Dairy Management

WISCONSIN
UNIVERSITY OF WISCONSIN–MADISON

DEPARTMENT OF DAIRY SCIENCE
University of Wisconsin-Madison

UW Extension
University of Wisconsin-Extension

Decisiones de manejo reproductivo con enfoque económico de la ganadería lechera

Víctor E. Cabrera, Ph.D.
Associate Professor
University of Wisconsin-Madison Dairy Science

Seminario Internacional Innovación en Reproducción de Rumiantes,
Universidad Nacional Micaela Bastidas de Apurímac-Perú, 21 octubre 2014

Valor económico de reproducción

Razones para mejorar reproducción

Producción
Mas leche producida

Reemplazos
Mas terneras

Remplazo selectivo
Mejor genética

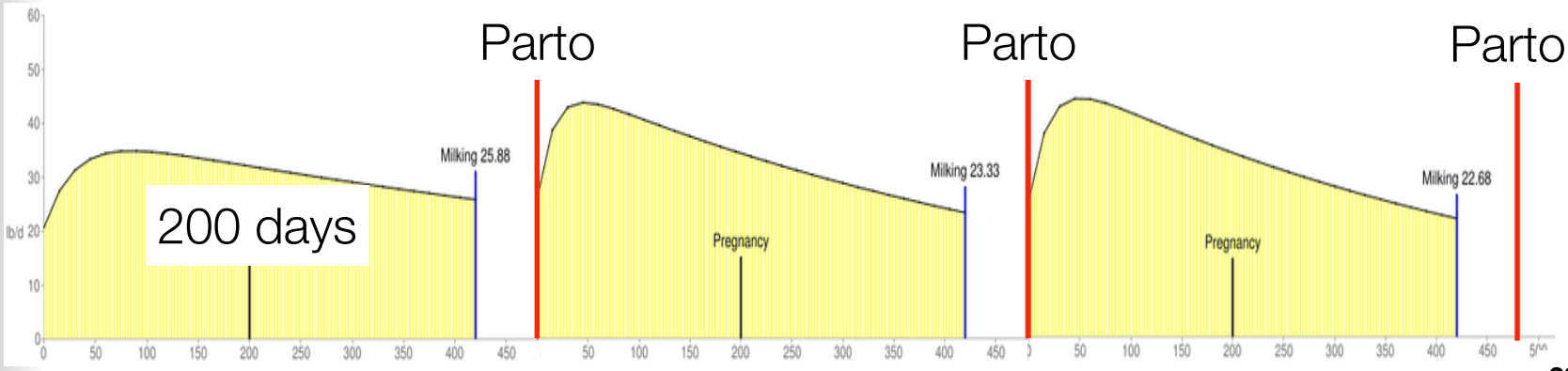
Descarte reproductivo
Mas vacas preñadas

Descarte involuntario
Vacas viven mas

Costos reproductivos
Relativamente menores

Producción y productividad

Mayor eficiencia productiva



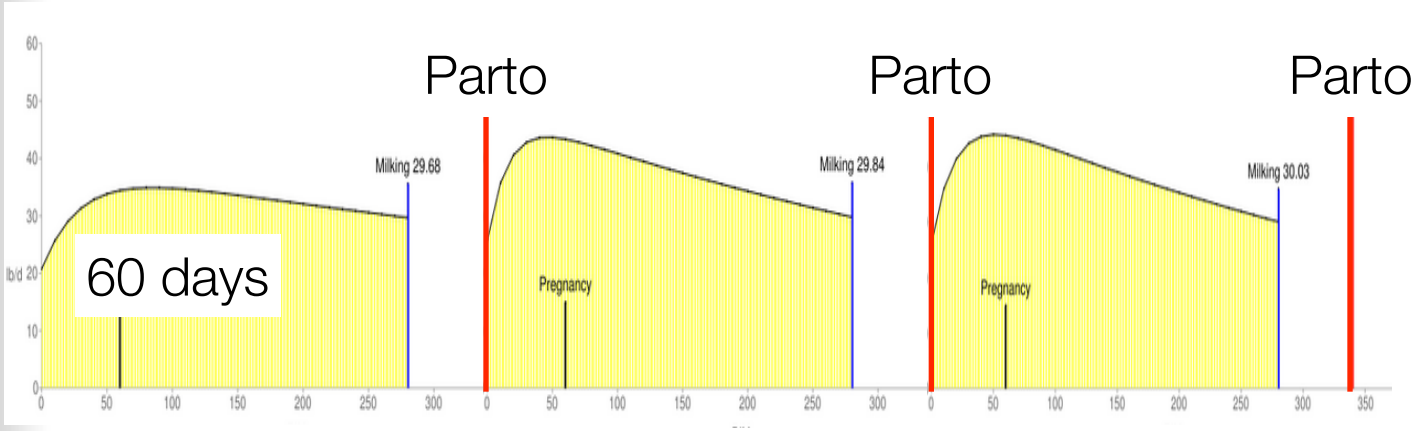
Leche

al año

41,485

10,515

28,713 in 1,020 d



30,224

10,815

30,224 in 1,020 d

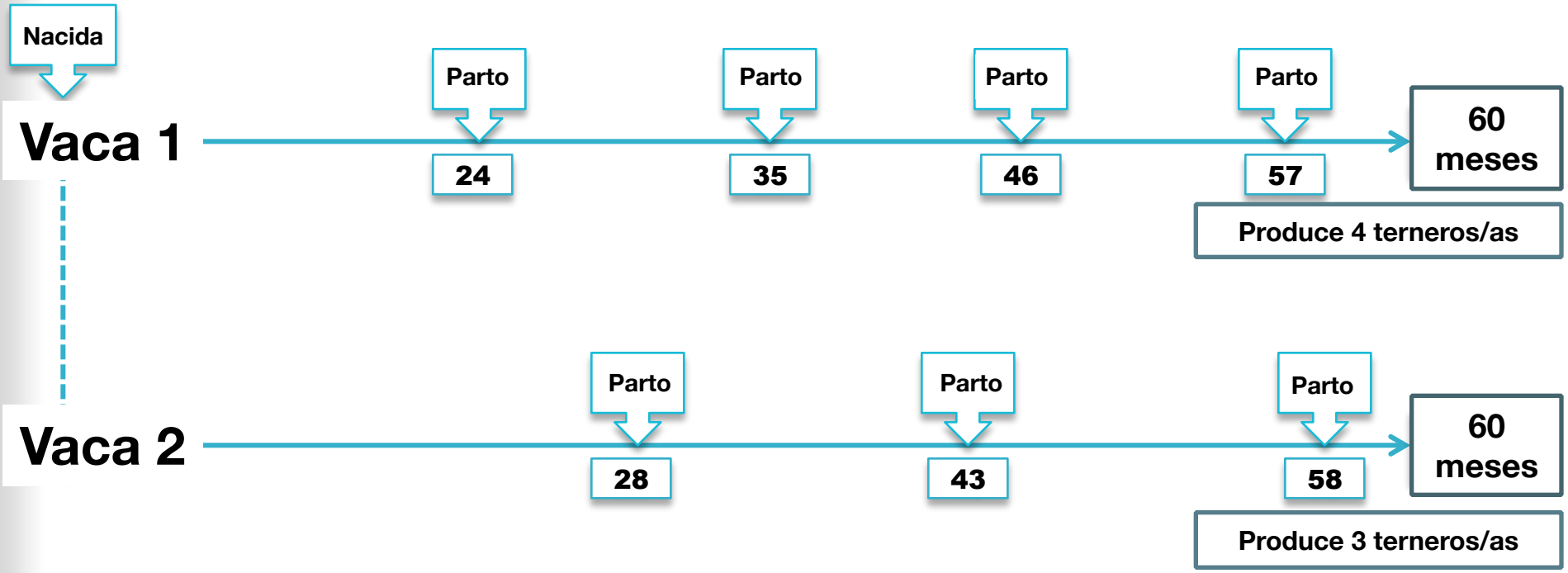
Mas productividad cuando preñada a 60 días: **300 lb/vaca.año**

