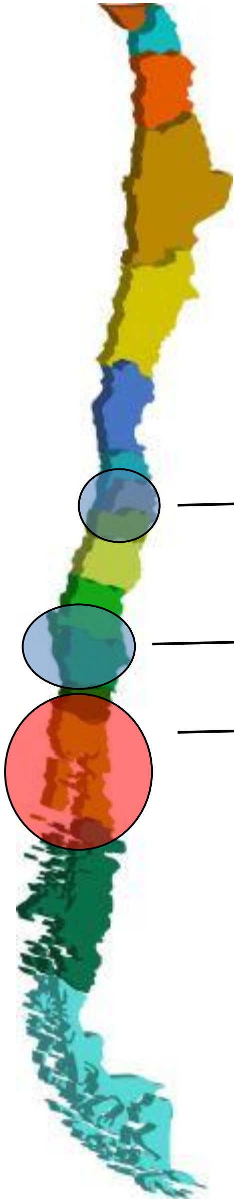
Population
17.5 mill.
people

Farmers
16,200



Source: Mario Olivares, IFCN.

The Dairy Cattle distribution



- Productive dairy herd is concentrated in few customers.
  - Pressure to produce milk based on milk solids.

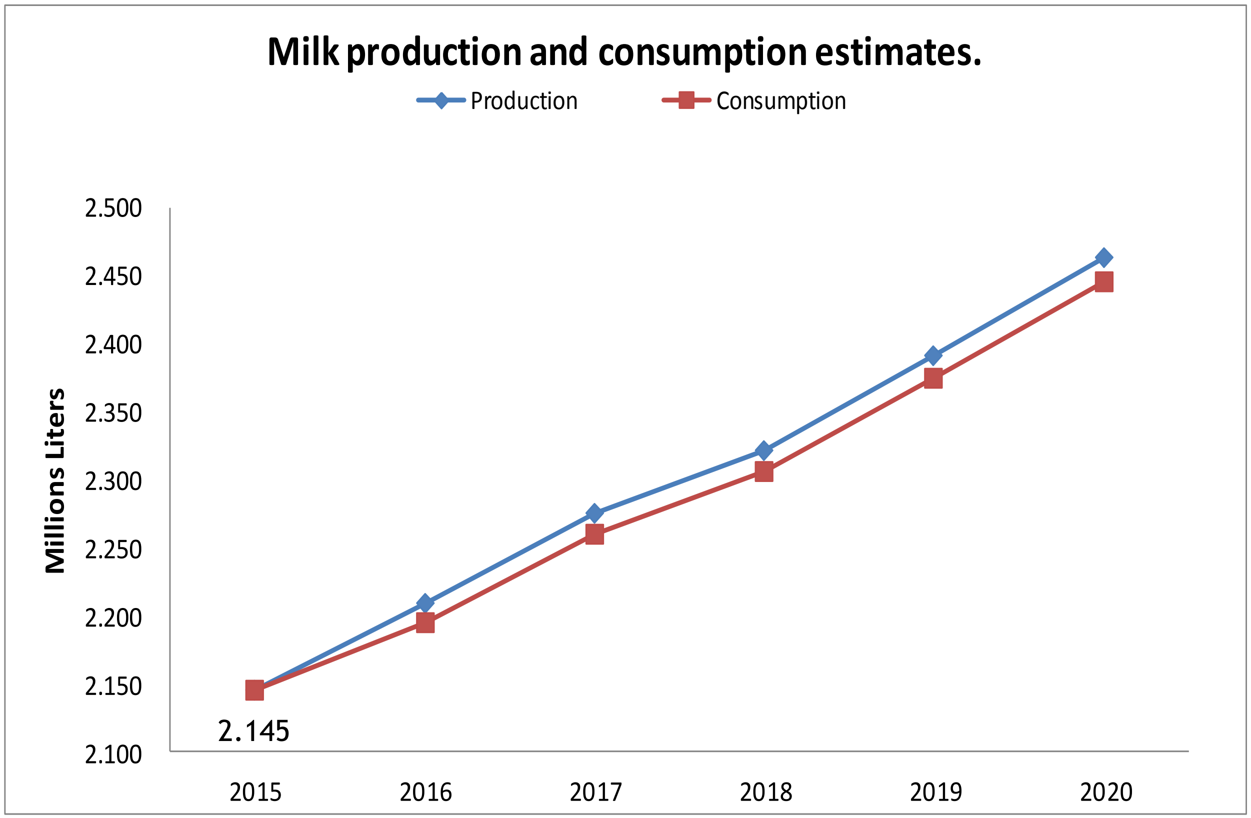
25% Central Zone, (TMR).

30% Bio Bio and Araucania Region.

45% Los Ríos y Los Lagos Region.

75% Dairy farm are in South, (Pasture).

Milk Production, Consumption. Exports and Imports
Estimates 2015-2020



Consumption growth (CARG) +2,8% 2015 to 2020.

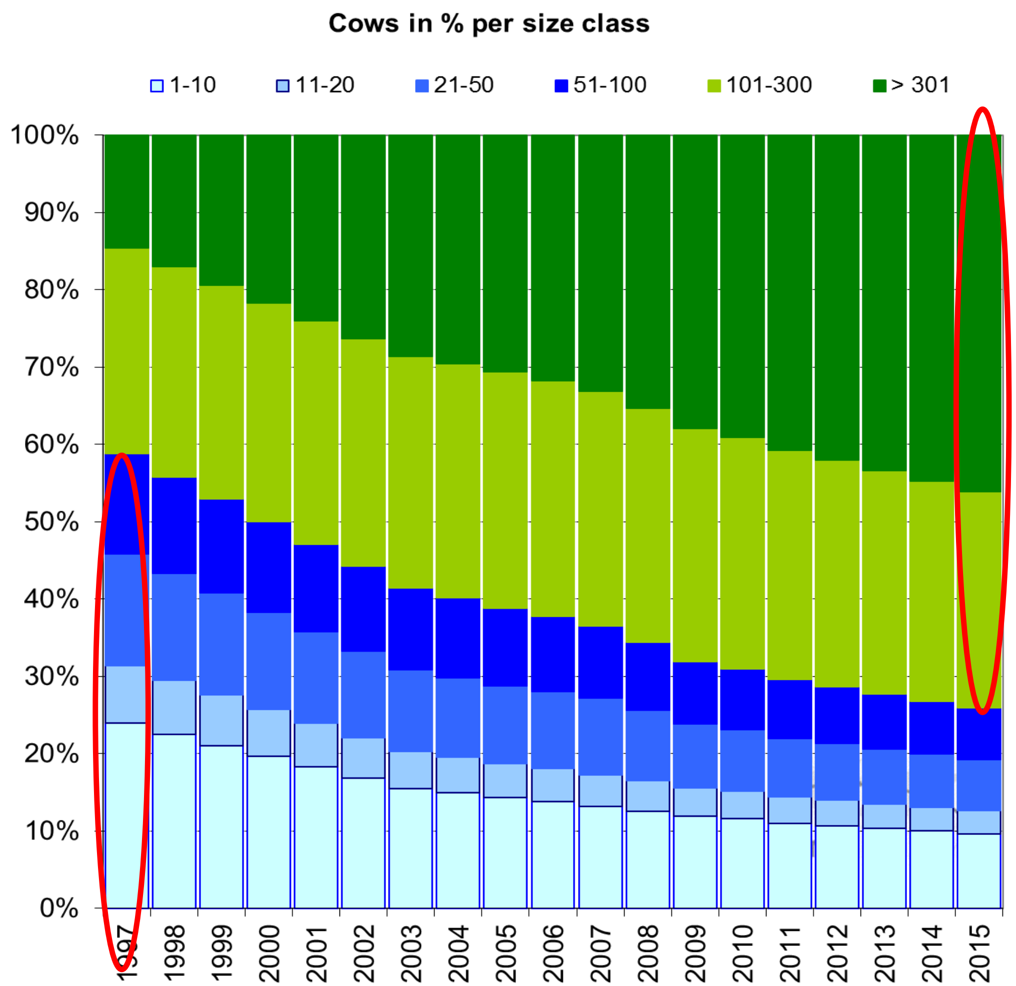
Population growing 1.1% per year.

Per capita income growth 11% last two years.

Per capita consumption is150 kg per year.

Elaborated: DSM Chile with Nestle Chile info, Fedeleche and Odepa 2015.

Chile - Farm structure outlook until 2015



1997: 60 % of dairy cows were in herds with less than 100 cows.

2015: 70 % of dairy cows will be in herds with more than 100 cows.

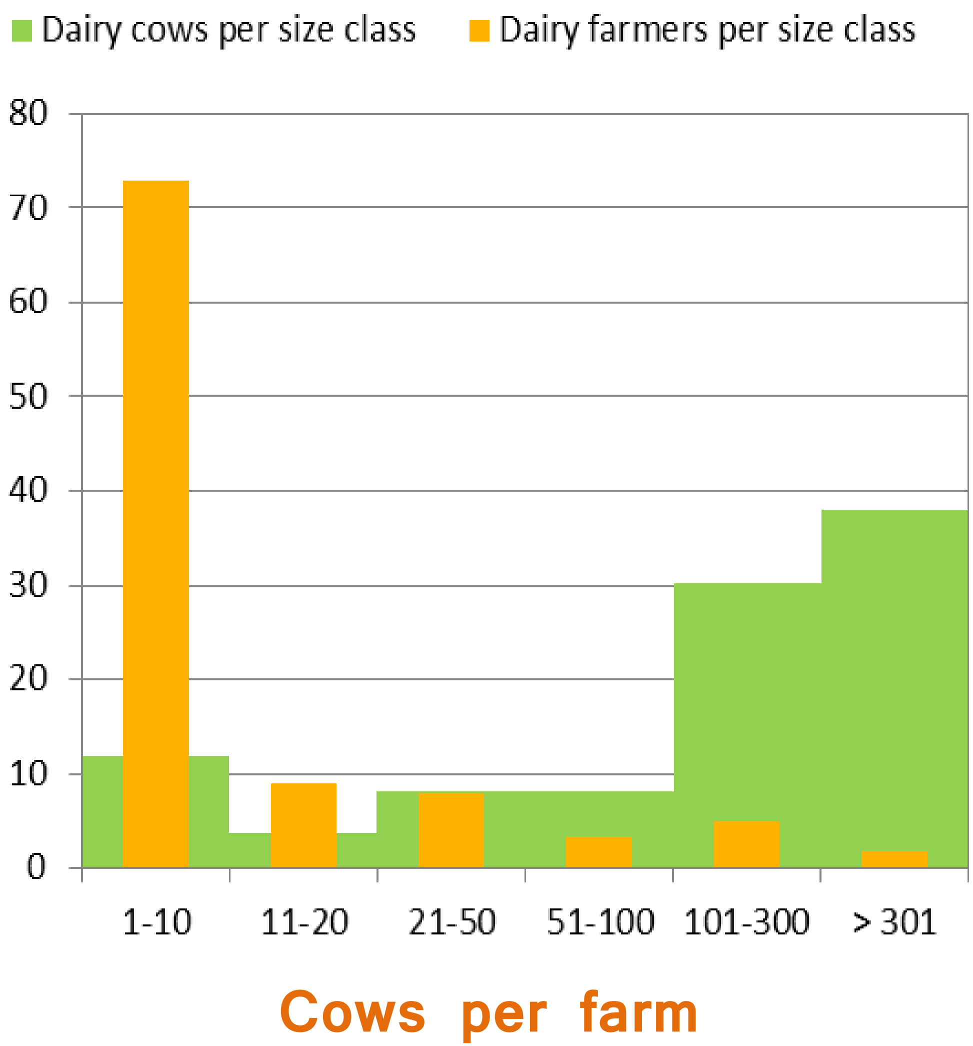
Most than 80% of dairy herds will be in Los Rios and Los Lagos regions.

Dairy farmer margin decrease but will be positive

Source: IFCN Dairy Research Center

DSM
BRIGHT SCIENCE. BRIGHTER LIVING.

Farm structure.
Dairy cows and dairy farmers.

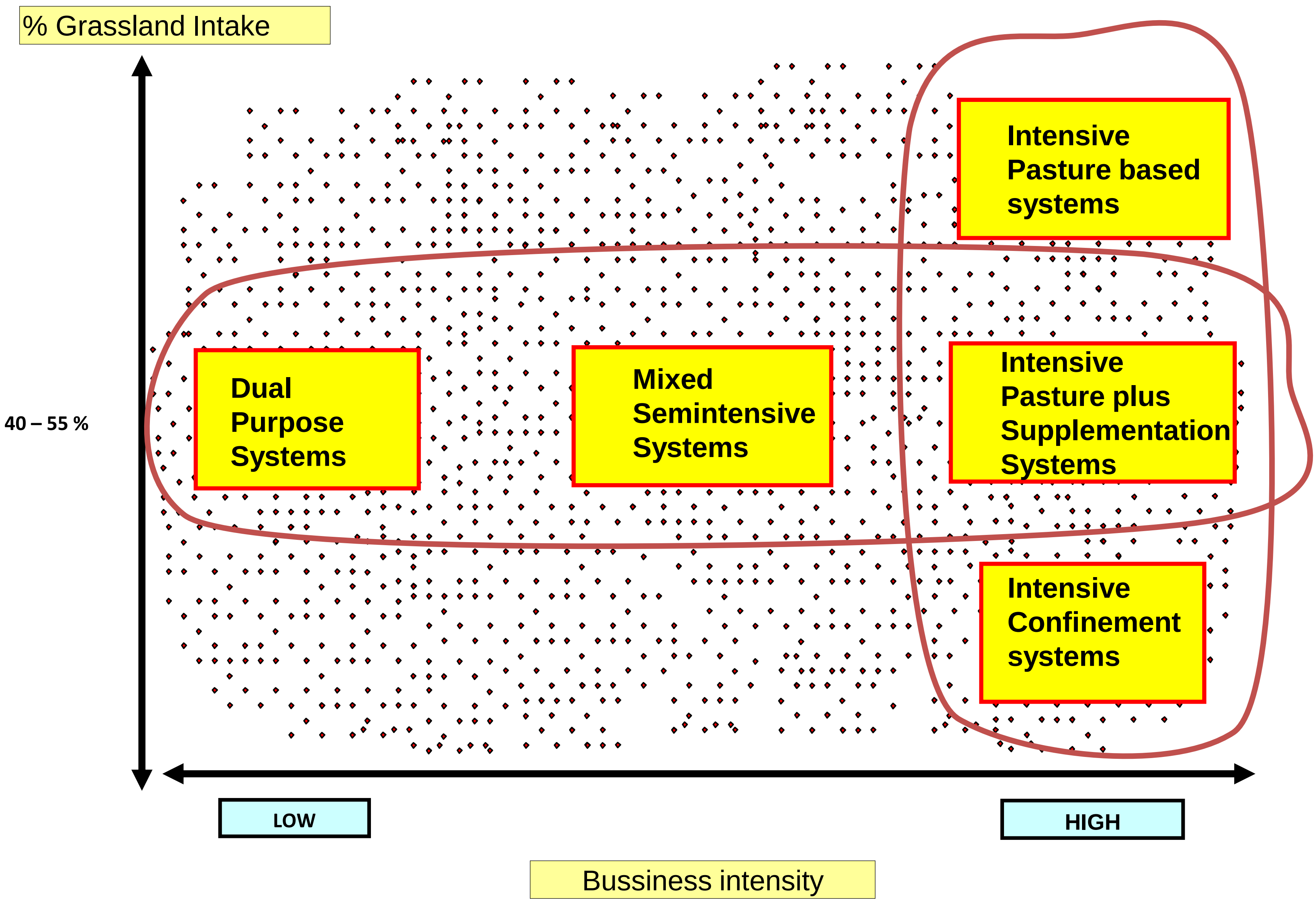


10% dairy farmers are owners of 76 % of dairy cows.

They deliver 92 % of total milk.

Source: IFCN Dairy Research Center

Chile - Farming systems



Source: M.E. Olivares , 2012.

Chile - Farming systems

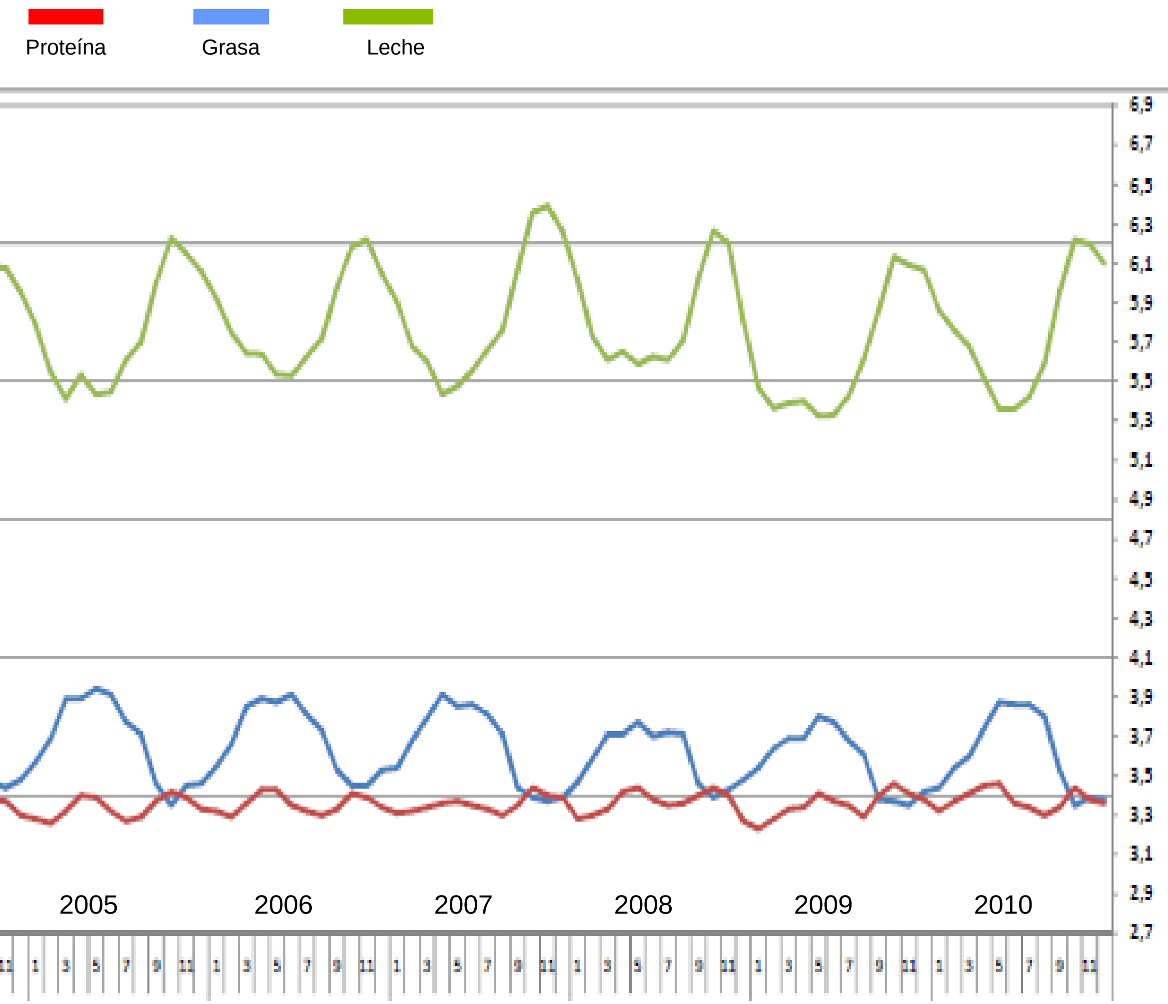
- **Low Input**
  - Supplement 1 to 2 kg/day of grain or forage or up to 10% of the total dry matter intake.
  - Potential milk yield could be 14 to 20 kg/cow/day or 4.200 to 6.000 kg of milk per lactation.

- **Medium Input**
  - Supplement 1 to 2.5 kg/day of forage dry matter and 2 kg/day of grain or up to 30% of the total dry matter intake.
  - Potential milk yield could be 18 to 27 kg/cow/day or 5.400 to 7.800 kg of milk per lactation.

- **High Input.**
  - Supplement 50% of the dry matter as Partial Mixed Ration (PMR) and 50% of dry matter from pasture.
  - Potential milk yield could be 27 to 36 kg/cow/day or 8.000 to 10.000 or more kg of milk per lactation.

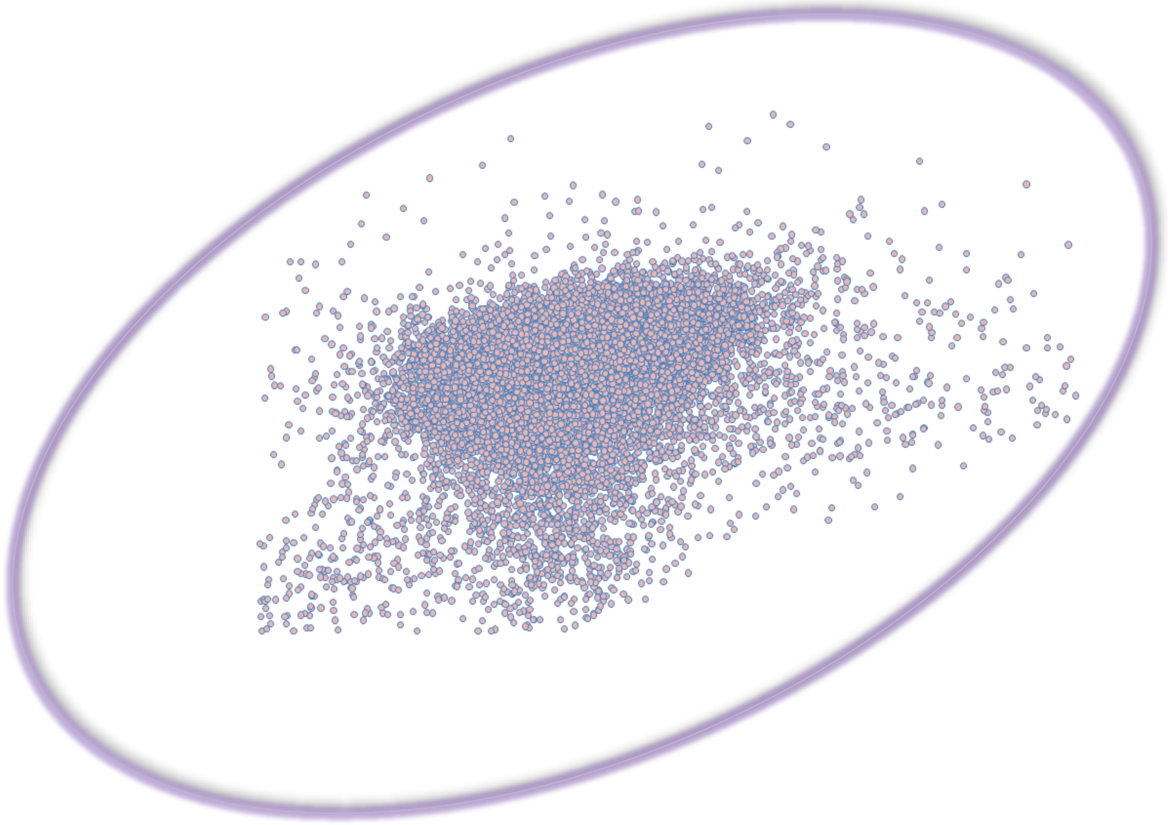
Source: IFCN Dairy Research Center

Seminario Nutrición Animal Cooprinsem (28/07/2011)



Fuente: Control Lechero Oficial Cooprinsem.

117.875 Lactancias Terminadas.



Vacas eliminadas entre los años 1999 a 2013.

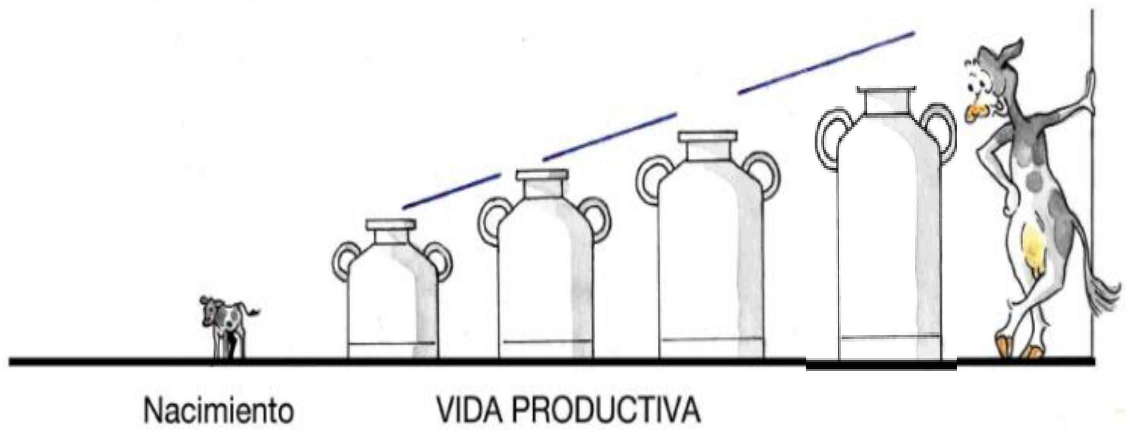
Observación y descripción.

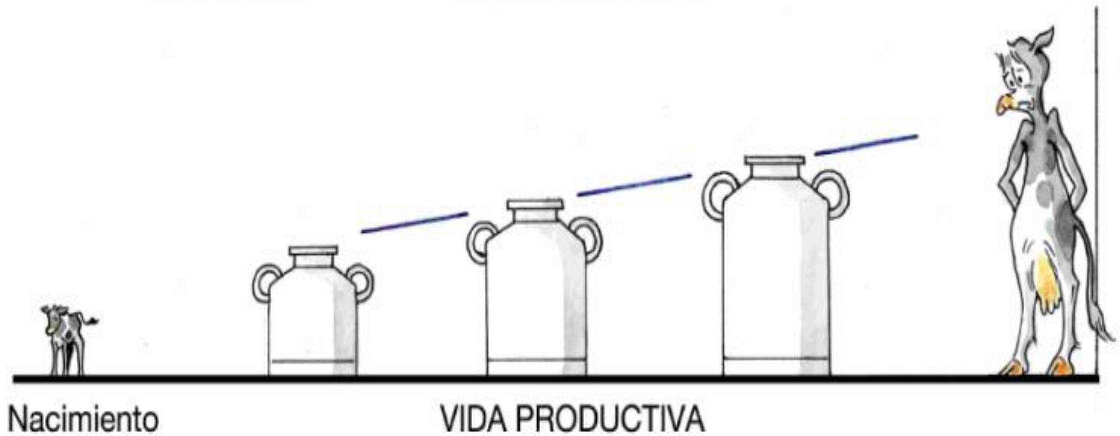
Indicadores:	Producción.	Que afectan la lactancia:	Estratos:
• Edad de eliminación. • Lapso parto preñez. • Lapso inter-parto. • Edad 1º parto. • Período seco. • Días de vida. • Índice coital.	• Leche (lts). • Grasa (kg y %). • Proteína (kg y %). • Suma de sólidos totales (kg). • Producción por día de vida (lts). • Producción de leche vitalicia (lts).	• Relación grasa : proteína. • Mastitis sub-clínicas. • Mastitis clínicas. • Cojeras. • Abortos. • Urea.	• Nivel productivo. • Fecha de nacimiento • Producción vitalicia. • **Producción por día de vida.**

Conceptos.

Producción por día de vida (PDV):

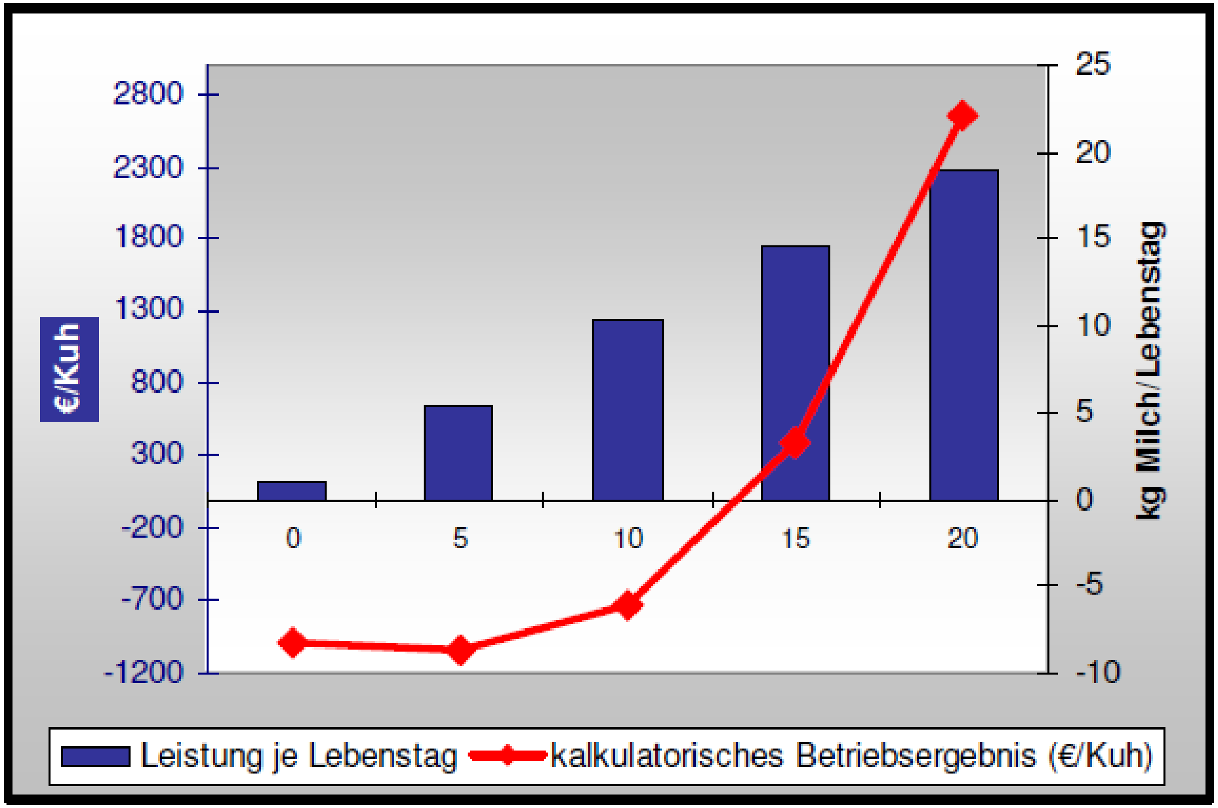
Producción vitalicia / Días de vida (desde que nace hasta que se elimina).





Dr. Anke Wangler (2005).
Institut für Tierproduktion, Dummerstorf, Alemania.

De acuerdo con nuestras investigaciones, se obtiene **recién un beneficio económico cuando se alcanzan los 15 kg de leche por día de vida .**
Las vacas más eficientes, **con 20 kg de leche por día de vida** o más, son precisamente aquellas que obtuvieron la mayor producción **durante la primera lactancia** y terminaron esta con una mayor persistencia.



Descripción de datos.

Producción por día de vida		Promedios					
Estrato	N° Vacas	PDV	PVITLEC	PVITSOL	DSVIT	Ed1Par	EdElim
< 5	22.202	2,73	3.329	235	215	29,38	37
5 - 10	36.331	7,65	14.084	996	773	28,89	58
10 - 15	37.835	12,34	30.194	2.079	1.351	27,81	79
15 - 20	17.261	16,96	46.905	3.155	1.704	26,25	90
> 20	4.156	22,59	60.939	3.909	1.754	24,78	88
Total general	117.785	10,12	23.695	1.620	1.025	28,10	67

Fuente: Control Lechero Oficial Cooprinsem.

Descripción de datos.

Norte		Promedios						
Estratos	Vacas	Ed1Par	EdElim	Días VIT	Ult Nop	PDV	P VIT Leche	P VIT Sólidos
< 5	2.550	29,21	34	145	1,07	2,53	2.830	191
5 - 10	4.070	28,99	49	538	1,88	7,74	11.845	796
10 - 15	5.143	27,49	60	885	2,75	12,49	23.238	1.528
15 - 20	3.584	25,76	68	1.129	3,34	17,30	35.883	2.321
> 20	2.261	24,35	78	1.453	4,12	23,23	55.623	3.490
Total general	**17.608**	**27,33**	**58**	**820**	**2,60**	**12,31**	**24.381**	**1.579**

Sur		Promedios						
Estratos	Vacas	Ed1Par	EdElim	Días VIT	Ult Nop	PDV	P VIT Leche	P VIT Sólidos
< 5	19.652	29,40	38	224	1,21	2,75	3.394	240
5 - 10	32.261	28,88	60	803	2,66	7,64	14.366	1.022
10 - 15	32.692	27,86	82	1.424	4,41	12,31	31.289	2.166
15 - 20	13.677	26,38	96	1.855	5,44	16,88	49.794	3.373
> 20	1.895	25,29	102	2.115	6,04	21,82	67.282	4.409
Total general	**100.177**	**28,24**	**69**	**1.060**	**3,39**	**9,74**	**23.574**	**1.627**

Fuente: Control Lechero Oficial Cooprinsem.