Hato de 100 vacas a $0.20/lb: **$6,000 ganancia**

Hato de 100 Vaca a $0.20/lb: **$30,220 ganancia**

Reemplazos disponibles

Mas terneras y terneros



Mas terneros/as al año por vaca: **0.2**

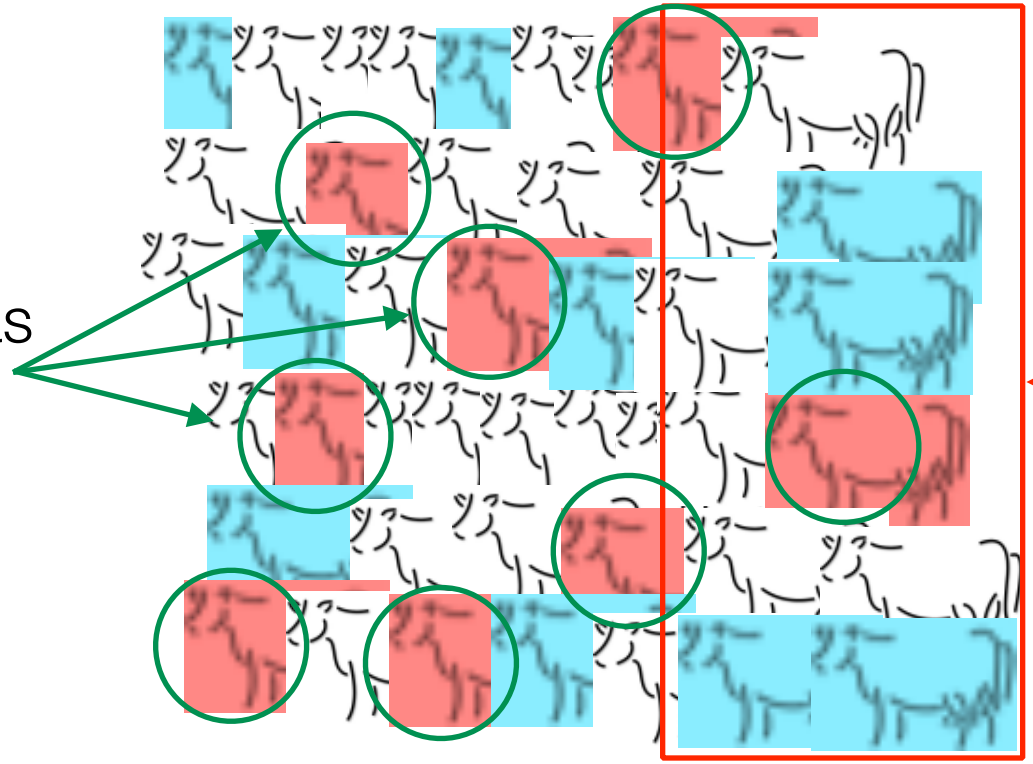
Hato de 100 vacas a $200: **$4,000 ganancia**