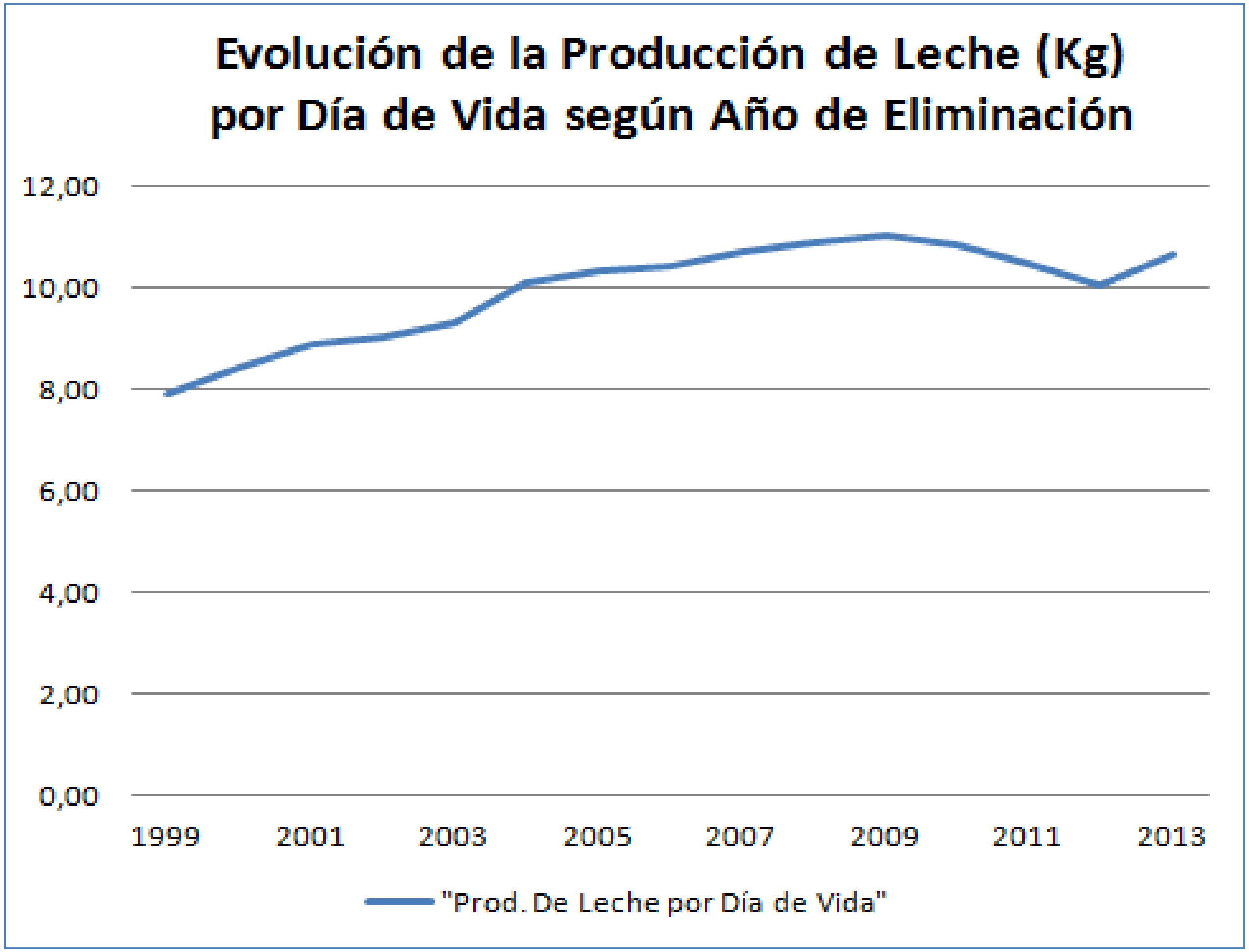
Descripción de datos.

Norte		Promedios						
	31%							
Estratos	Vacas	Ed1Par	EdElim	Días VIT	Ult Nop	PDV	P VIT Leche	P VIT Sólidos
15 - 20	3.584	25,76	68	1.129	3,34	17,30	35.883	2.321
> 20	2.261	24,35	78	1.453	4,12	23,23	55.623	3.490
Promedio	**5.845**	**25,10**	**73**	**1.291**	**3,73**	**20,30**	**45.753**	**2.906**

Sur		Promedios						
	15,5%					0,95 Lts pdv.	12.785 Kg LV .	1.075 Kg ST.
Estratos	Vacas	Ed1Par	EdElim	Días VIT	Ult Nop	PDV	P VIT Leche	P VIT Sólidos
15 - 20	13.677	26,38	96	1.855	5,44	16,88	49.794	3.373
> 20	1.895	25,29	102	2.115	6,04	21,82	67.282	4.409
Promedio	**15.572**	**25,84**	**99**	**1.985**	**5,74**	**19,35**	**58.538**	**3.891**

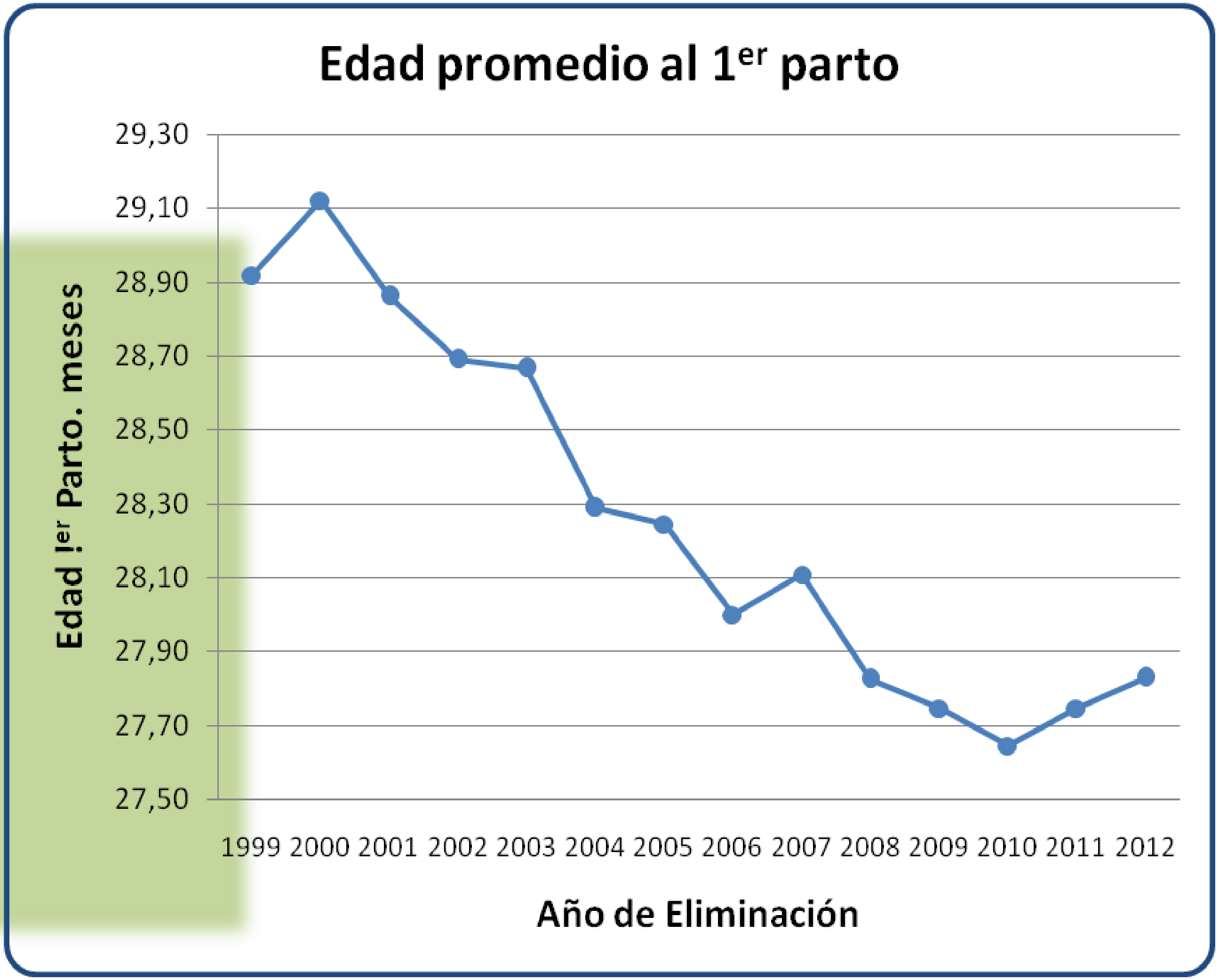
Fuente: Control Lechero Oficial Cooprinsem.

Descripción de datos.



Fuente: Control Lechero Oficial Cooprinsem.

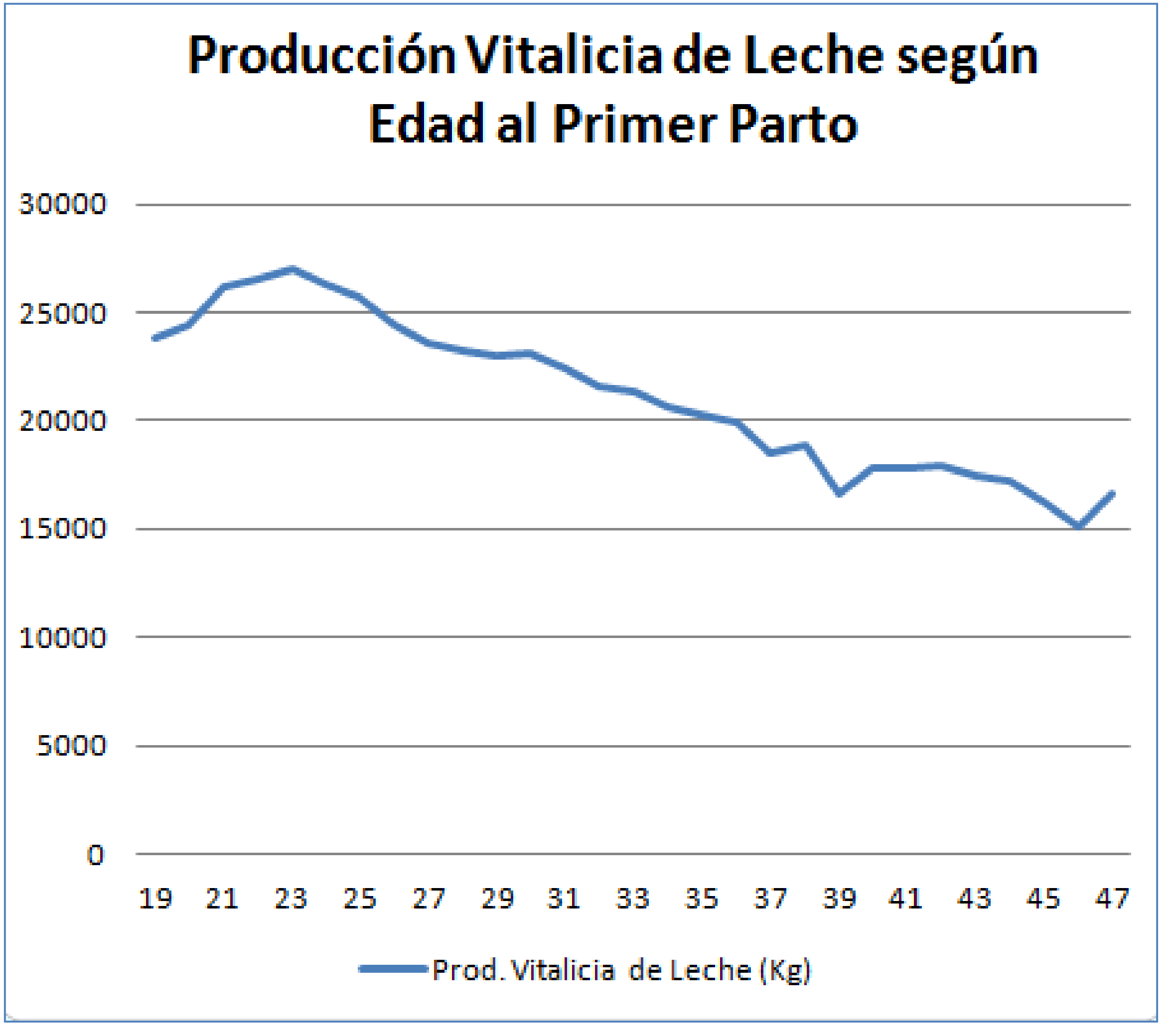
Descripción de datos.



Fuente: Control Lechero Oficial Cooprinsem.

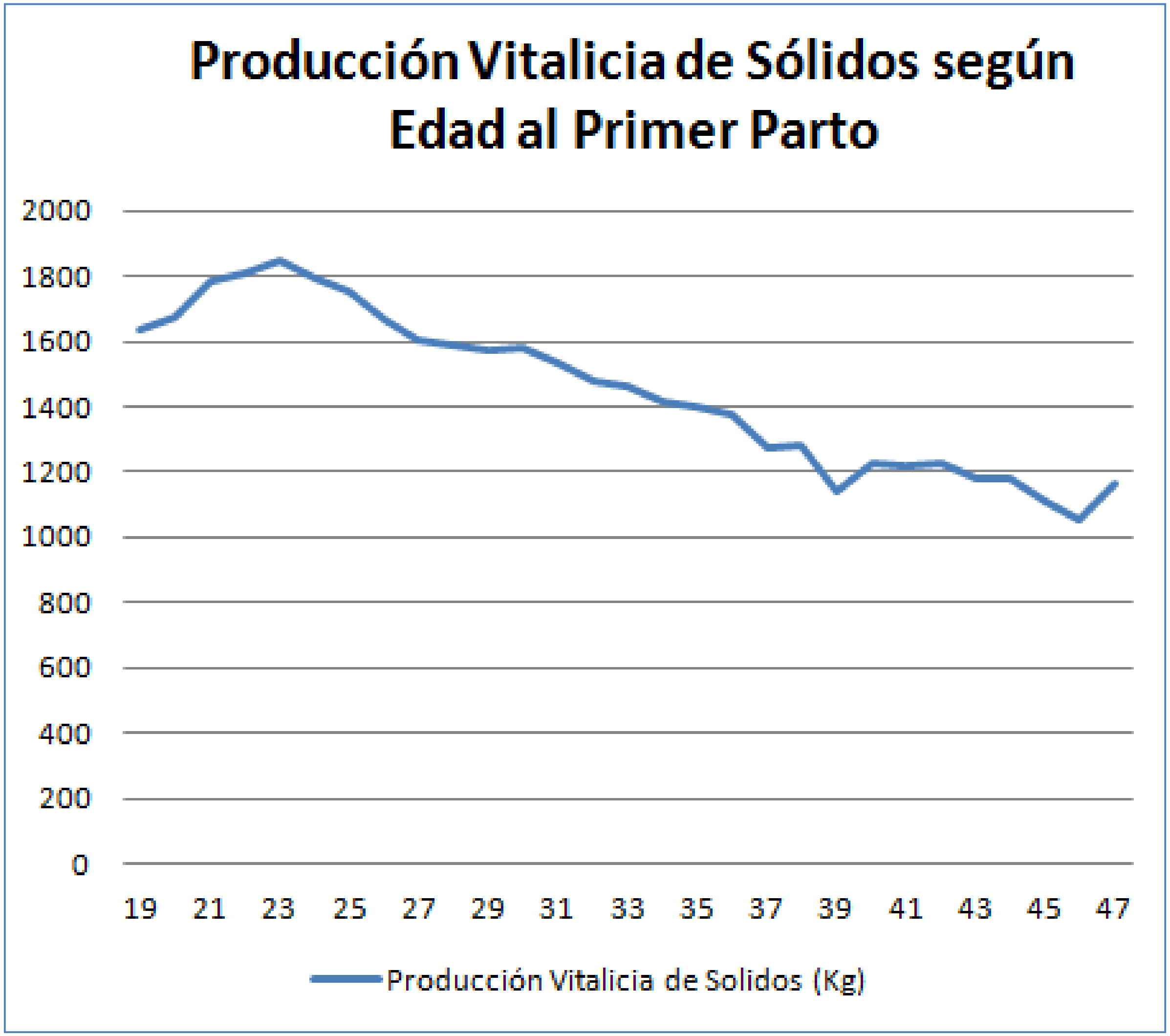
Análisis de datos.

Un efecto significativo de la edad al primer parto fue encontrado sobre la producción de leche y proteína vitalicia, determinándose una disminución de -507 Kg de leche, ($P < 0.0001$).
(Lizana C, 2013)



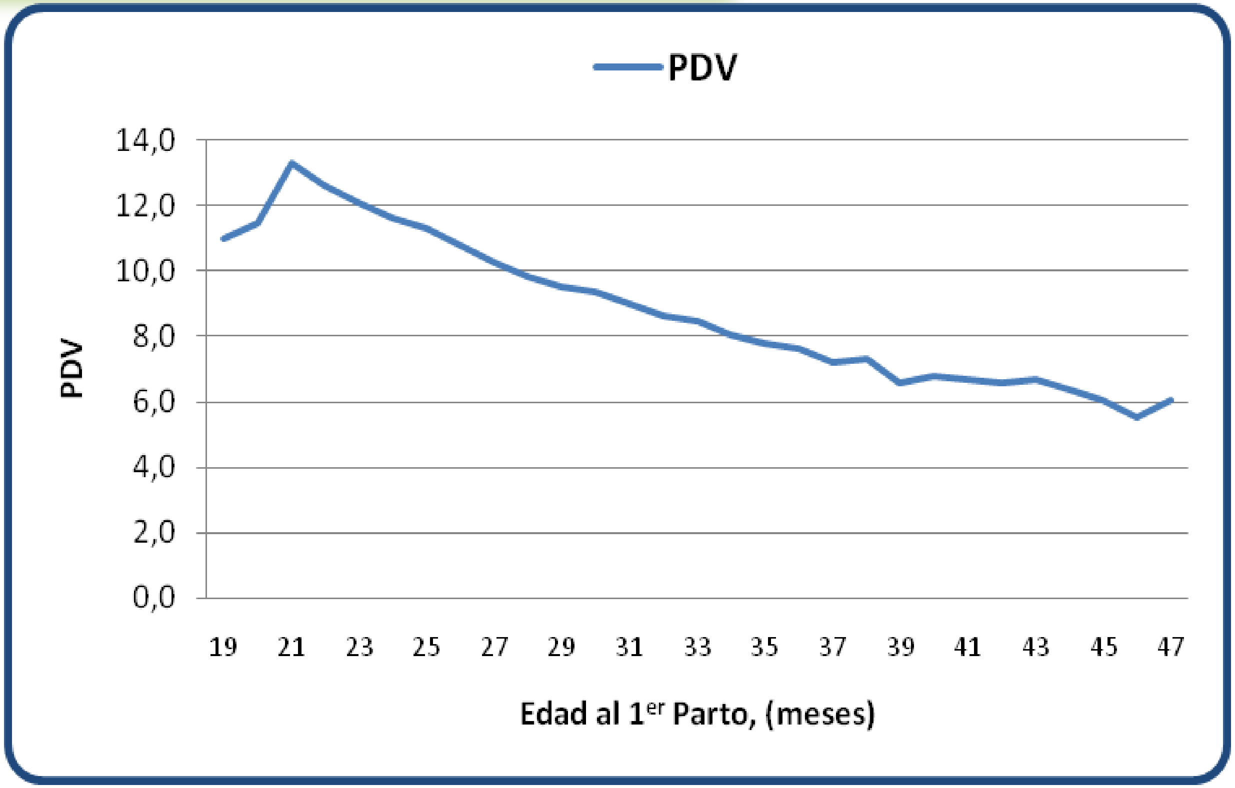
Análisis de datos.

Para sólidos la disminución es de -34 Kg por cada mes adicional de edad al parto($P < 0.0001$). (Lizana C, 2013)

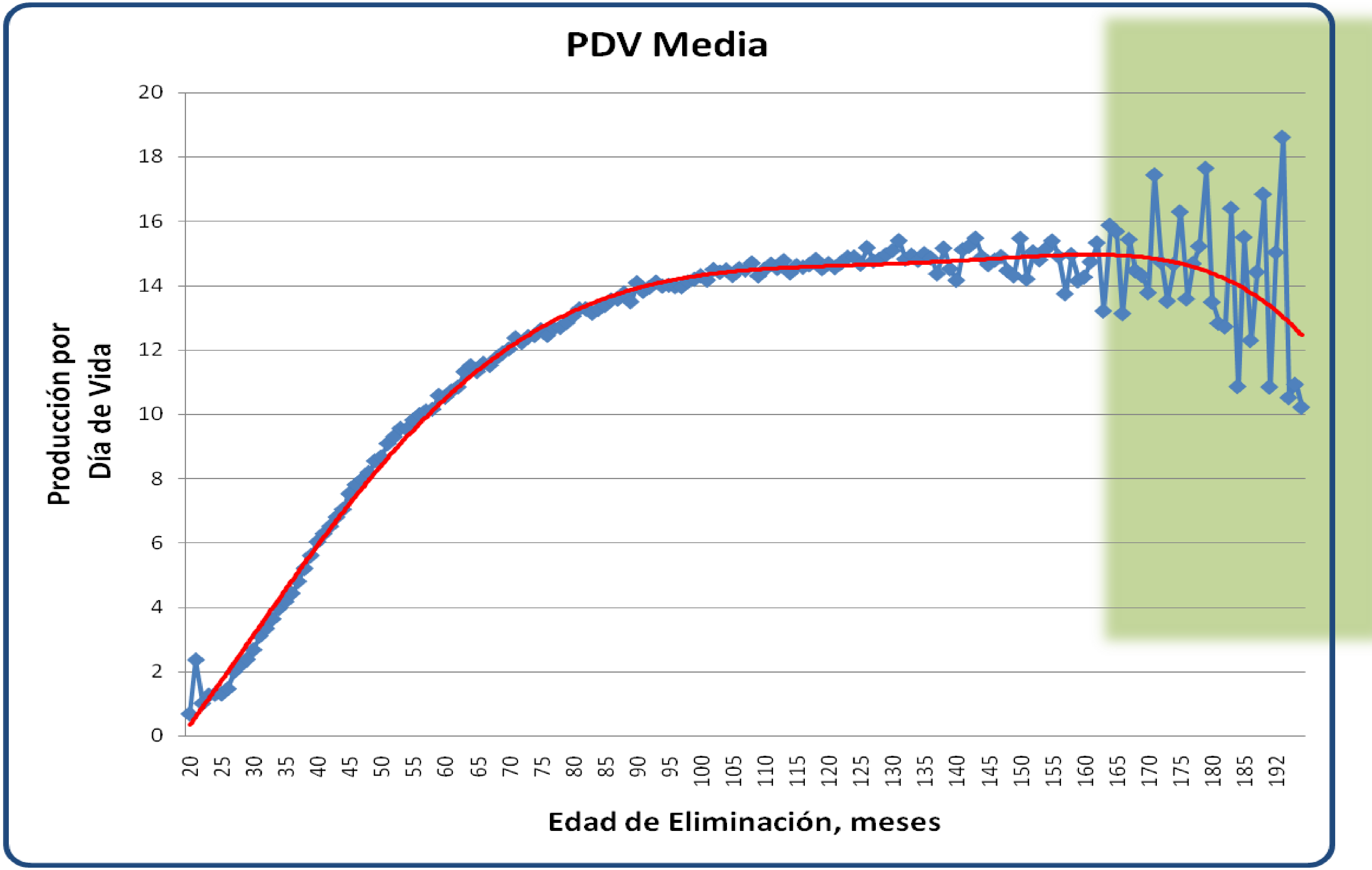


Análisis de datos.

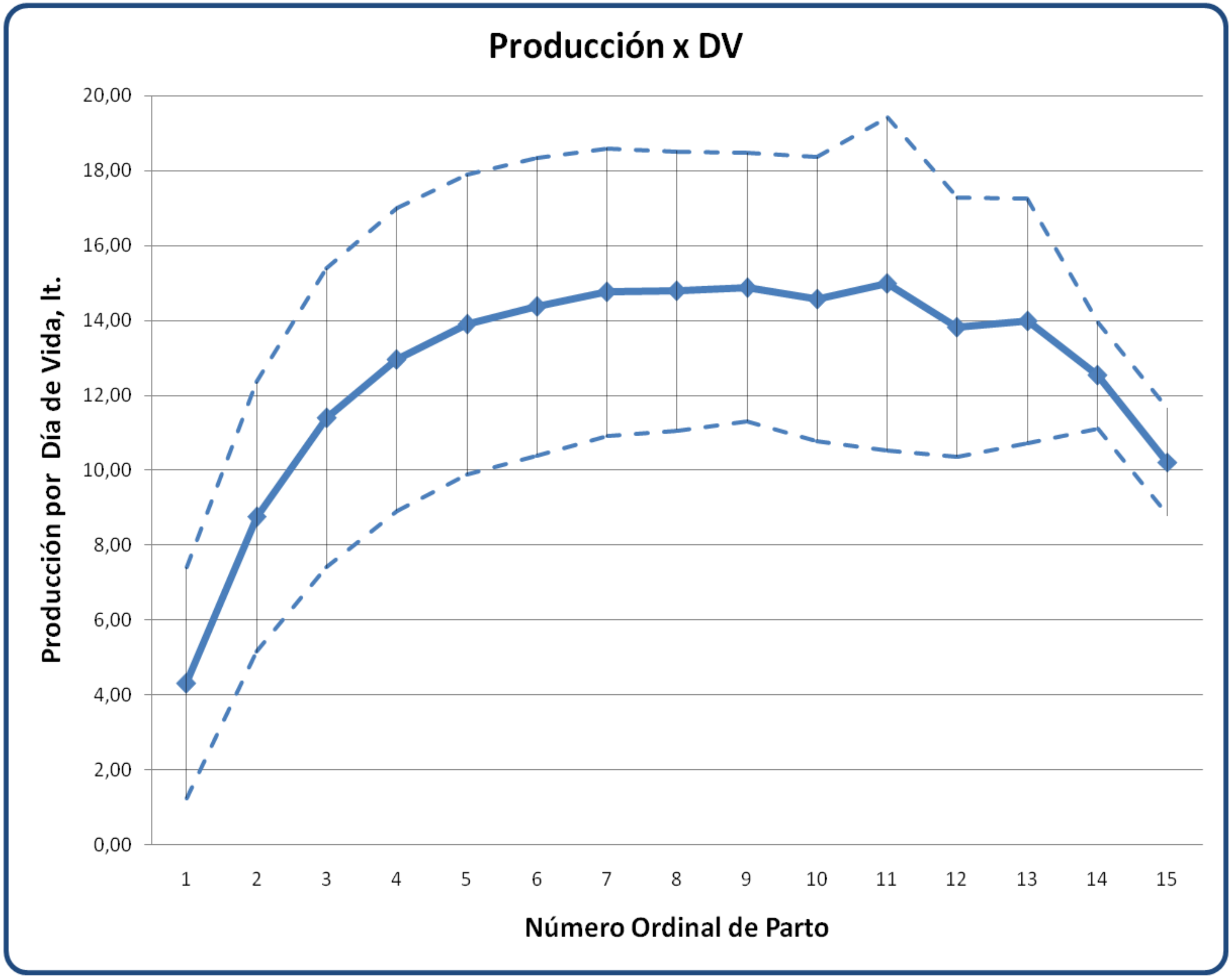
Se encontró un efecto significativo de la edad al primer parto sobre la producción por día de vida, determinándose una disminución de -0,33 Kg de leche,
(P < 0.01) por cada mes adicional de edad al parto.
Lizana, C.(2013)



Descripción de datos.



Descripción de datos.

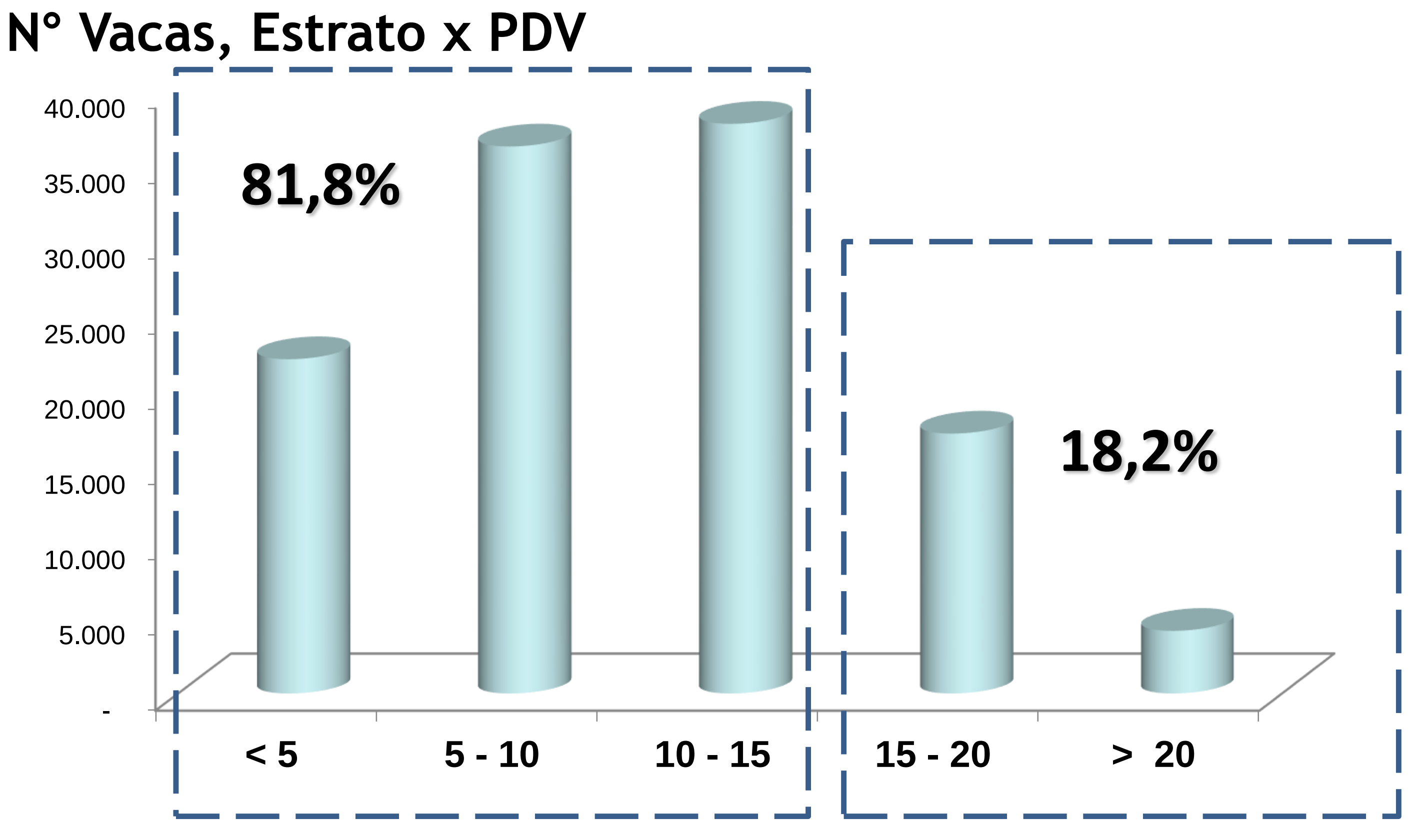


Mastitis clínica y cojeras según NOP y variables de producción.

Mastitis	Promedios		
Clínica	PDV	PVITLEC	UltNop
0	10,03	23.517	3,26
1	6,54	11.971	1,90
Diferencia	3,49	11.546	1,36

Cojeras	Promedios		
	PDV	PVITLEC	UltNop
0	10,13	23.563	3,24
1	6,46	13.349	2,21
Diferencia	3,67	10.214	1,03

Análisis de datos.



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Feed Efficiency and Nutrition

Our research activities aim to understand the mechanisms underpinning the efficient conversion of nutrients to quality animal products using a variety of animal models including animals selected for enhanced efficiency (e.g., residual feed intake) and management models of efficiency (e.g., compensatory growth). Multidisciplinary approaches applied include nutrition, physiology; transcriptomics (including RNAseq) and genomics; proteomics; endocrinology and product quality. Data from this work will contribute to the identification of potential molecular biomarkers for the genetic selection of cattle with greater feed efficiency and provide insight into opportunities and consequences of modification of future production systems. Researchers are also applying a suite of molecular technologies including metagenomics to characterise and gain a greater understanding of the rumen microbiome and its role in the efficiency of nutrient utilisation and methane production.

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J Dairy Sci. 2010 Sep;93(9):4318-31. doi: 10.3168/jds.2009-2686.

Dry matter intake and feed efficiency profiles of 3 genotypes of Holstein-Friesian within pasture-based systems of milk production.

Coleman J, Berry DP, Pierce KM, Brennan A, Horan B.

Teagasc, Moorepark Dairy Production Research Centre, Fermoy, Co. Cork, Ireland.

Abstract

The primary objective of the study was to quantify the effect of genetic improvement using the Irish total merit index (Economic Breeding Index) on dry matter intake and feed efficiency across lactation and to quantify the variation in performance among alternative definitions of feed efficiency. Three genotypes of Holstein-Friesian dairy cattle were established from within the Moorepark dairy research herd: 1) low Economic Breeding Index North American Holstein-Friesian representative of the Irish national average dairy cow, 2) high genetic merit North American Holstein-Friesian, and 3) high genetic merit New Zealand Holstein-Friesian. Animals from within each genotype were randomly allocated to 1 of 2 possible intensive pasture-based feed systems: 1) the Moorepark pasture system (2.64 cows/ha and 500 kg of concentrate supplement per cow per lactation) and 2) a high output per hectare pasture system (2.85 cows/ha and 1,200 kg of concentrate supplement per cow per lactation). A total of 128 and 140 spring-calving dairy cows were used during the years 2007 and 2008, respectively. Each group had an individual farmlet of 17 paddocks, and all groups were managed similarly throughout the study. The effects of genotype, feed system, and the interaction between genotype and feed system on dry matter intake, milk production, body weight, body condition score, and different definitions of feed efficiency were studied using mixed models with factorial arrangements of genotypes and feed systems accounting for the repeated cow records across years. No significant genotype-by-feed-system interactions were observed for any of the variables measured. Results showed that aggressive selection using the Irish Economic Breeding Index had no effect on dry matter intake across lactation when managed on intensive pasture-based systems of milk production, although the ranking of genotypes for feed efficiency differed depending on the definition of feed efficiency used. Performance of animals grouped on alternative definitions of feed efficiency showed that conventional definitions such as feed conversion efficiency or residual feed intake may be inappropriate measures of efficiency for lactating dairy cows. An alternative definition, residual solids production, is proposed. This definition of feed efficiency identifies animals that produce greater volumes of milk solids at similar levels of feed intake without excessive body tissue mobilization and with improved fertility.