Remplazo selectivo

Desechar vacas menos productivas/más problemáticas

Buena reproducción

Mala reproducción

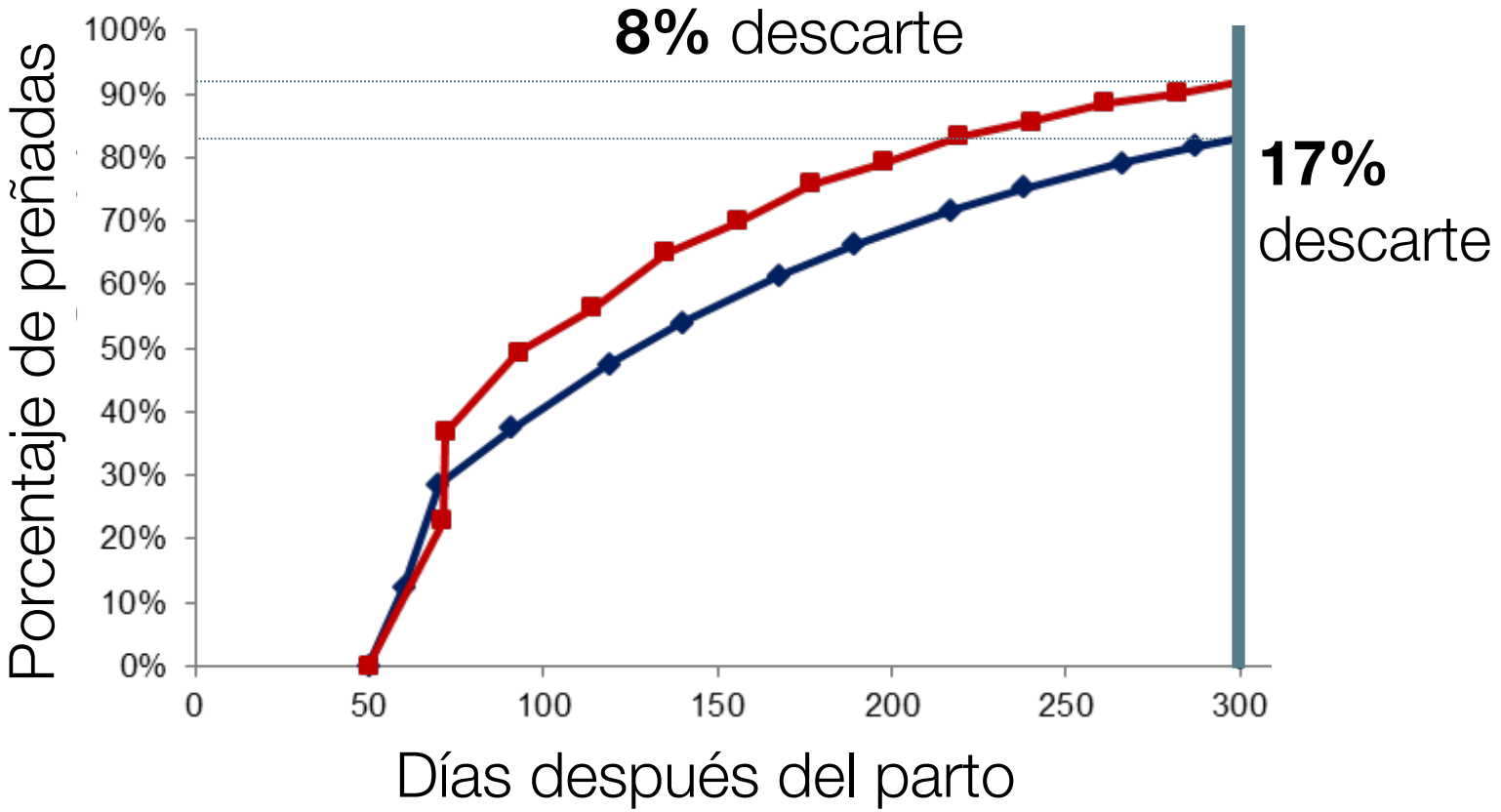


Seleccionadas para irse

Se tienen que ir

Descarte reproductivo

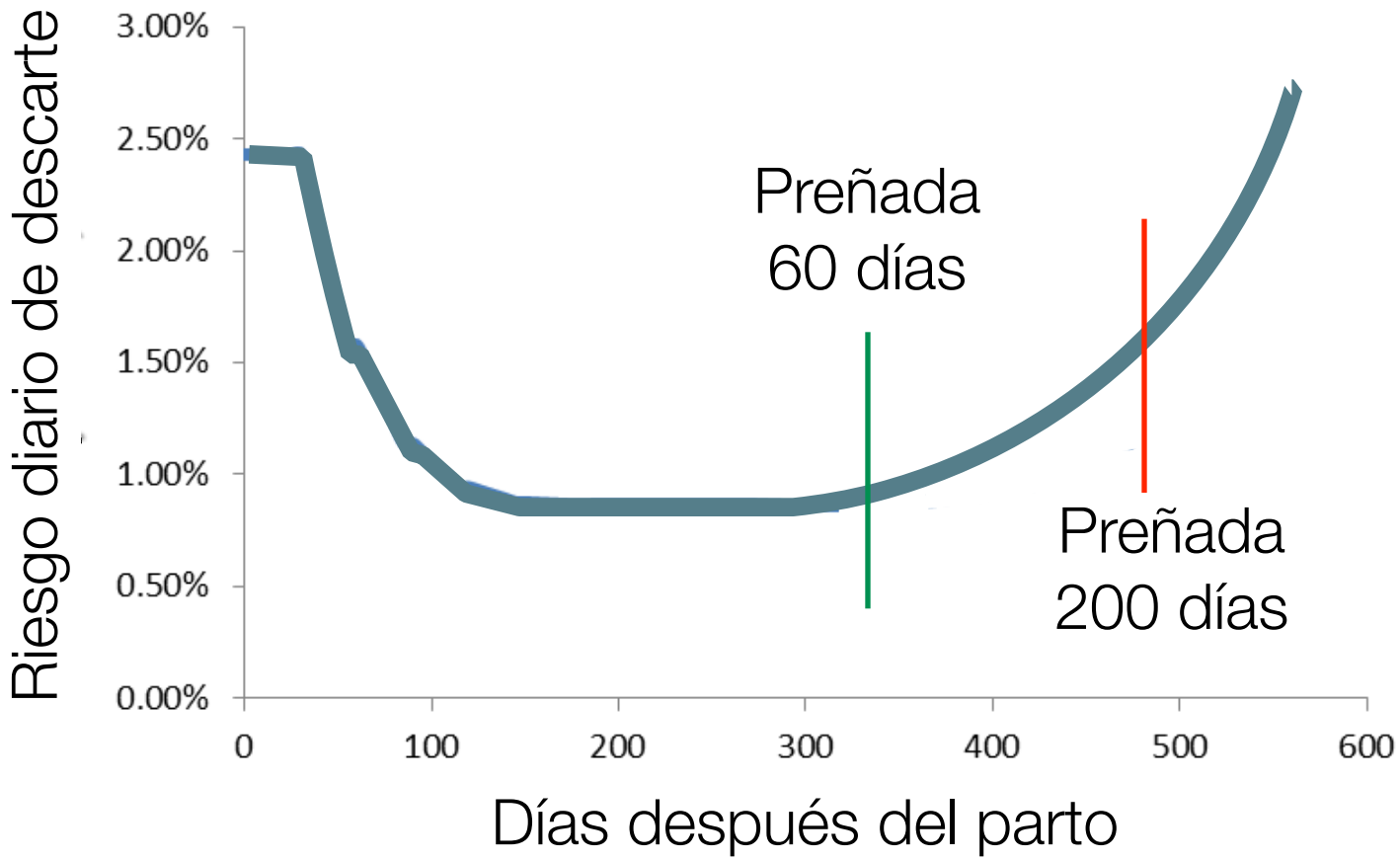
Menos vacas no preñadas desechadas



Hato de 100 vacas a $800: **$13,600 ganancia**

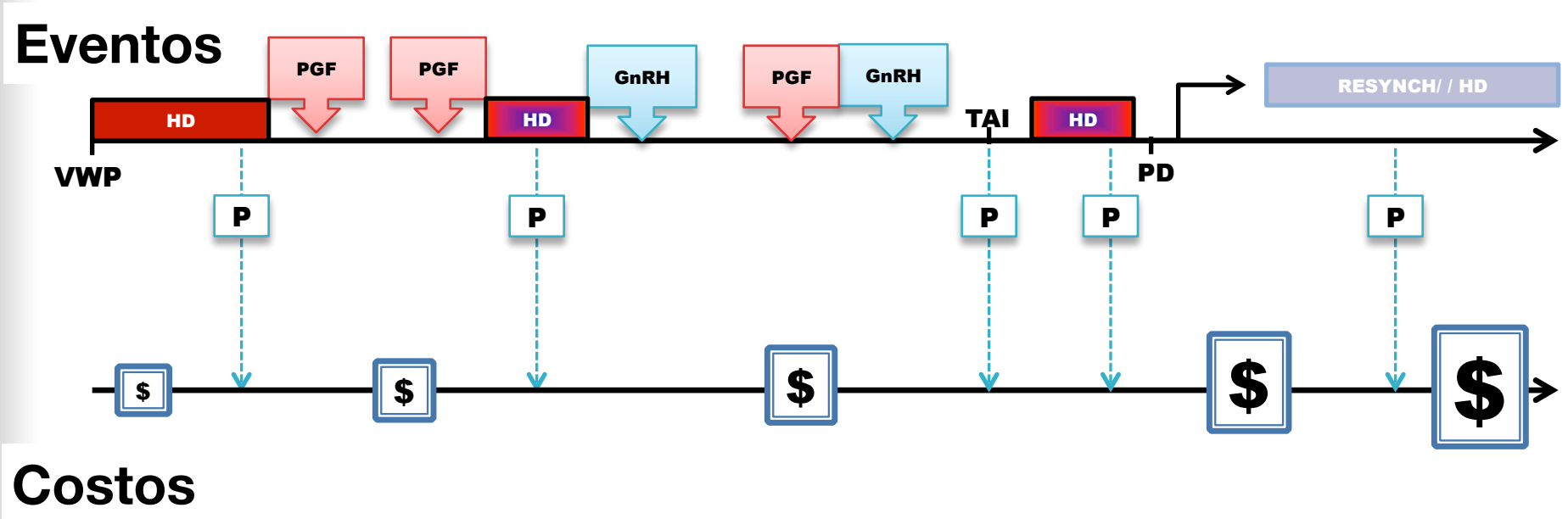
Descarte involuntario