Penn State Extension

DAS 2011-183 extension.psu.edu

Feed Efficiency for Lactating Dairy Cows and Its Relationship to Income Over Feed Costs

Daryl Maulfair, Jud Heinrichs, and Virginia Ishler

Department of Dairy and Animal Science

TOPICS

REVIEWERS

Bob VanSaun, Penn State
Rebecca White, Penn State

PENNSTATE
Cooperative Extension
College of Agricultural Sciences

Considerations for Improving Feed Efficiency in Dairy Cattle

Louis Armentano[1] and Kent Weigel
Department of Dairy Science
University of Wisconsin-Madison

Benchmarking Your Feed Efficiency, Feed Costs, and Income over Feed Cost

Michael F. Hutjens

Professor of Animal Sciences, University of Illinois, Urbana, 61801
Email: hutjensm@uiuc.edu

4-State Dairy Nutrition & Management Conference

Nutrient Requirements, Responses and Feed Efficiency

Normand R. St-Pierre and William P. Weiss
Department of Animal Sciences, The Ohio State University, Columbus, OH-43210
Email: st-pierre.8@osu.edu

Optimizing Feed Efficiency: Feed and Non-feed Factors

Jim Sullivan, Ph.D., PAS-Technical Manager-US Dairy Business Unit-Novus International
Jim.Sullivan@novusint.com

Results of UW-Madison Corn Shredlage Feeding Trial

Luiz Ferraretto and Randy Shaver
Dairy Science Department
UW-Madison

ADSA DISCOVER Conferences

26th ADSA Discover Conference on Food Animal Agriculture:
Dairy Feed Efficiency
September 23-26, 2013
Northern Illinois University Conference Center in Naperville, IL
Hosted by the American Dairy Science Association®

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OPTIMIZING FEED EFFICIENCY THROUGH LACTATION

Mike Allen, Michigan State University

Opportunities for Improving Dairy Feed Efficiency

Michael J. VandeHaar
Department of Animal Science
Michigan State University

Fitting Feed Efficiency Into The Dairy Enterprise

Luis A. Rodriguez, Greg Bethard and Michael McGilliard

Improving Feed Efficiency by Means Other Than Dilution of Maintenance

Bill Weiss, The Ohio State University

Genomics and the Improvement of Feed Efficiency: Where are we headed?

Curt Van Tassel, USDA-ARS Animal Improvement Laboratory

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Home > Levy investment > Margins & growth > Farm margins > Feedbase > FCE

Improved feed efficiency and feeding systems

Project description:

The feeding systems used in Australian dairy can be classified into five main types:

1. Pasture and other forages with less than 1 tonne grain /cow/yr fed in the bail
2. Pasture and other forages with more than 1 tonne grain /cow/yr fed in thebail
3. Combination of pasture and a partial mixed ration (PMR)with or without grain feeding in the bail
4. Hybrid system, pasture grazed for less than 9 months per year.
5. Total mixed ration (TMR) system with no grazing.

As feed is a largest cost on Australian dairy farms, improvements in feed conversion efficiency (FCE) can lead to significant increases in farm profitability. Improvements in feed efficiency can be achieved by increasing the amount of DM consumed by each cow and/or increasing the digestibility (and therefore energy supply) of the dry matter consumed which will then lead to increased milk production

Project objective:

Improve the FCE of dairy cows that are managed under each of the five feeding systems. The strategies will vary depending upon the type of feeding system used by individual farmers

Relevant Links
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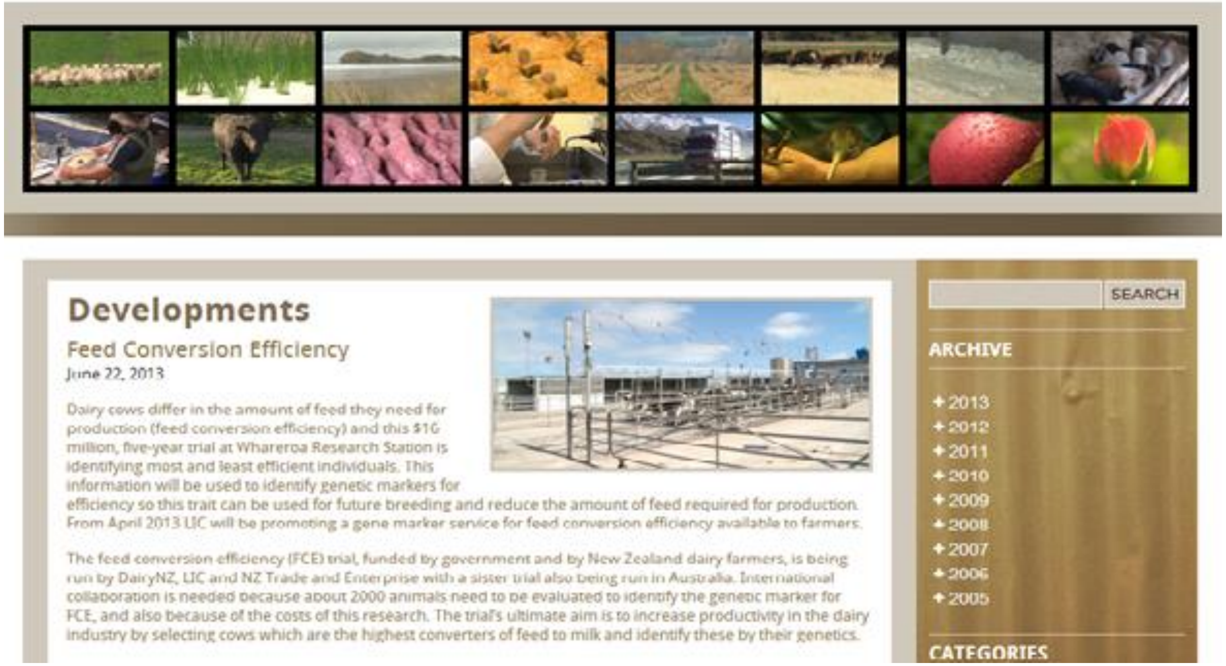
Symposium

International Dairy Nutrition Symposium 2013: Feed efficiency in dairy cattle

Contact
drs. RMA (Roselinde) Goselink
Contact form

To highlight the various aspects of feed efficiency in dairy farming, seven experts from the Netherlands and abroad will present their vision on improving feed efficiency in dairy production, on Thursday 21 November 2013 in Wageningen, The Netherlands.



Developments

Feed Conversion Efficiency

June 22, 2013

Dairy cows differ in the amount of feed they need for production (feed conversion efficiency) and this $16 million, five-year trial at Whareroa Research Station is identifying most and least efficient individuals. This information will be used to identify genetic markers for efficiency so this trait can be used for future breeding and reduce the amount of feed required for production. From April 2013 LIC will be promoting a gene marker service for feed conversion efficiency available to farmers.

The feed conversion efficiency (FCE) trial, funded by government and by New Zealand dairy farmers, is being run by DairyNZ, LIC and NZ Trade and Enterprise with a sister trial also being run in Australia. International collaboration is needed because about 2000 animals need to be evaluated to identify the genetic marker for FCE, and also because of the costs of this research. The trial's ultimate aim is to increase productivity in the dairy industry by selecting cows which are the highest converters of feed to milk and identify these by their genetics.

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Project Profile - Dairy

Genetic Markers for Feed Efficiency in Dairy Cows

The 'Improving lifetime profitability of the Australian dairy herd through genetic markers and physiological markers' project is a joint project between the Biosciences and Future Farming Systems Research Divisions. The project has four phases (start up, discovery, validation and implementation).

Driver for the Research

Genomic selection for feed efficiency in dairy cattle: a complex objective

Jennie Pryce, Yvette de Haas, Ben Hayes, Mike Coffey and Roel Veerkamp

Victoria
The Place To Be

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Outline

Gross efficiency versus metabolic efficiency

Genomic prediction of measures related to intake

- Australia and New Zealand
- Australia, Netherlands and UK
- Australia, Canada, Denmark, Ireland, Germany, Netherlands, New Zealand, UK, USA

Feed efficiency traits in the breeding objective

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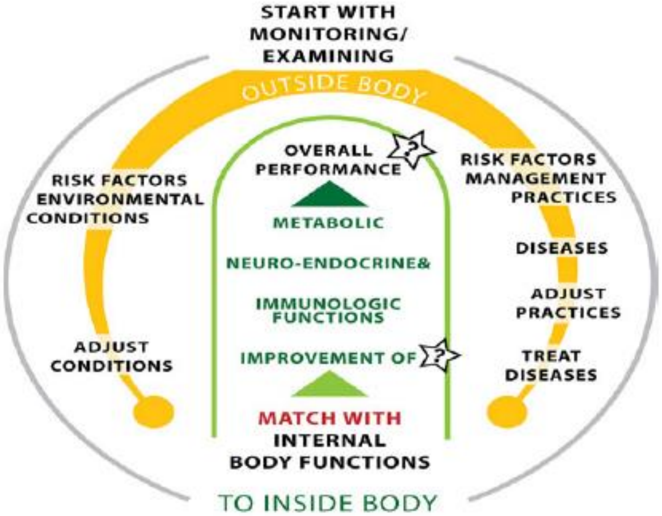
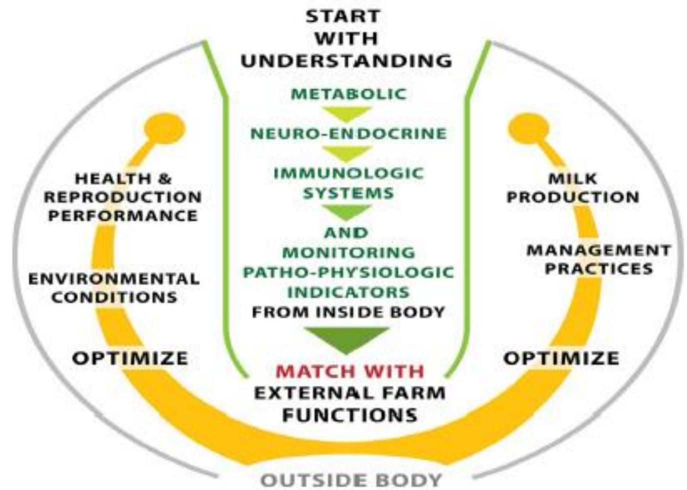
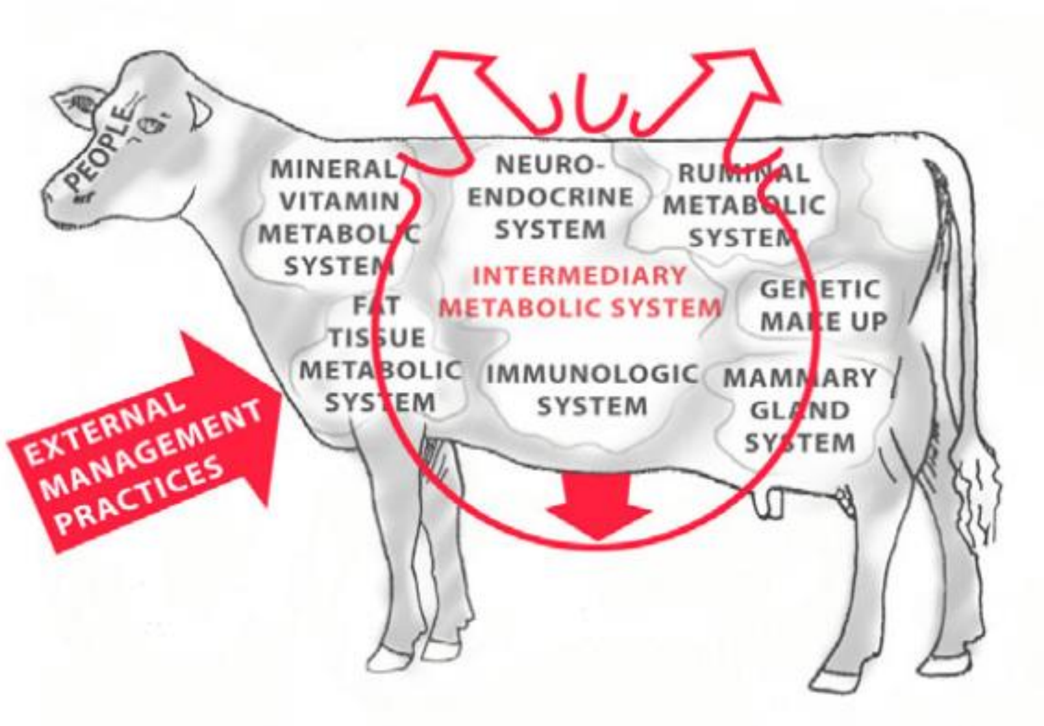


Outside-inside farm management approach (old)



Inside-outside farm management approach (new)

Brand and Peeters, 2008.



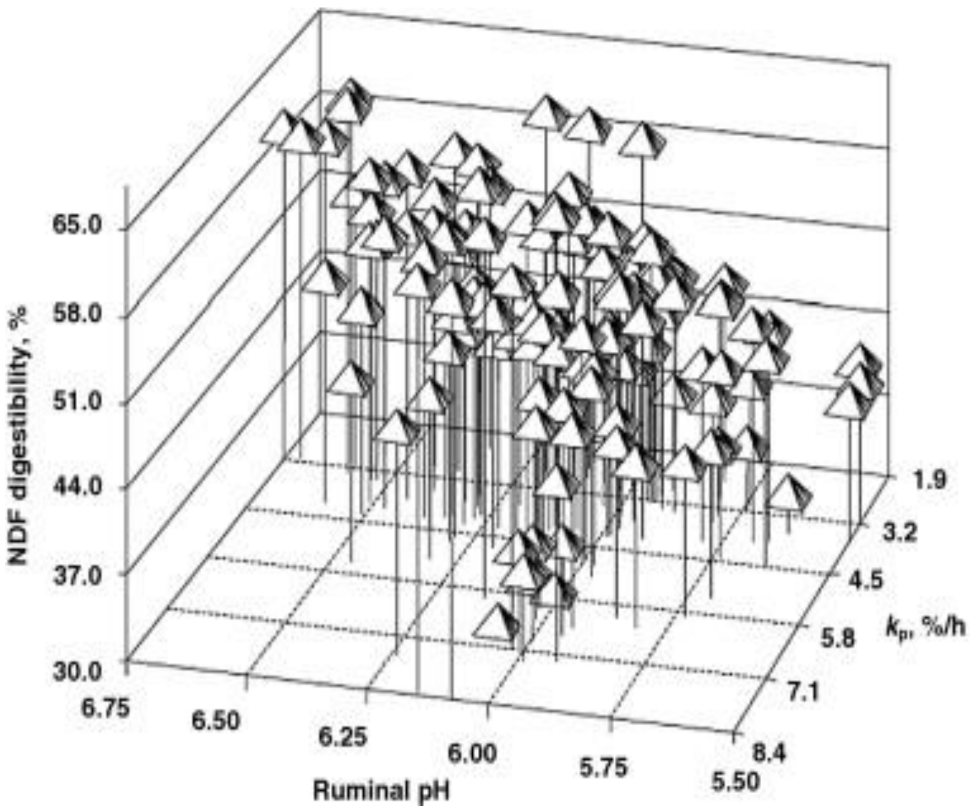
Brand and Peeters, 2008.

Digestibilidad de la fibra.

Oba y Allen, 1999, J. Dairy Sci. 82:589.
Describen diferencias significativas ($p<0.10$) entre la relación del contenido de FDN de la dieta y el FDN digestible de los forrajes (en vivo y en vitro).

El incremento de una unidad de FDN digestible (en vivo o en vitro), son 0,17 kilos mas de consumo al día en materia seca y 0,25 kgs mas de leche al día al 4% GCL.

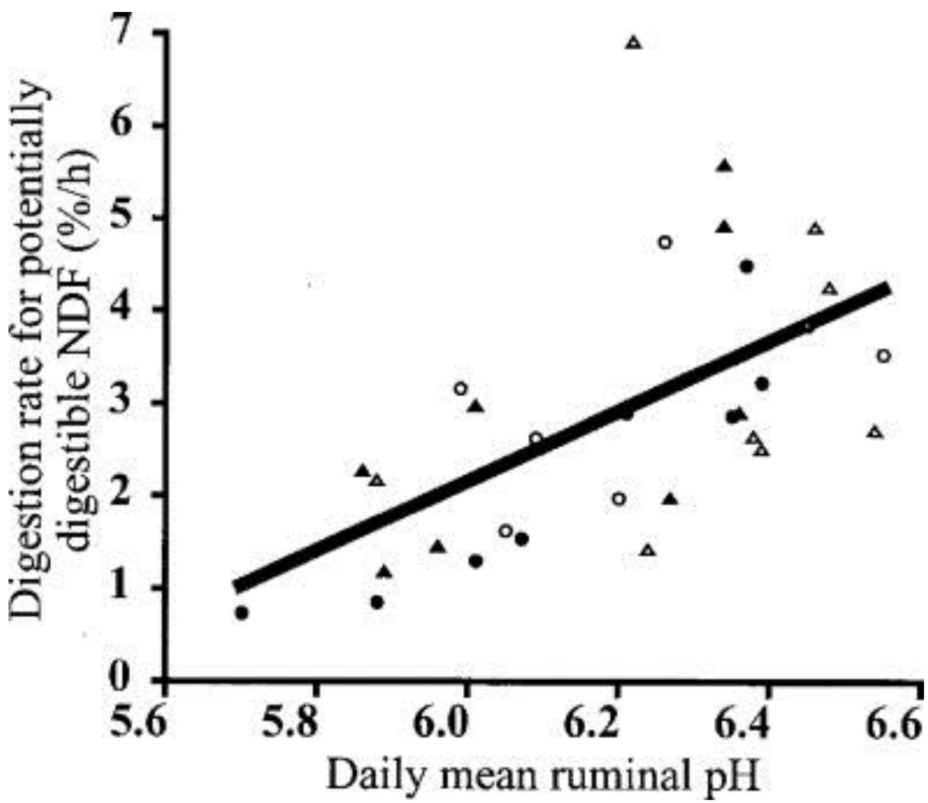
En resumen, se concluya en este experimento que existe una relación positiva entre consumo de materia seca, producción de leche corregida y el contenido de FDND de los forrajes, ($p>0.001$)



Interplay between rumen digestive disorders and diet-induced inflammation in dairy cattle, Zebeli y Metzler.

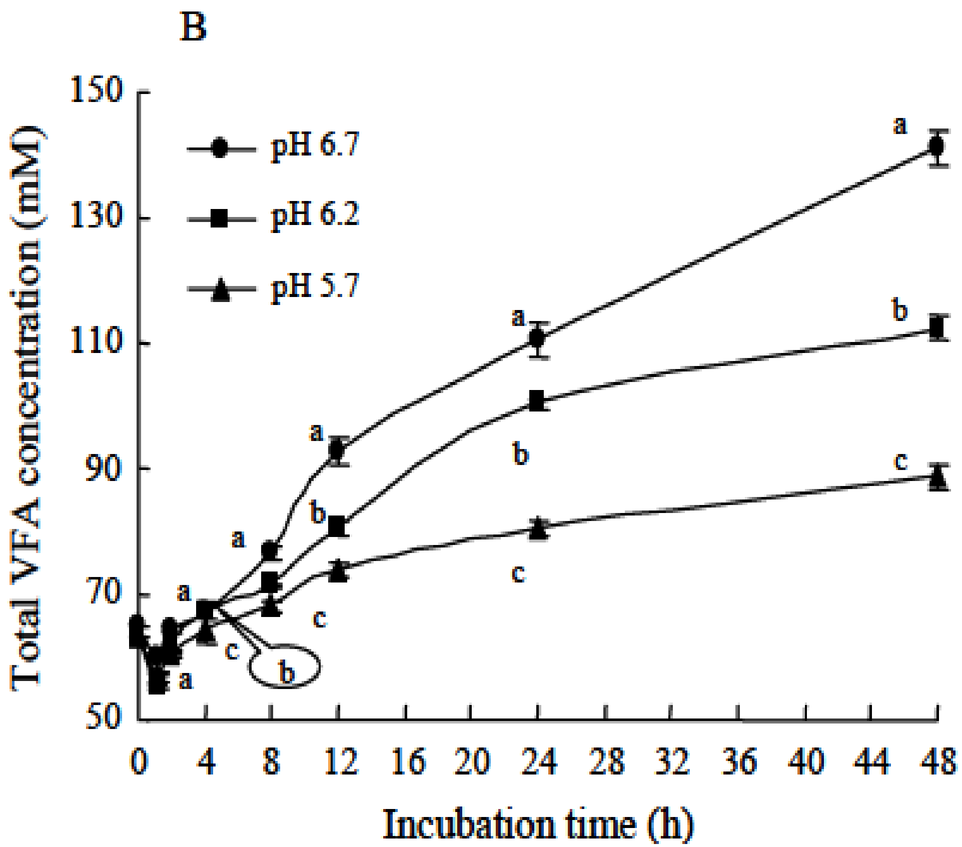
Oba y Allen, 2003, J. Dairy Sci. 86:184.

Ph ruminal y la tasa de digestión del FDN.



Cerrados: 32% Almidones.
Abiertos: 21% Almidones.

Círculos: Maíz grano húmedo.
Triangulos: Maíz molido seco.



Low Ruminal pH Reduces Dietary Fiber Digestion via Reduced Microbial Attachment

Ha Guyn Sung, Yasuo Kobayashi[1], Jongsoo Chang[2], Ahnul Ha, Il Hwan Hwang and J. K. Ha*
School of Agricultural Biotechnology, College of Agriculture and Life Sciences
Seoul National University, Seoul 151-742, Korea

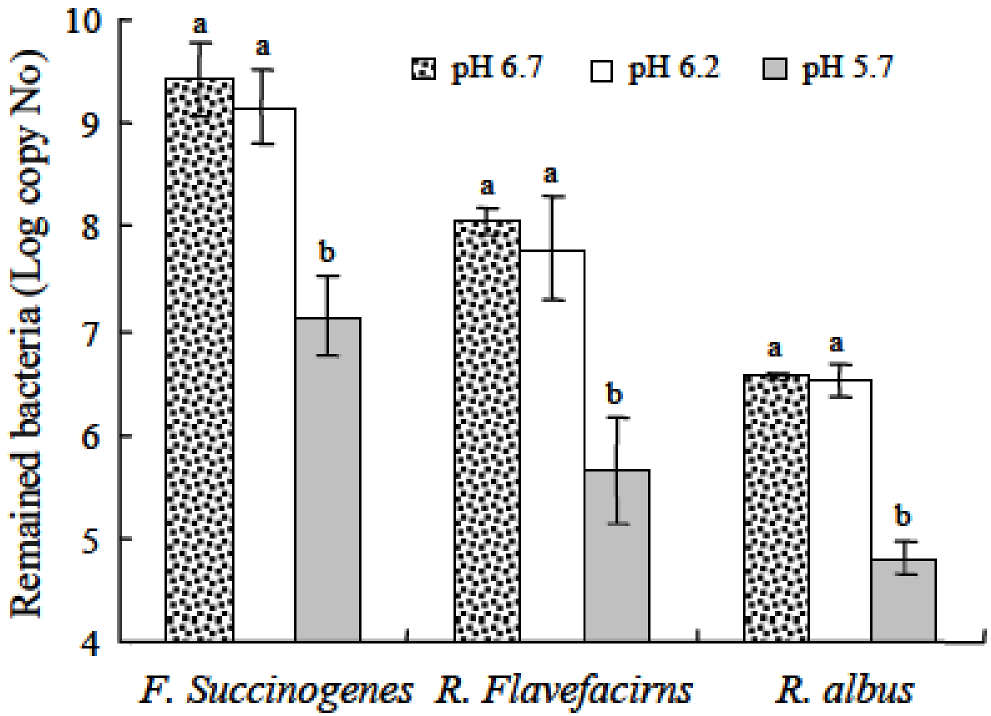


Figure 3. Effects of different pH in washing solution on the detachment of bacteria colonized on filter paper ([a, b, c] Means with different letters differ at $p<0.05$).••

Ha Guyn Sung, Yasuo Kobayashi[1], Jongsoo Chang[2], Ahnul Ha, Il Hwan Hwang and J. K. Ha
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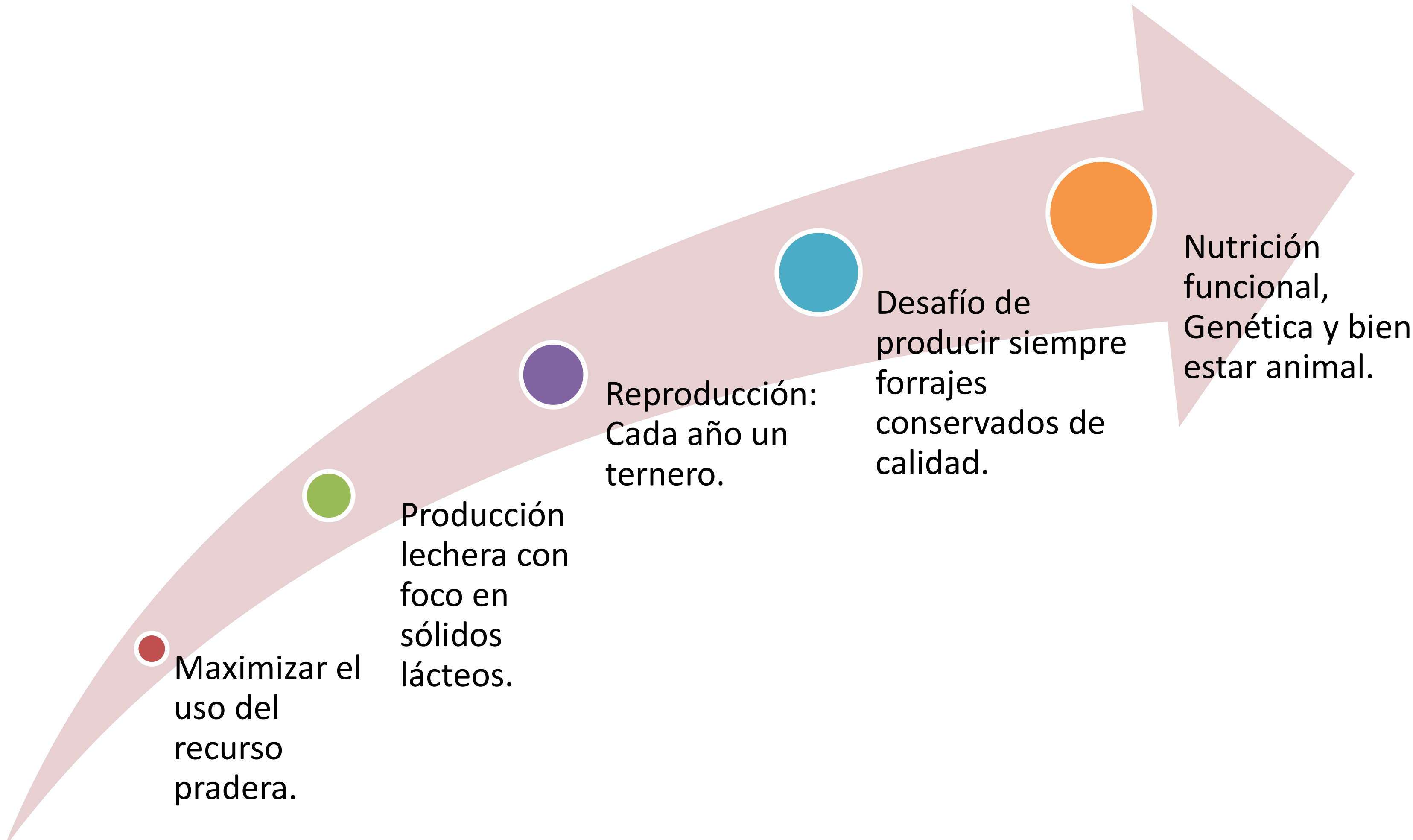
Seoul National University, Seoul 151-742, Korea

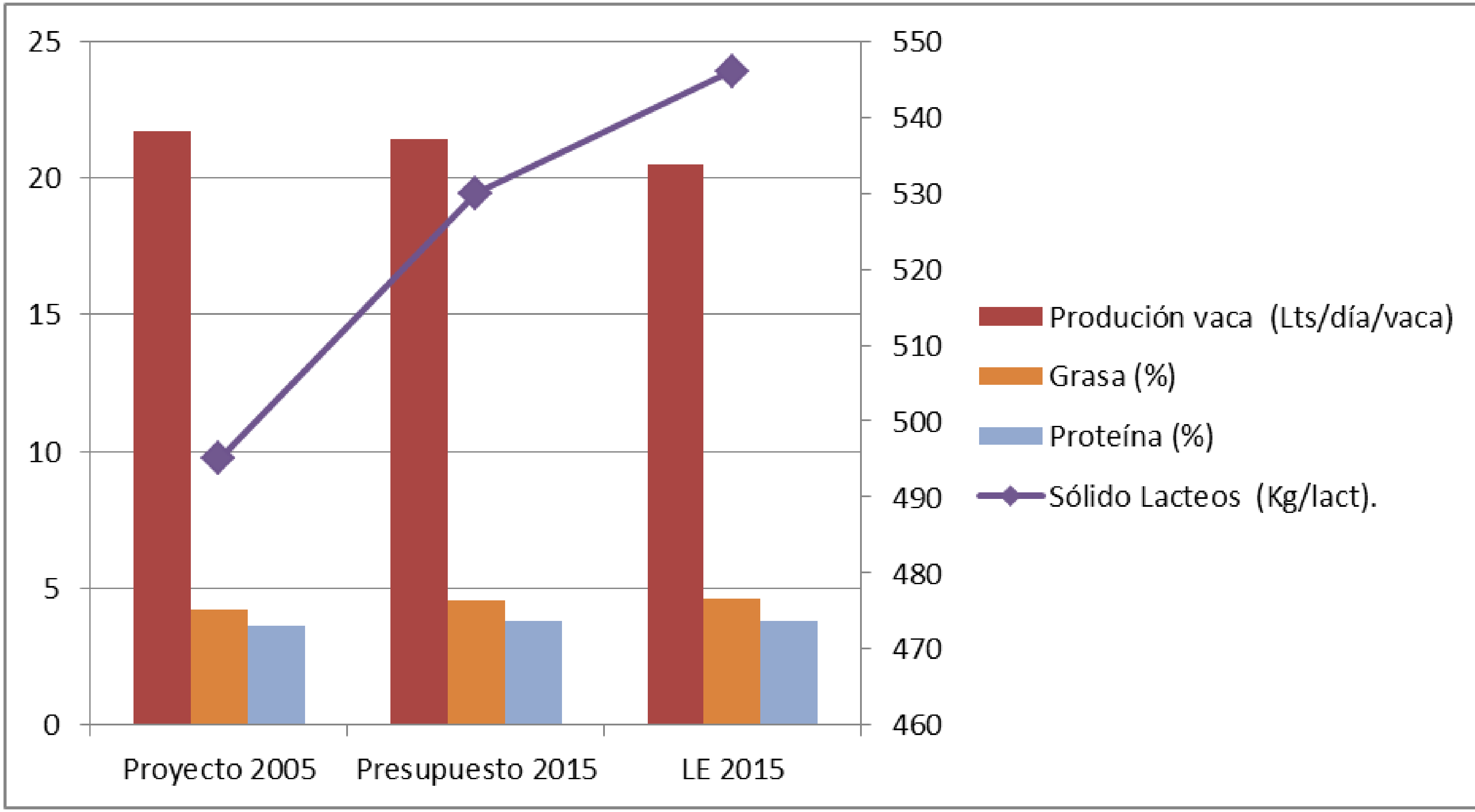
Pilares productivos relevantes en sistemas pastoriles en el sur de Chile.



Proyecto (2005).
Unitario.

Desarrollo Histórico (Unitario) Fuente: Control Lechero Oficial Cooprinsem.							
	Año	Nº Vacas masa	Prod. (Lts/día/vaca)	Producción Lactancia Terminada (Kg).	Sólido Lacteos (Kg).	Grasa (%)	Proteína (%)
	2006	227	16,1	4.186,00	s/i	s/i	s/i
	2007	413	16,9	4.478,00	301	3,62	3,31
	2008	516	18,8	5.000,00	338	3,67	3,31
	2009	592	18,5	4.930,00	325	3,43	3,36
	2010	661	20,4	6.000,00	425	3,86	3,43
	2011	741	21,7	6.195,00	440	3,87	3,46
	2012	810	20,1	6.576,00	494	4,09	3,65
	2013	954	20,8	6.673,00	510	4,10	3,69
	2014	1034	21,4	6.587,00	522	4,41	3,76
Presupuesto	2015	1023	21,4	6.860,00	530	4,55	3,80
Proyecto (2005)	2015	1000	21,7	6.500,00	495	4,20	3,65
LE 2015	2015	1057	20,5	6.500,00	546	4,60	3,80

Proyectado v/s Presupuesto v/s LE.
Valores Unitarios.