Riesgo incrementa con duración de lactancia



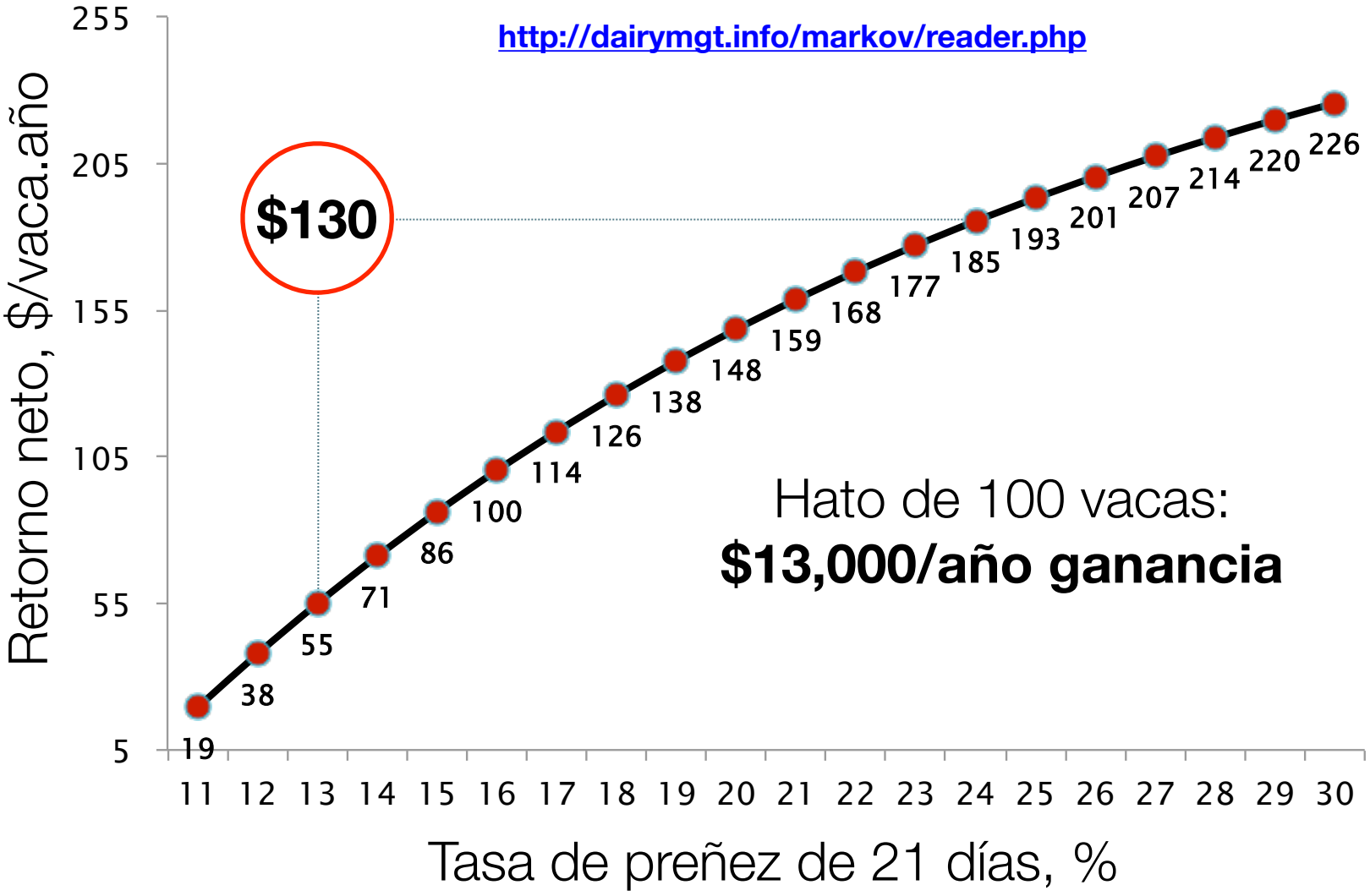
Costos reproductivos

Relación entre eficiencia reproductiva e inversiones



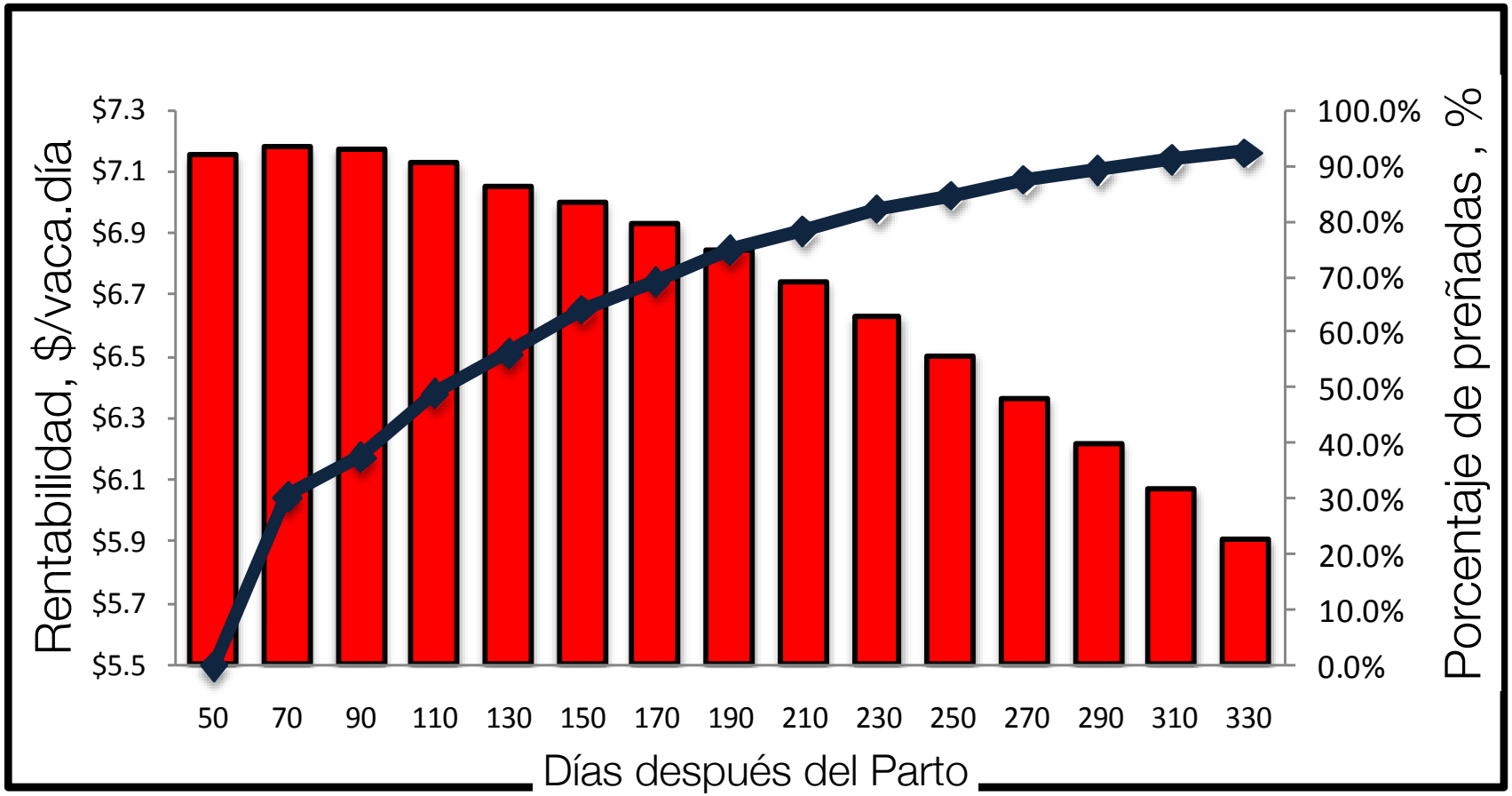
Un resumen

Valor de mejora de reproducción



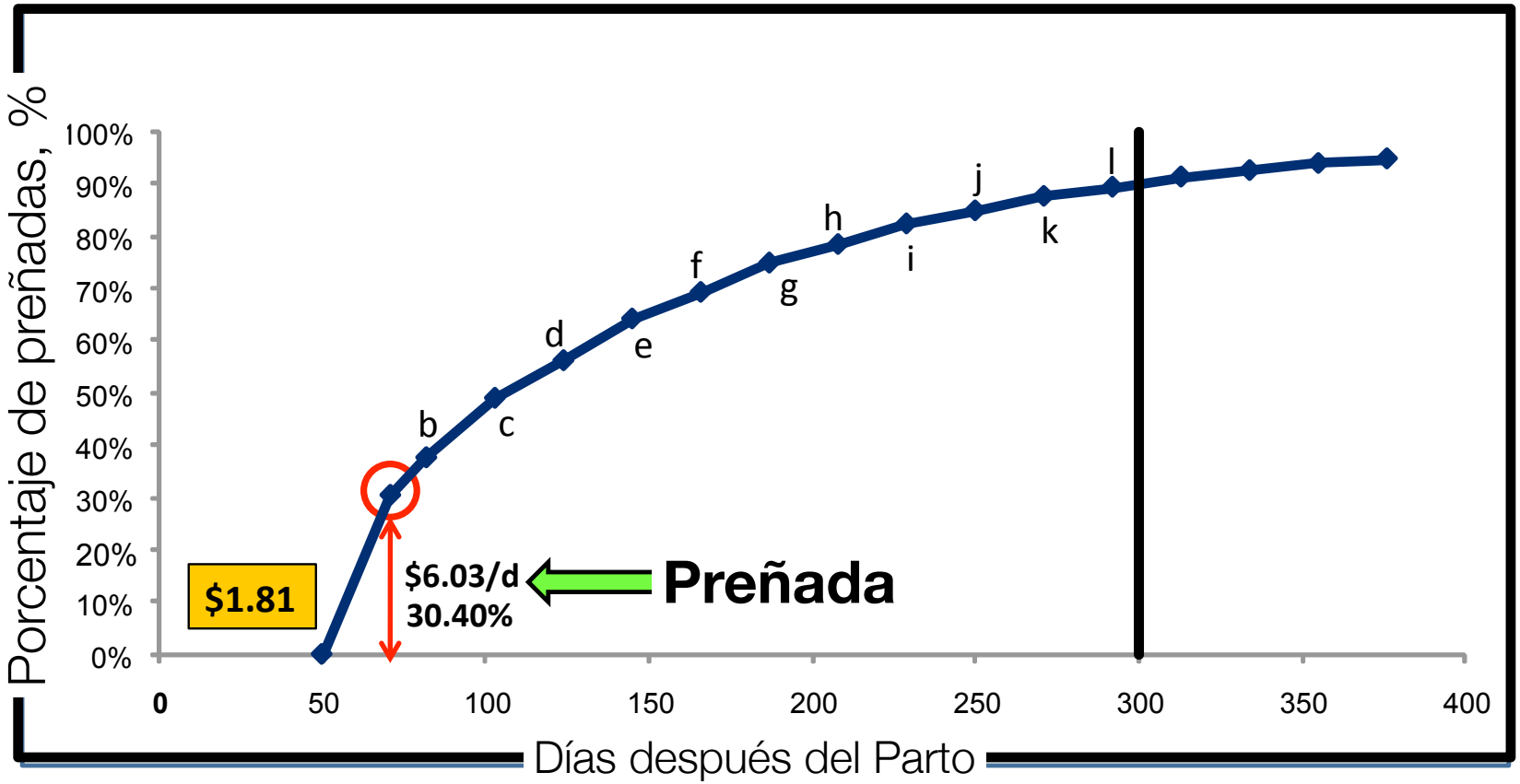
Rentabilidad total

Como podemos combinar todos los factores



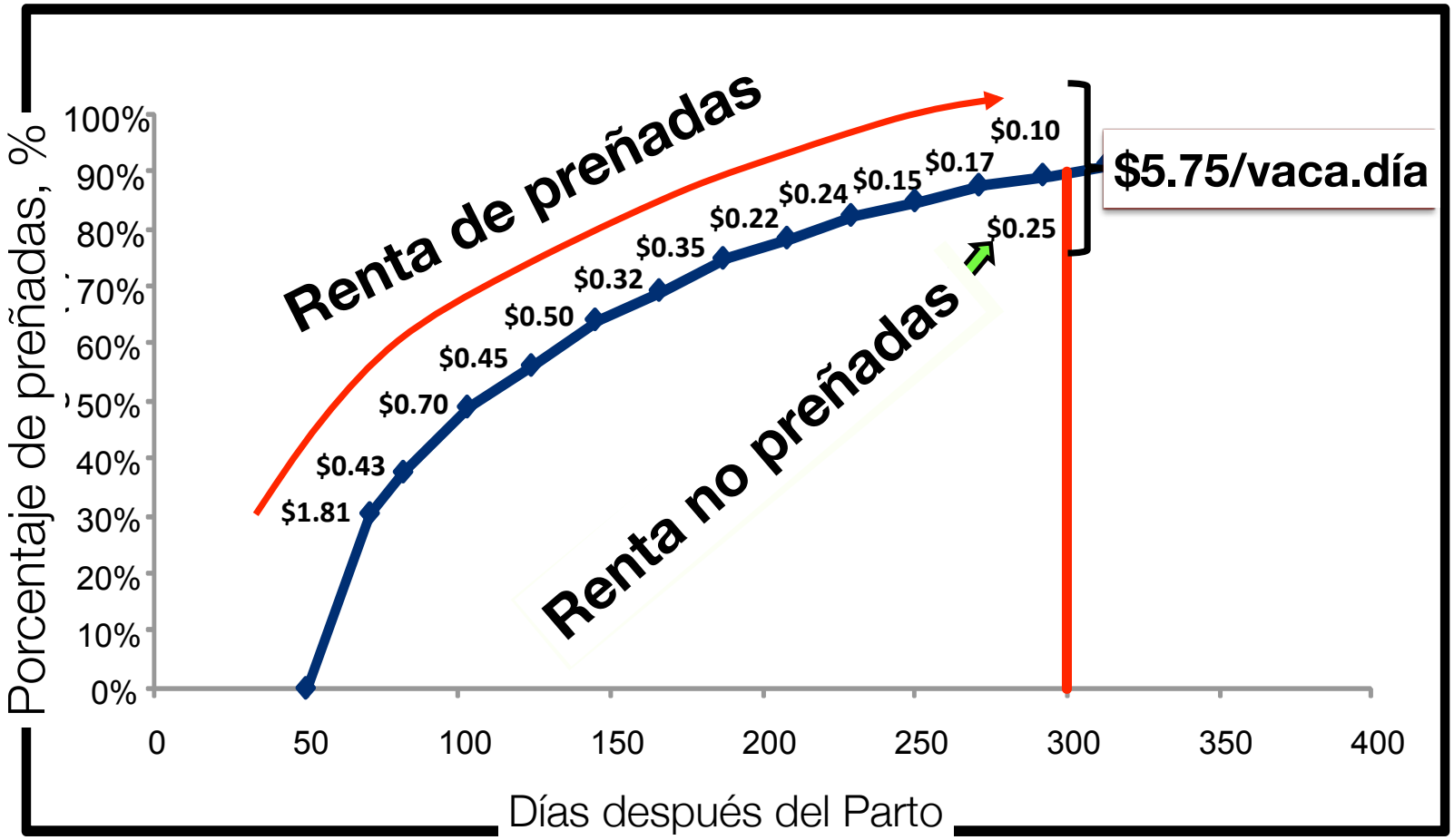
Rentabilidad de la reproducción