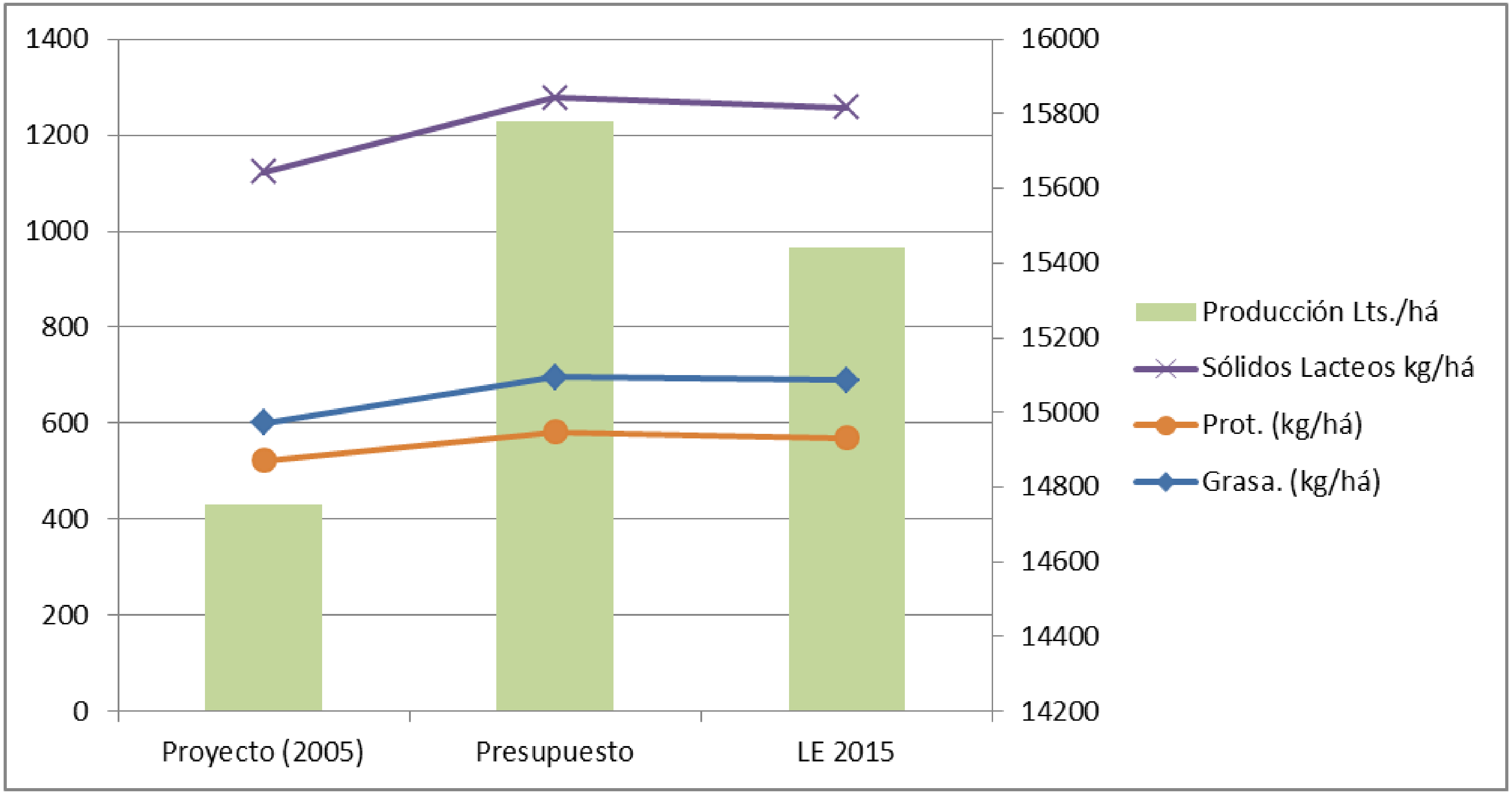


Proyecto Lumaco (2005).
Superficie.

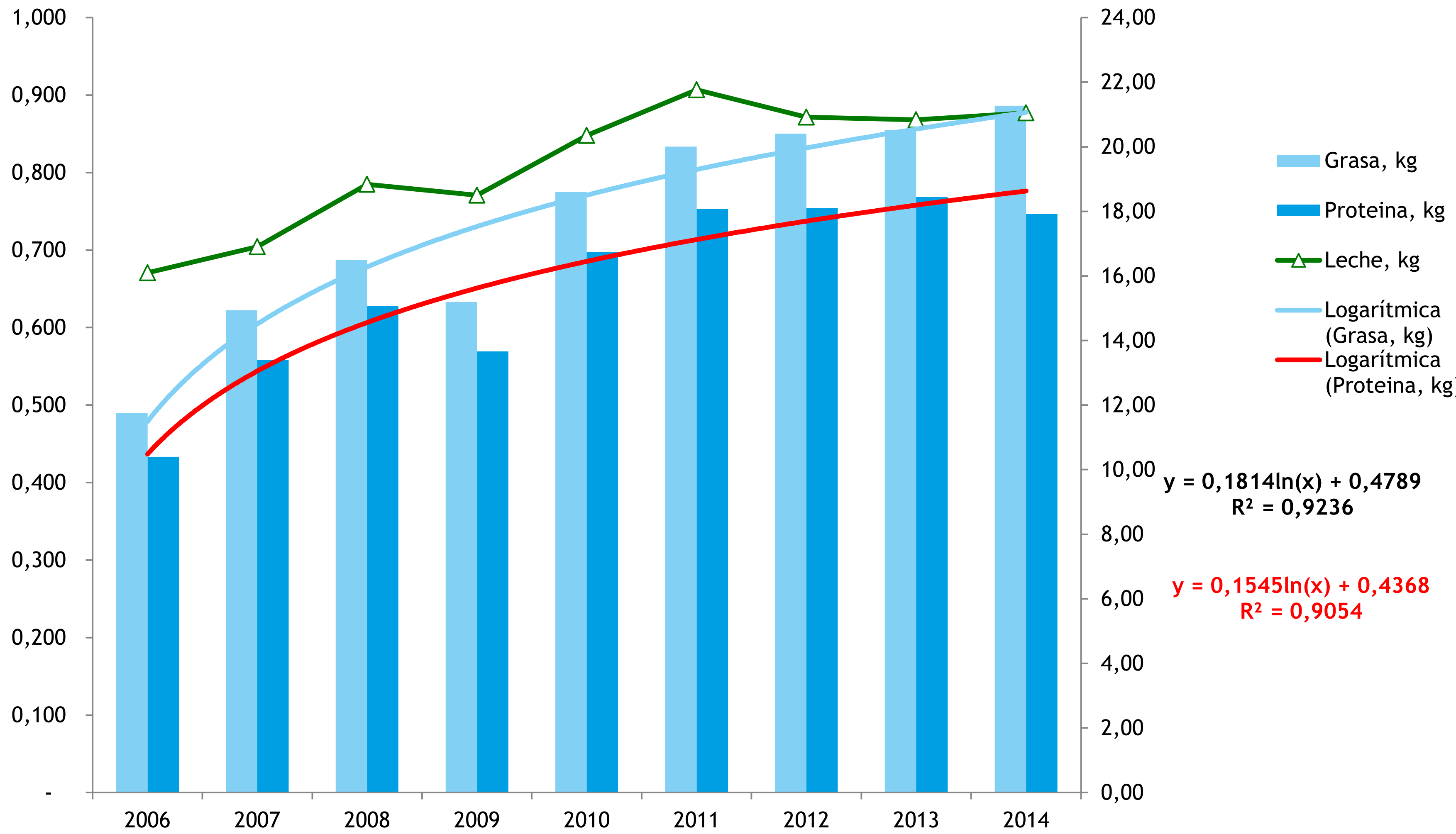
Desarrollo Histórico (Superficie) Fuente: Control Lechero Oficial Cooprinsem.							
Distrito L.	Año	Plataforma Lechera (há).	Densidad (vacas/há)	Producción Lts./há	Sólidos Lacteos kg/há	Prot. (kg/há)	Grasa. (kg/há)
Historico	2006	216	1,05	4.395,00	s/i	s/i	s/i
(real)	2007	256	1,61	7.209,00	485	231	253
	2008	296	1,74	8.700,00	589	279	310
	2009	321	1,84	9.071,00	597	296	302
	2010	351	1,88	11.287,00	798	376	423
	2011	377	1,96	12.142,00	863	408	456
	2012	421	1,92	12.626,00	948	447	501
	2013	426	2,24	14.947,00	1129	535	594
	2014	441	2,34	14.846,00	1177	541	635
Presupuesto	2015	445	2,30	15.778,00	1278	582	696
Proyecto (2005)	2015	440	2,27	14.755,00	1124	522	601
LE 2015	2015	445	2,38	15.440,00	1258	569	689

Proyectado v/s Presupuesto v/s LE.

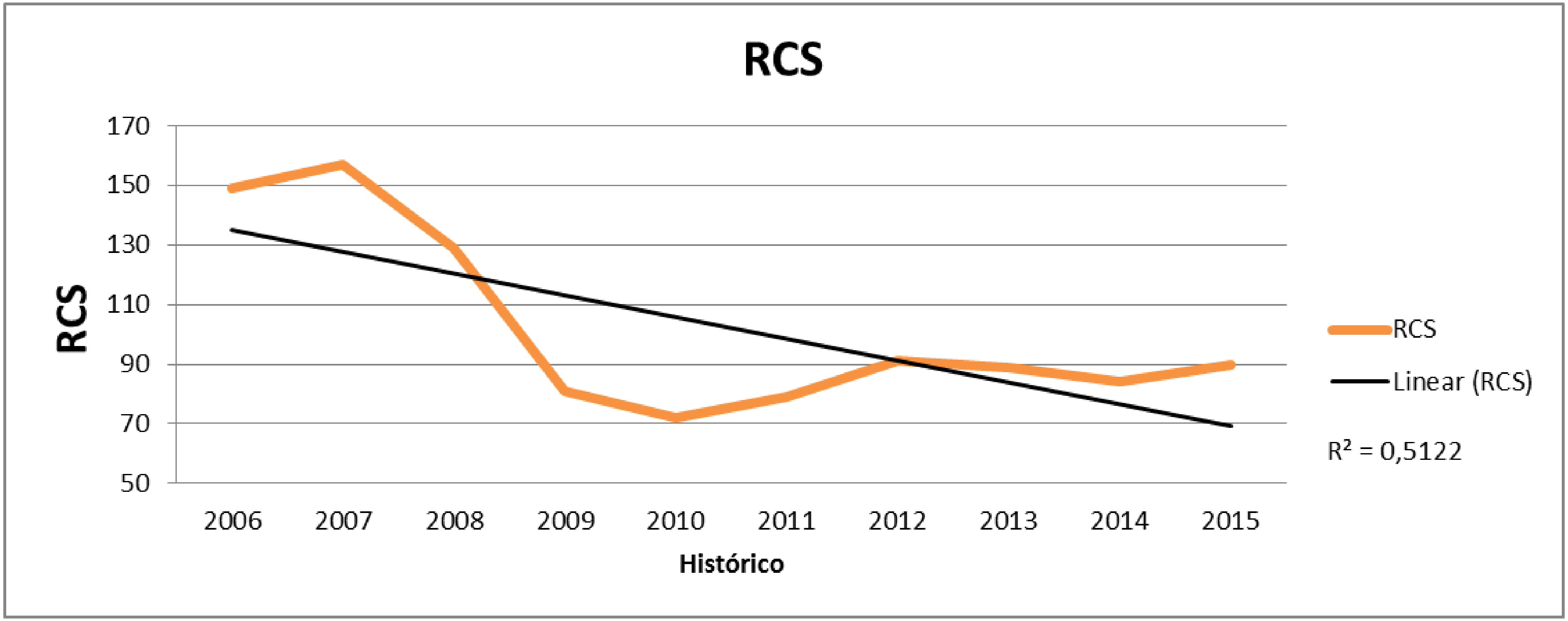
Valores por superficie.



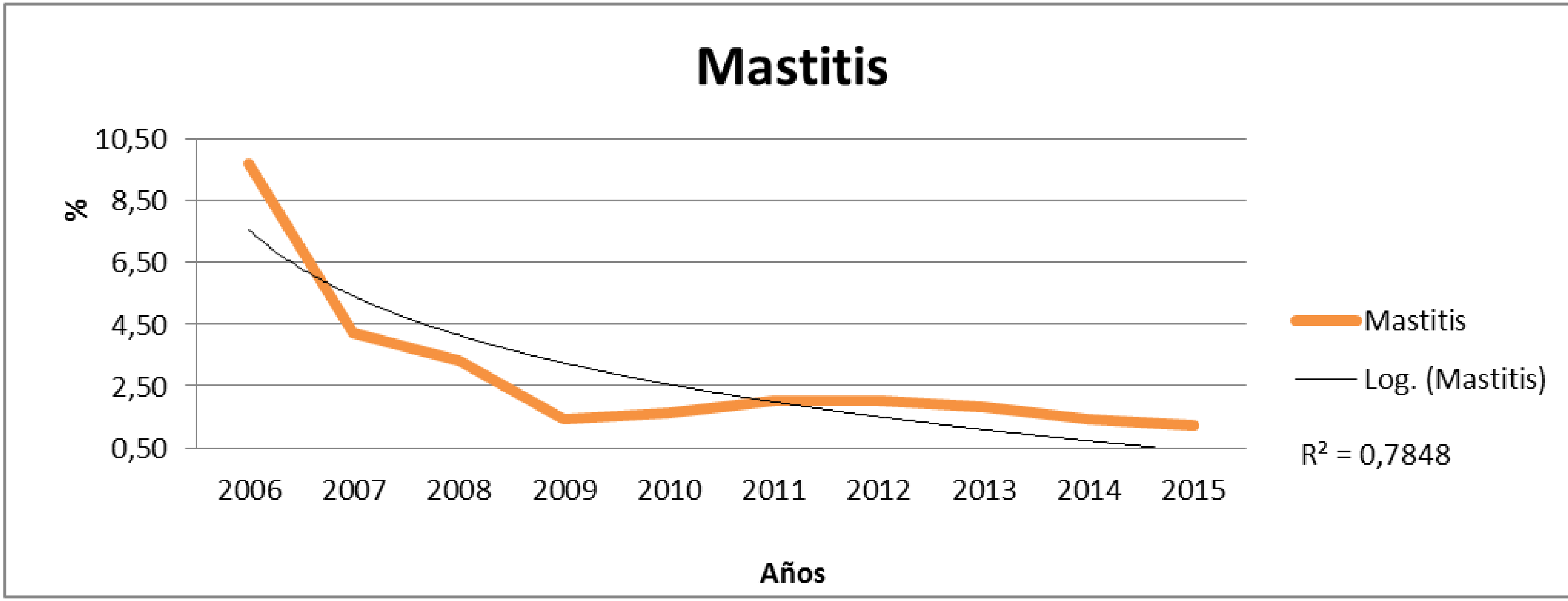
Evolución histórica productiva.



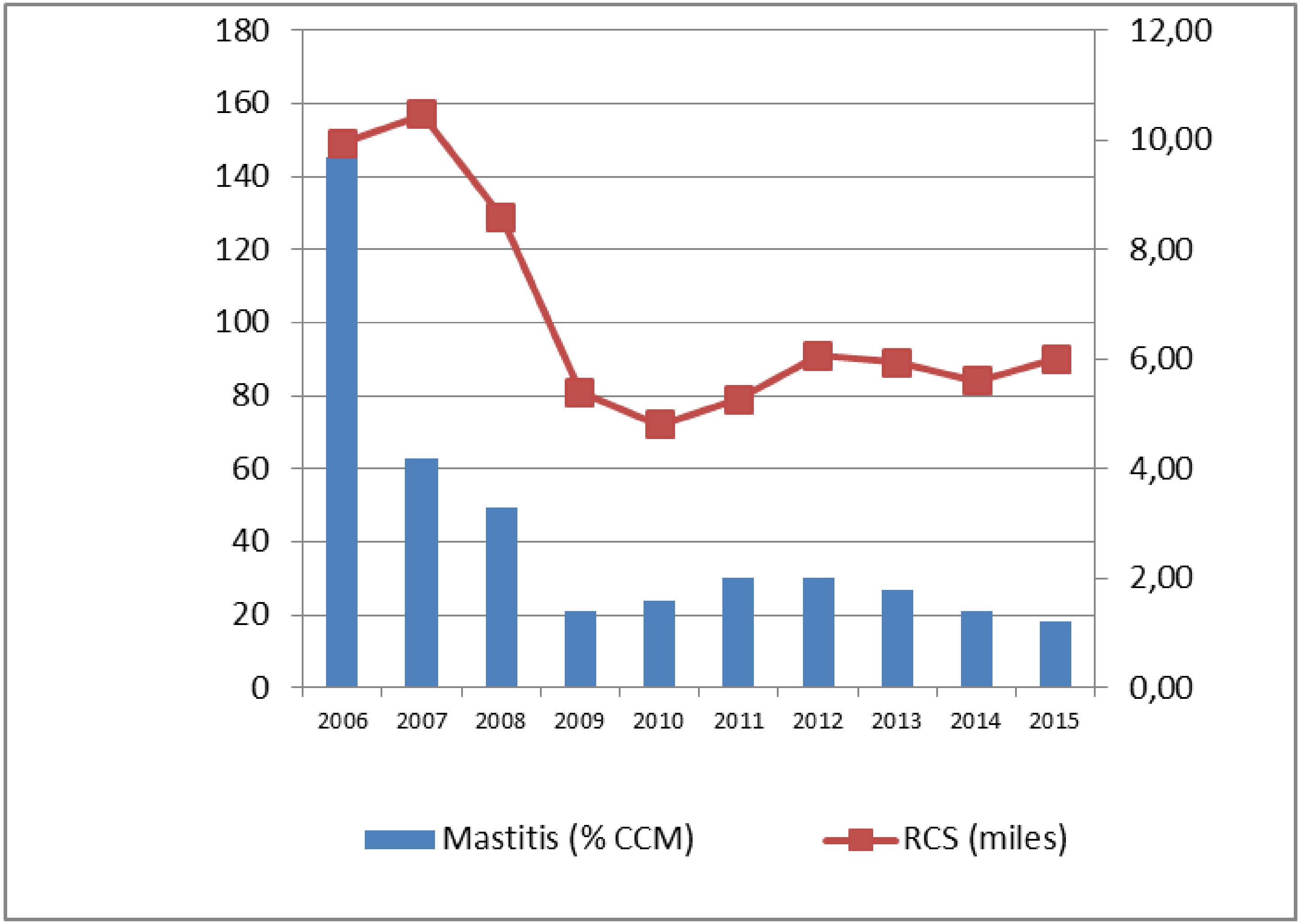
Evolución histórica Recuentos Células Somáticas.