Integrando el valor y el hato



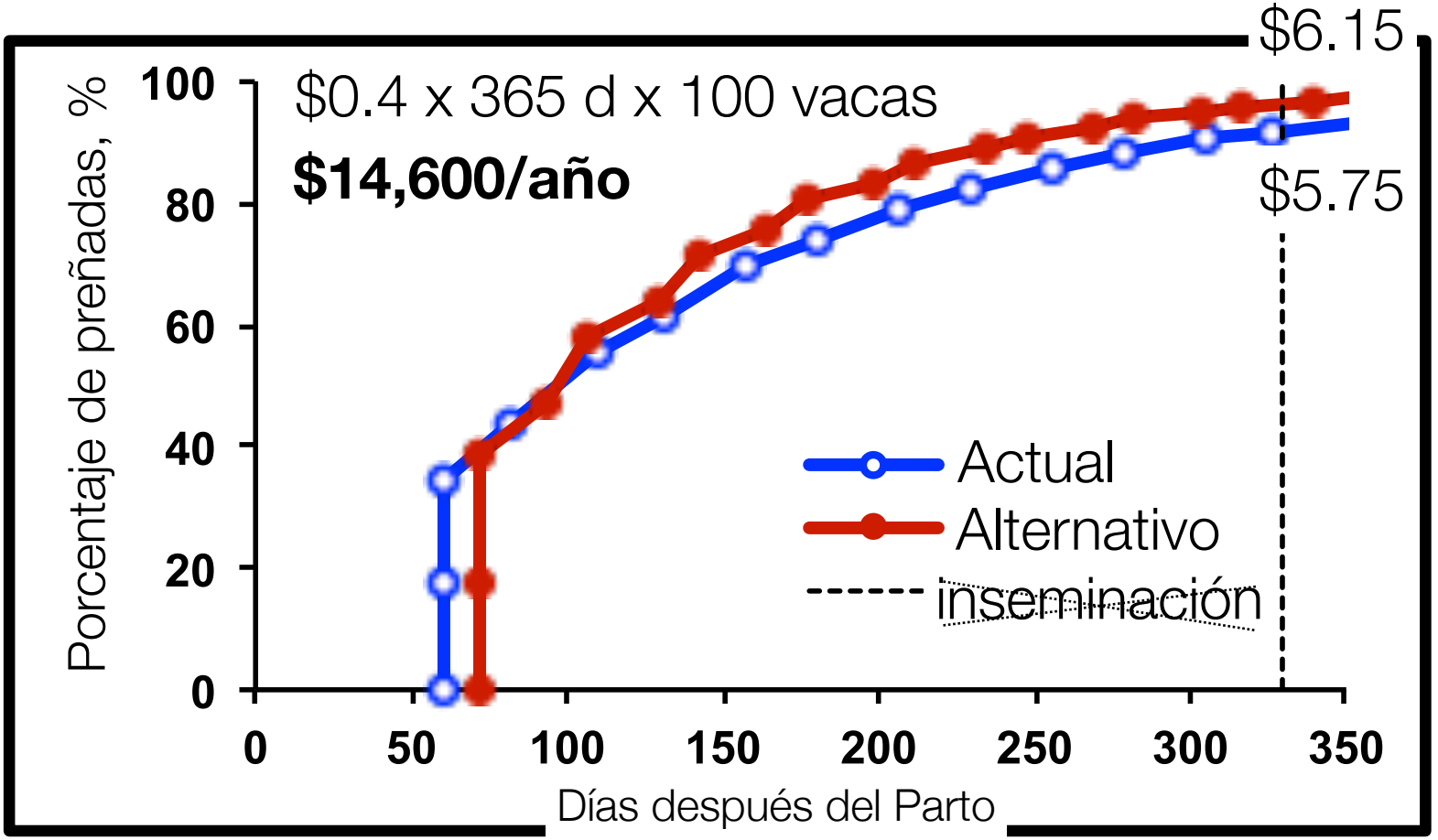
Rentabilidad de la reproducción

Poniendo todo junto



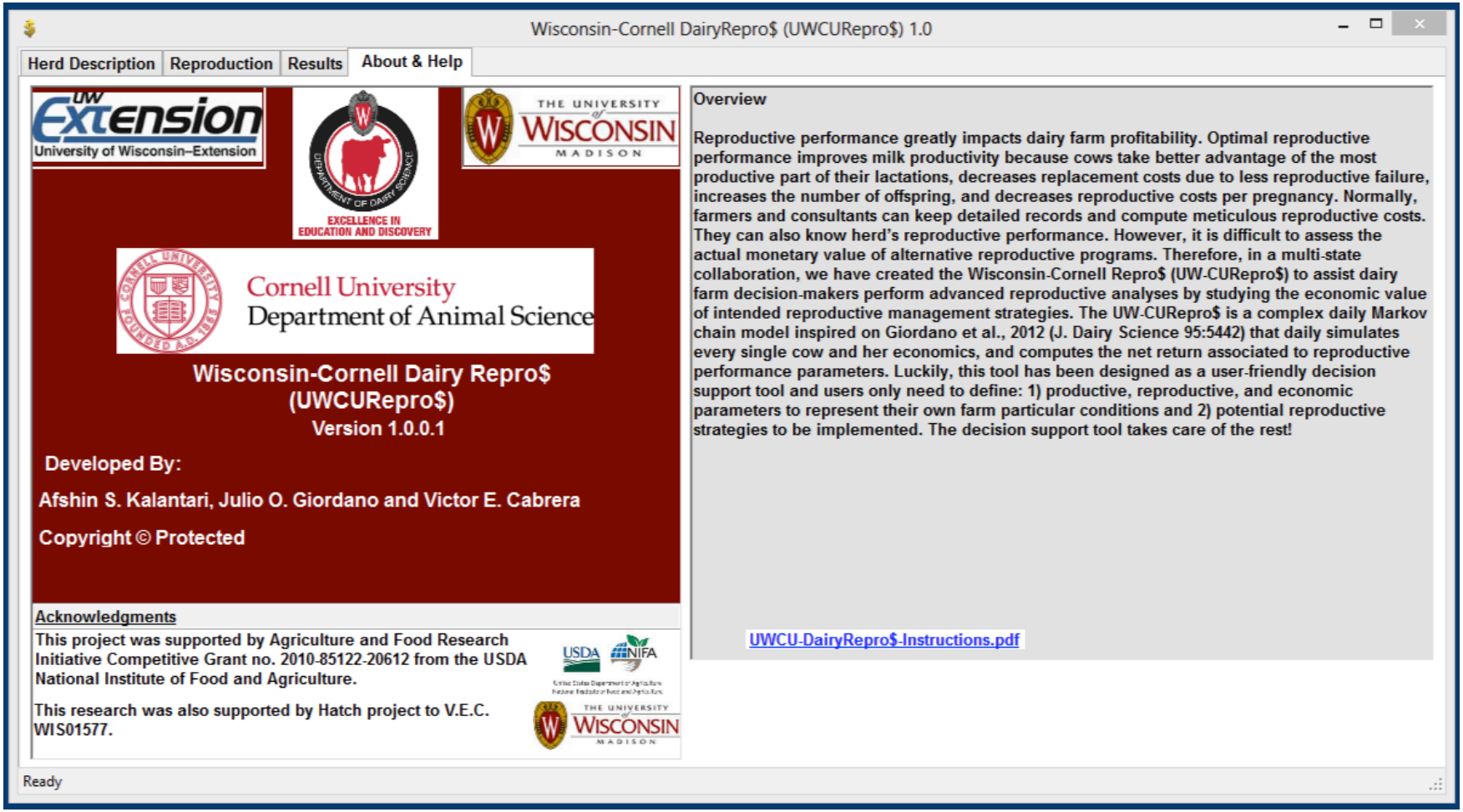
Valor económico de programa

Lo más importante es la diferencia



Entonces como hago el cálculo?

Lo tenemos cubierto



Http:DairyMGT.info Tools

Describe tu hato

Importante por que el análisis es diferente en cada caso

Herd Parameters

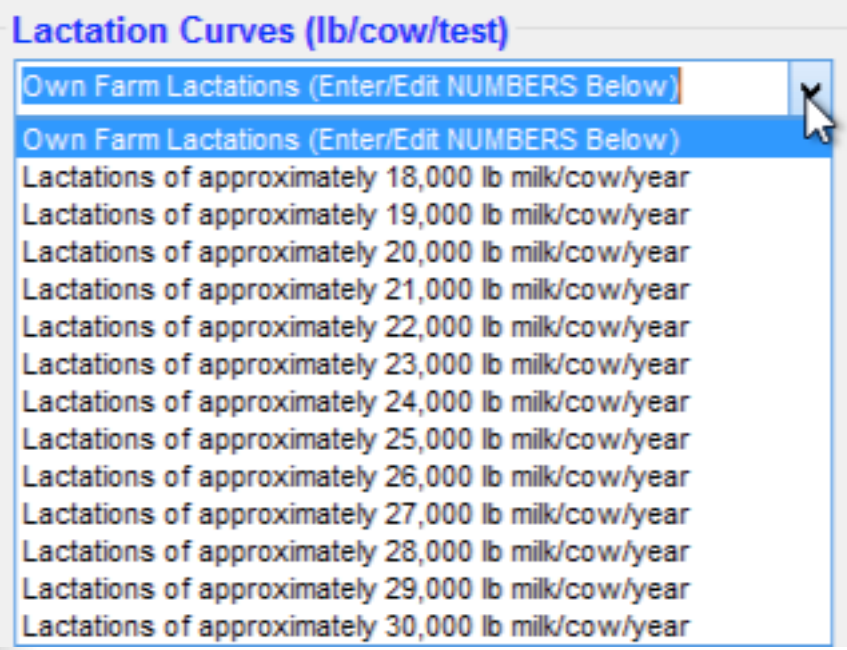
Herd Size (#)	100
Average Body Weight (lb)	1,400
Involuntary Culling (%/yr)	35.0
Mortality Rate(%/yr)	4.0
Stillbirth(%)	4.9

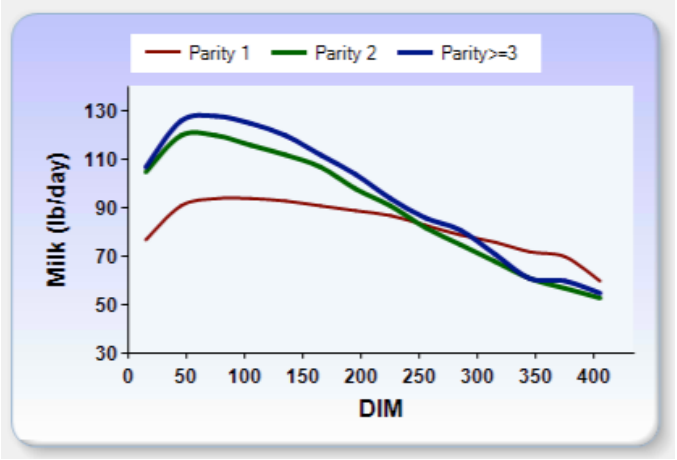
Economic Parameters

Milk Price ($/cwt)	16.00
Cost Feed Lactating ($/lb DM)	0.08
Dry Period Fixed Cost ($/lb DM)	0.06
Female Calf value($)	136
Male Calf value ($)	50
Heifer Replacement Value($)	1,302
Salvage Value ($/lb)	0.526