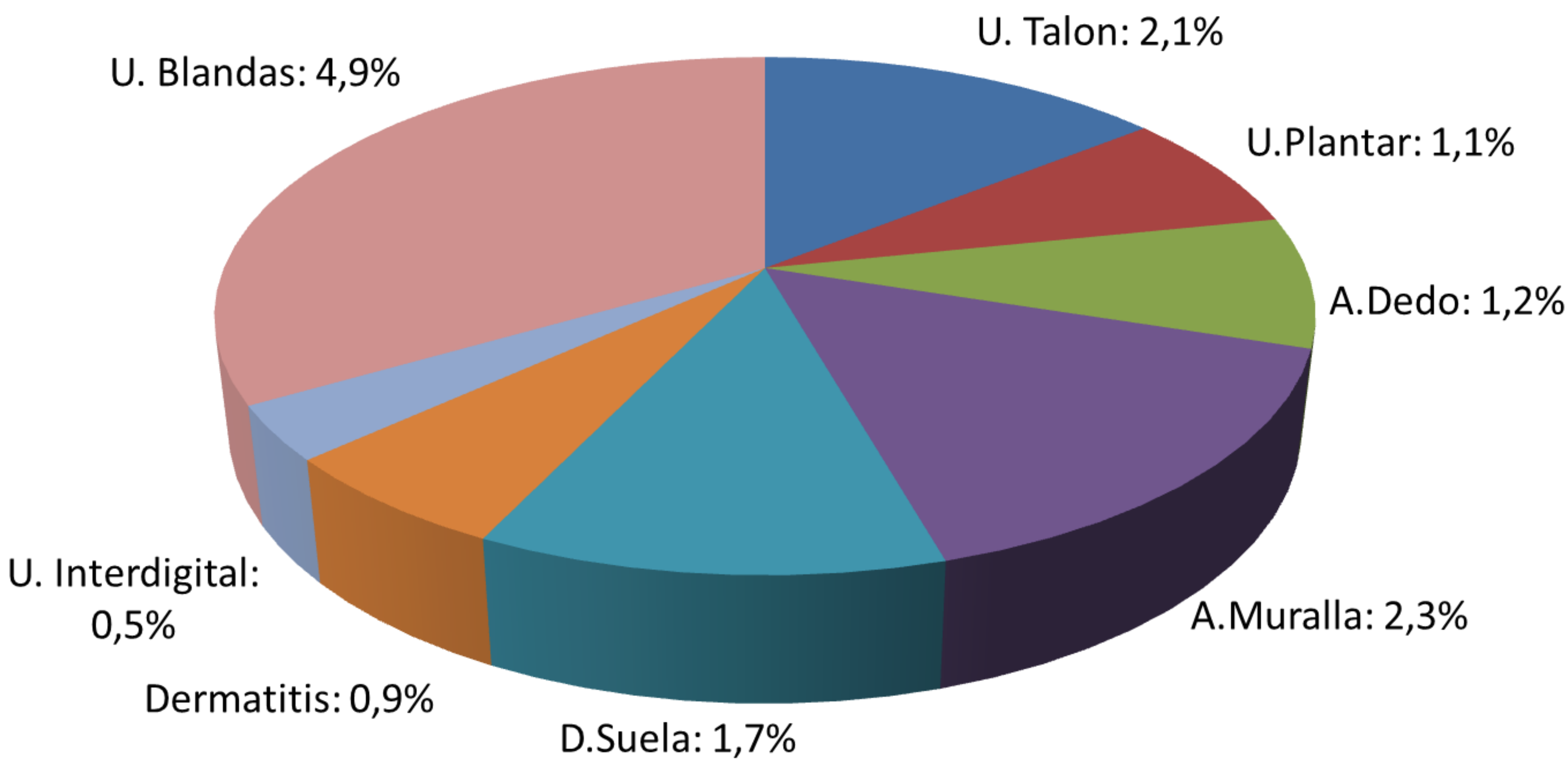
Evolución histórica Recuentos Mastitis (% casos clínicos mes).



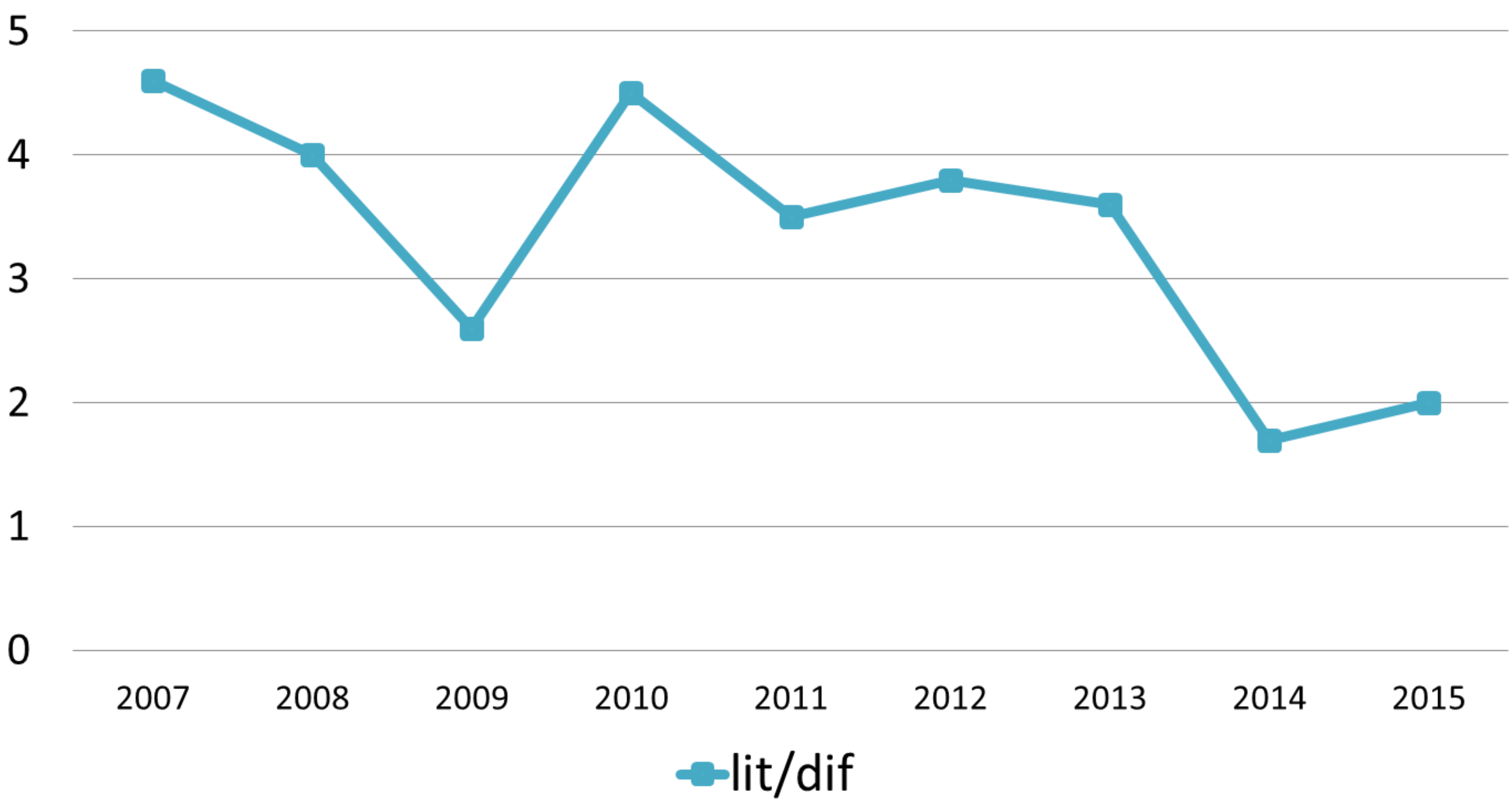
Relación Mastitis (% casos clínicos mes) y Recuentos de Células Somáticas.

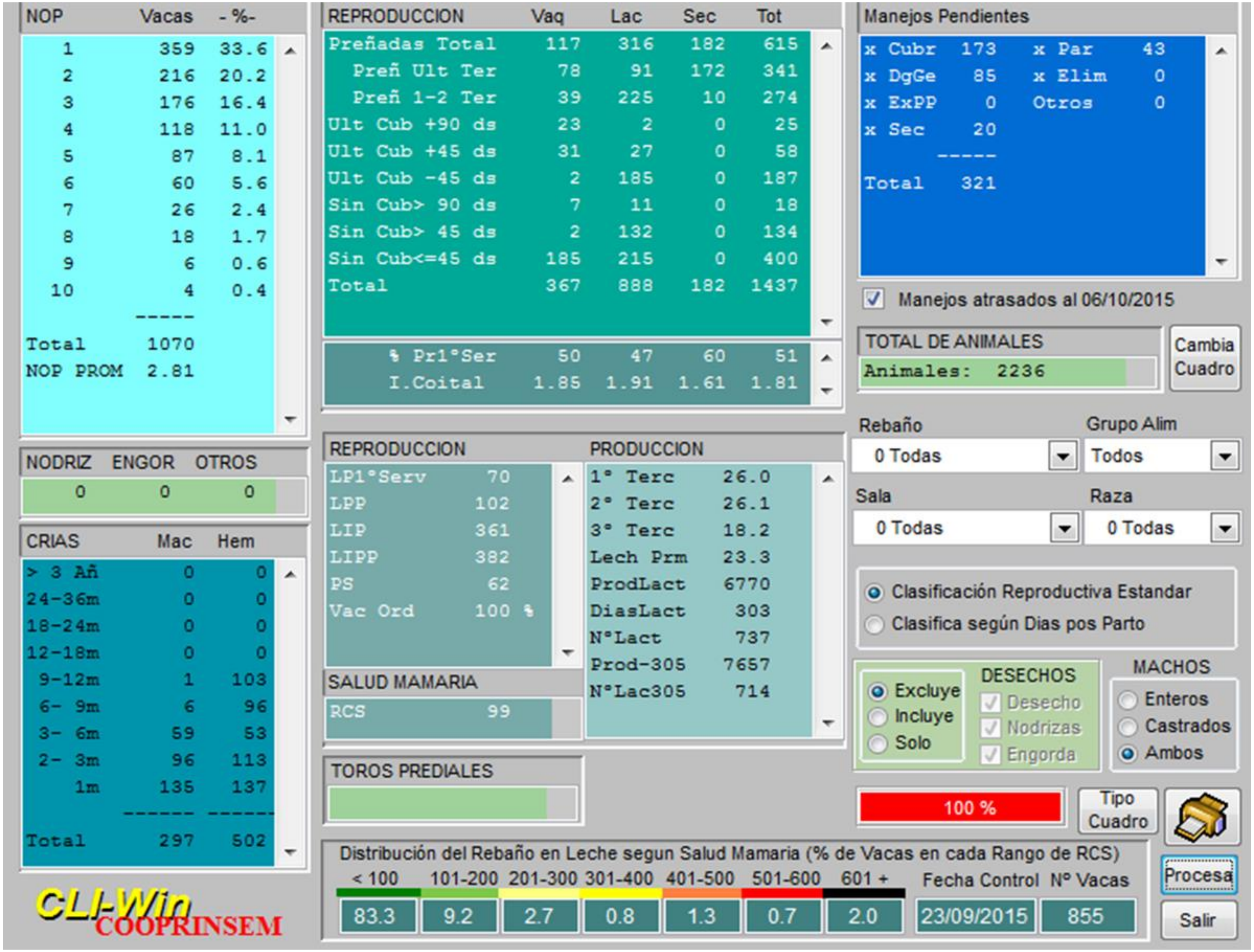


Enfermedades pódales año 2014.
% de incidencias en vacas tratadas (3% del rebaño).



Histórico diferencial (lts).
Lote fresco v/s Lote cojas.




NOP Vacas - %-
1 359 33.6
2 216 20.2
3 176 16.4
4 118 11.0
5 87 8.1
6 60 5.6
7 26 2.4
8 18 1.7
9 6 0.6
10 4 0.4

Total 1070
NOP PROM 2.81
REPRODUCCION Vaq Lac Sec Tot
Preñadas Total 117 316 182 615
Preñ Ult Ter 78 91 172 341
Preñ 1-2 Ter 39 225 10 274
Ult Cub +90 ds 23 2 0 25
Ult Cub +45 ds 31 27 0 58
Ult Cub -45 ds 2 185 0 187
Sin Cub> 90 ds 7 11 0 18
Sin Cub> 45 ds 2 132 0 134
Sin Cub<=45 ds 185 215 0 400
Total 367 888 182 1437
% Pr1°Ser 50 47 60 51
I.Coital 1.85 1.91 1.61 1.81
Manejos Pendientes
x Cubr 173 x Par 43
x DgGe 85 x Elim 0
x ExPP 0 Otros 0
x Sec 20

Total 321
Manejos atrasados al 06/10/2015
TOTAL DE ANIMALES
Animales: 2236
Cambia Cuadro
NODRIZ ENGOR OTROS
0 0 0
REPRODUCCION
LP1°Serv 70
LPP 102
LIP 361
LIPP 382
PS 62
Vac Ord 100 %
PRODUCCION
1° Terc 26.0
2° Terc 26.1
3° Terc 18.2
Lech Prm 23.3
ProdLact 6770
DiasLact 303
N°Lact 737
Prod-305 7657
N°Lac305 714
SALUD MAMARIA
RCS 99
Rebaño
0 Todas
Grupo Alim
Todos
Sala
0 Todas
Raza
0 Todas
Clasificación Reproductiva Estandar
Clasifica según Dias pos Parto
DESECHOS
Excluye
Incluye
Solo
Desecho
Nodrizas
Engorda
MACHOS
Enteros
Castrados
Ambos
CRIAS Mac Hem
> 3 Añ 0 0
24-36m 0 0
18-24m 0 0
12-18m 0 0
9-12m 1 103
6- 9m 6 96
3- 6m 59 53
2- 3m 96 113
1m 135 137
------ ------
Total 297 502
TOROS PREDIALES
100 %
Tipo Cuadro
Distribución del Rebaño en Leche segun Salud Mamaria (% de Vacas en cada Rango de RCS)
< 100 101-200 201-300 301-400 401-500 501-600 601 +
83.3 9.2 2.7 0.8 1.3 0.7 2.0
Fecha Control N° Vacas
23/09/2015 855
Procesa
Salir
CLI-Win
COOPRINSEM

Cow Index .

Cow Index (fuente: CLO Cooprinsem sept. 2015)						
Percentil	**Leche**	**% Vacas**	**Grasa**	**% Vacas**	**Proteína**	**% Vacas**
90-99	786	**2%**	33,5	**21**	24,1	**14**
80-89	581	**4%**	20,7	**15**	16,1	**18**
70-79	408	**4%**	14,3	**10**	11,9	**13**
60-69	286	8%	9,7	11	8,5	14
50-59	176	8%	6	10	5,6	12
40-49	78	14%	2,6	8	2,7	10
30-49	-2	11%	-1,4	4	0,3	7
20-29	-132	16%	-4,4	5	-2,2	5
10-19	-287	20%	-9,6	8	-5,9	4
1-9	-579	14%	-19	8	-13,2	3

Comparativo Northland NZ Farm- CH Lumaco Farm.
Fuente: Dairy Export Magazine July 2015, Pag, 11.

Physical Farm Data	**New Zealand**	**Lumaco**
Milking plataform area	318 ha	318 ha
Cows	875	950
Production	468 kg MS/cow	532 kg MS/cow
	1.281kg MS/ha	1.693 kg MS/ha
Pasture eaten	12.600 Kg DM/ha	9.480 Kg DM/ha
Milking suplement	1.420 Kg DM/cow	1.148 Kg DM/cow
		872 Kg DM/cow
Nitrogen	200 kg N/ha/year	210 kg N/ha/year
Cows/labour unit	219	105
Farm dairy	50-bail rotary	36 herringbone dairy
Dairy automation	DAL sensors, meal feeding	No
Empty rate	8% spring herd, 12% autumn	16%
Weeks of mating	10 weeks spring, 7 weeks autumn	All year
Wintering	200 cows grazed off	200 cows grazed off
Runoff leased or owned	81 ha	41 ha