Describe tu hato

Importante por que el análisis es diferente en cada caso

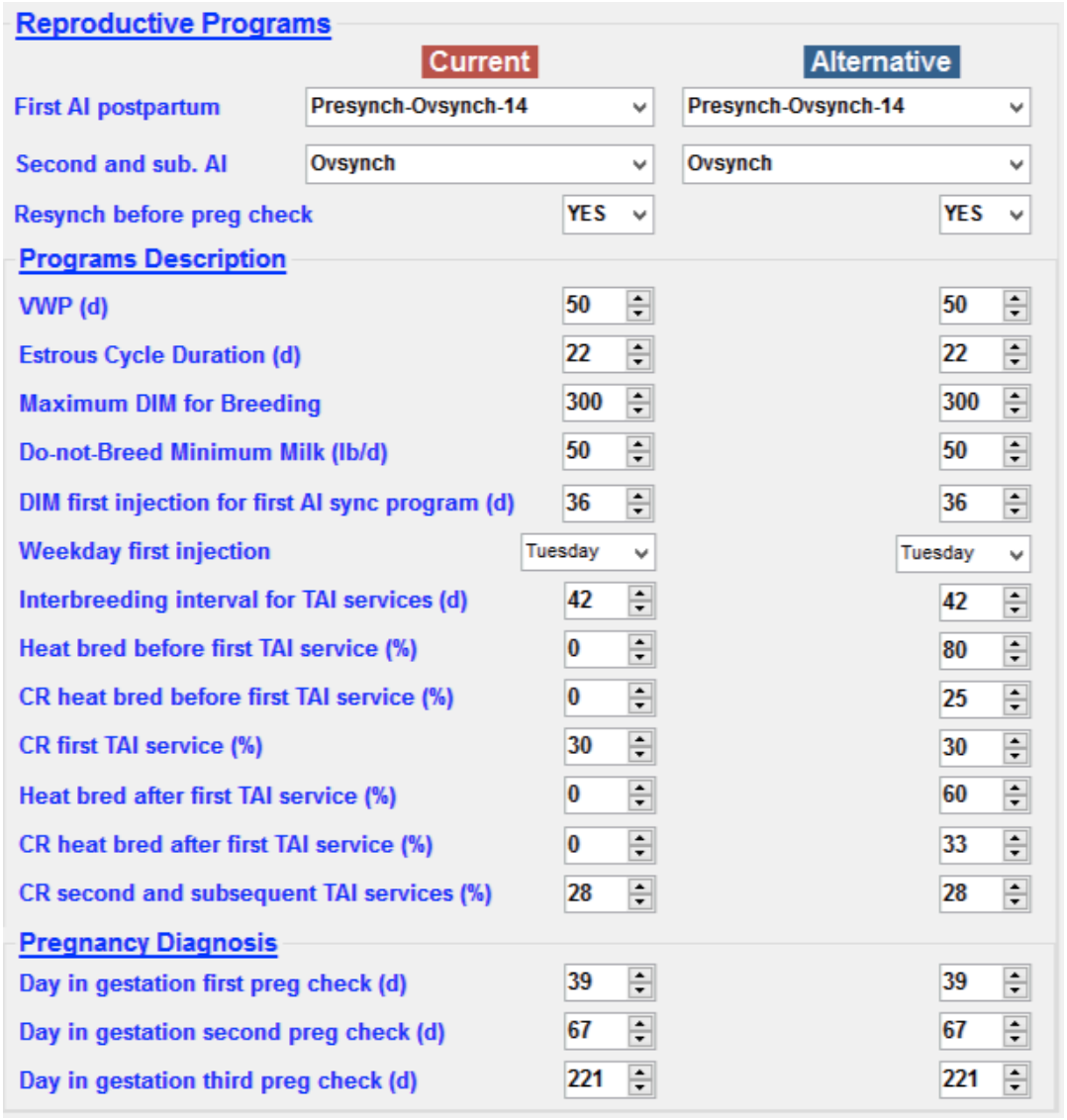




DIM	Parity 1	Parity 2	Parity ≥3
15	77	105	107
45	91	120	126
75	94	120	128
105	94	116	125
135	93	112	120
165	91	107	112
195	89	98	104
225	87	91	94
255	83	82	86
285	79	75	81
315	76	68	71
345	72	61	61
375	70	57	60
405	60	53	55

Describe tu programa reproductivo

Y explora cambios que crees mejorarían el desempeño



Reproductive Programs

	Current	Alternative
First AI postpartum	Presynch-Ovsynch-14	Presynch-Ovsynch-14
Second and sub. AI	Ovsynch	Ovsynch
Resynch before preg check	YES	YES

Programs Description

VWP (d)	50	50
Estrous Cycle Duration (d)	22	22
Maximum DIM for Breeding	300	300
Do-not-Breed Minimum Milk (lb/d)	50	50
DIM first injection for first AI sync program (d)	36	36
Weekday first injection	Tuesday	Tuesday
Interbreeding interval for TAI services (d)	42	42
Heat bred before first TAI service (%)	0	80
CR heat bred before first TAI service (%)	0	25
CR first TAI service (%)	30	30
Heat bred after first TAI service (%)	0	60
CR heat bred after first TAI service (%)	0	33
CR second and subsequent TAI services (%)	28	28

Pregnancy Diagnosis

Day in gestation first preg check (d)	39	39
Day in gestation second preg check (d)	67	67
Day in gestation third preg check (d)	221	221

Describe tu programa reproductivo

Usa estándares para el primer servicio

Synchronization Program	VWP (d)	Conception Rate (%)	
		Mean	Range
Presynch-Ovsynch-14	70-85	37	(32-42)
Presynch-Ovsynch-12	70-85	42	(37-47)
Presynch-Ovsynch-11	70-85	43	(37-47)
Presynch-Ovsynch-10	70-85	44	(37-47)
Double-Ovsynch	70-85	47	(40-50)
G-6-G	70-85	45	(37-47)
Ovsynch	60-75	33	(30-37)
Cosynch-72	60-75	26	(25-33)
Presynch-Ovsynch-12 w/CIDR	70-85	45	(40-50)
Double-Ovsynch w/ CIDR	70-85	50	(43-53)
Ovsynch w/ CIDR	60-75	36	(40-50)
Cosynch-72 w/ CIDR	60-75	32	(33-40)

Describe tu programa reproductivo

Usa estándares pero servicios adicionales

Synchronization Program	Interbreeding Interval (d)	Conception Rate (%) Mean	Range
Ovsynch-Day 25	35	27	(24-30)
Ovsynch-Day 32	42	30	(25-35)
Ovsynch-Day 39	49	28	(25-32)
Double-Ovsynch	49	38	(33-42)
Short-Double-Ovsynch	42	34	(30-38)
HGPG (hCG-7d-Ovsynch)	35	37	(33-41)
GGPG (GnRH-7d-Ovsynch)	35	34	(27-37)
G-6-G	49	35	(32-38)
Cosynch-72-Day 25	35	23	(20-25)
Cosynch-72-Day 32	42	28	(24-32)
Cosynch-72-Day 39	49	25	(23-28)
Ovsynch-Day 32 w/ CIDR	42	33	(28-38)
Double-Ovsynch w/ CIDR	49	41	(36-45)
Short-Double-Ovsynch w/CIDR	42	37	(33-41)
HGPG (hCG-7d-Ovsynch) w/CIDR	35	40	(36-41)
GGPG (GnRH-7d-Ovsynch) w/ CIDR	35	35	(30-40)
G-6-G w/CIDR	49	38	(33-41)
Cosynch-72-Day 32 w/CIDR	42	31	(27-35)

Describe tu programa reproductivo

Incluye los costos/inversiones realizadas

Insemination Cost

	Current	Alternative
Semen ($/cow)	5.0	5.0
Labor ($/cow)	5.0	5.0

Preg check

	Current	Alternative
Palpation ($/hr)	105.0	105.0
Ultrasound ($/hr)	0.0	0.0
Blood Test ($/cow)	0.0	0.0

Synchronization

Labor for injection	15.0	15.0

Hormones

GnRH ($/dose)	2.6	2.6
PGF ($/dose)	2.3	2.3
CIDR ($/Unit)	10.0	10.0
hCG ($/dose)	3.5	3.5

Describe tu programa reproductivo

Incluye los costos/inversiones realizadas

Detection of Estrus

Visual Observation

Laborers (#)	0	0
hr/d	0.0	0.0
Labor ($/h)	0.0	0.0

Activity monitors for Heat Detection

System cost ($)	0	0
Monitors (#)	0	0
Cost per monitor ($)	0.0	0.0
Maintenance ($/yr)	0.0	0.0
Life expectancy (yr)	0.0	0.0
Salvage value (%)	0	0

Describe tu programa reproductivo

Incluye costos de labor

Labor Required for Injections and Pregnancy Diagnosis

☐ Reset default values to zero

		Desc	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Current	Injections	Laborers	0.0	2.0	0.0	2.0	0.0	0.0	0.0
		Hours/d	0.0	0.6	0.0	0.9	0.0	0.0	0.0
		# Cows	0.0	36.0	0.0	52.0	0.0	0.0	0.0
	Pregnancy Diagnosis	Hours/d	0.0	0.6	0.0	0.9	0.0	0.0	0.0
		# Cows	0.0	36.0	0.0	52.0	0.0	0.0	0.0

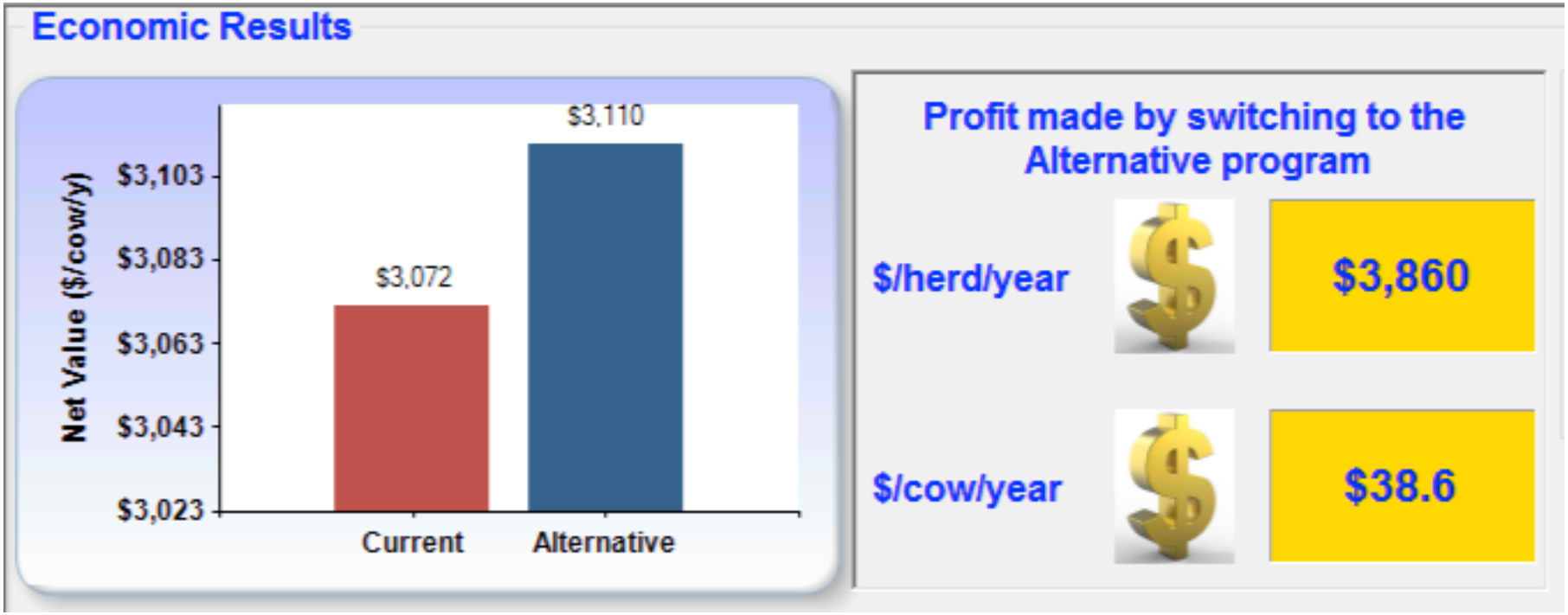
		Desc	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Alternative	Injections	Laborers	0.0	2.0	0.0	2.0	0.0	0.0	0.0
		Hours/d	0.0	0.6	0.0	0.9	0.0	0.0	0.0
		# Cows	0.0	36.0	0.0	52.0	0.0	0.0	0.0
	Pregnancy Diagnosis	Hours/d	0.0	0.6	0.0	0.9	0.0	0.0	0.0
		# Cows	0.0	36.0	0.0	52.0	0.0	0.0	0.0

Corre el análisis

Toma entre 2 y 10 minutos

Estudia los resultados

Las diferencias son lo mas importante



Estudia los resultados

Las diferencias son lo mas importante

Contribution to Net Value

Item	Current	Alternative	Diff
Total Net Value ($/cow/y)	3,071.8	3,110.4	38.6
IOFC ($/cow/y)	3,266.8	3,280.7	13.9
Replacement Cost ($/cow/y)	-191.0	-183.9	7.1
Reproductive Cost ($/cow/y)	-41.3	-27.6	13.7
Calf Value ($/cow/y)	37.3	41.2	3.9

Estudia los resultados

Las diferencias son lo mas importante

Cows Leaving the Herd

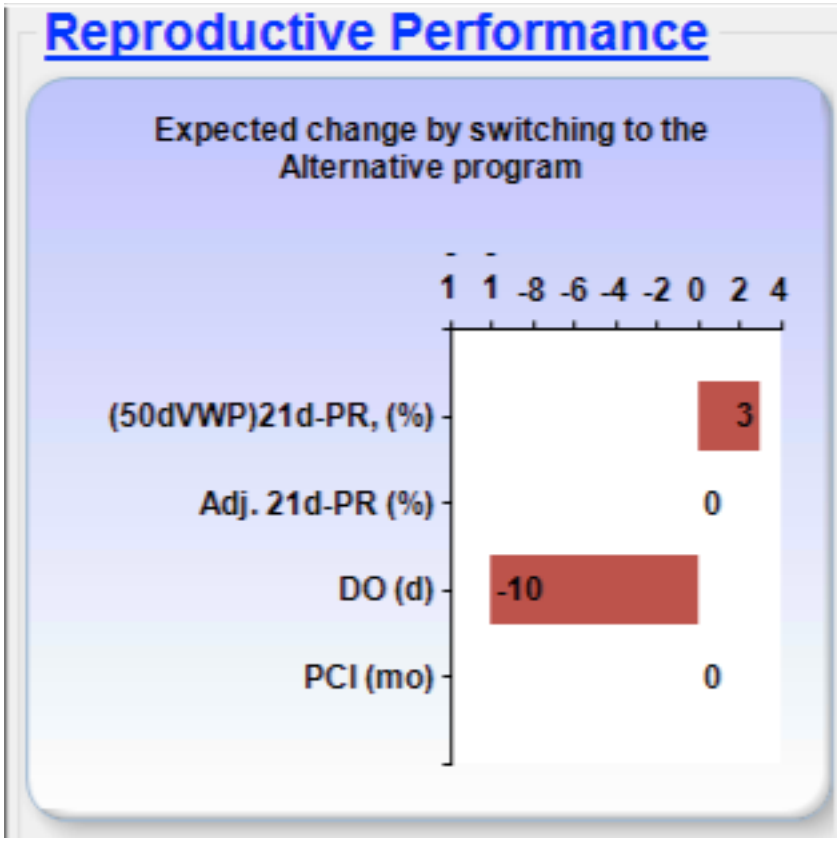
Item	Current	Alternative	Diff
Total Culling (%)	41.2	39	-2.2
Non-Reproductive Culling (%)	26.3	25.3	-1
Mortality (%)	4.1	3.9	-0.2
Reproductive Culling (%)	10.8	9.8	-1

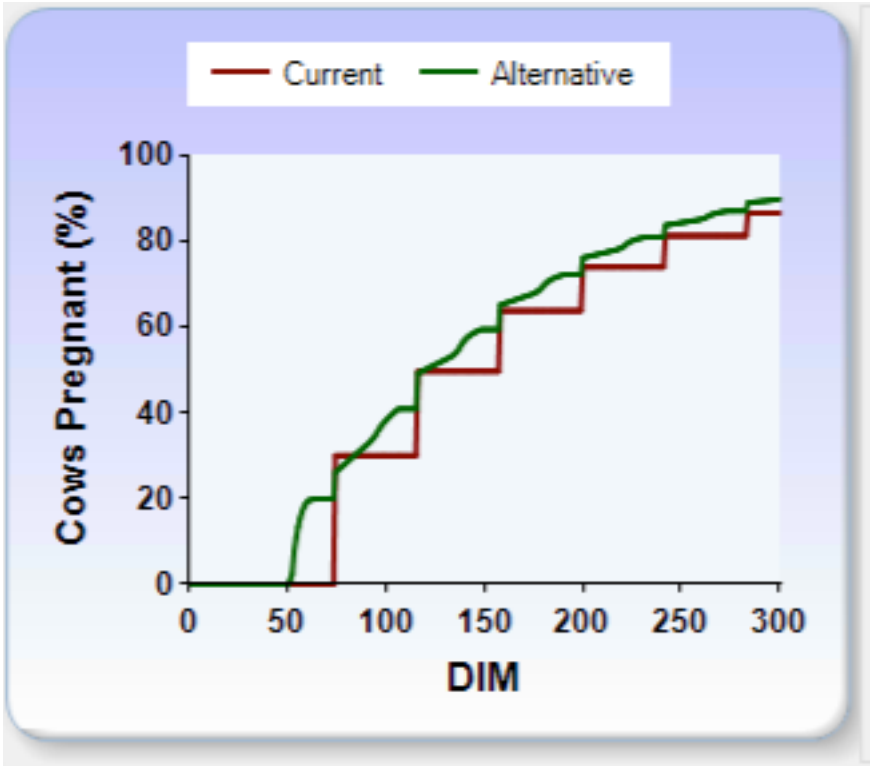
Heifer Supply and Demand

Item	Current	Alternative
Heifer Supply (% of herd/year)	40.9	41.4
Heifer Demand (% of herd/ye...	41.2	39.1
Heifer Balance	-0.3	2.3

Estudia los resultados

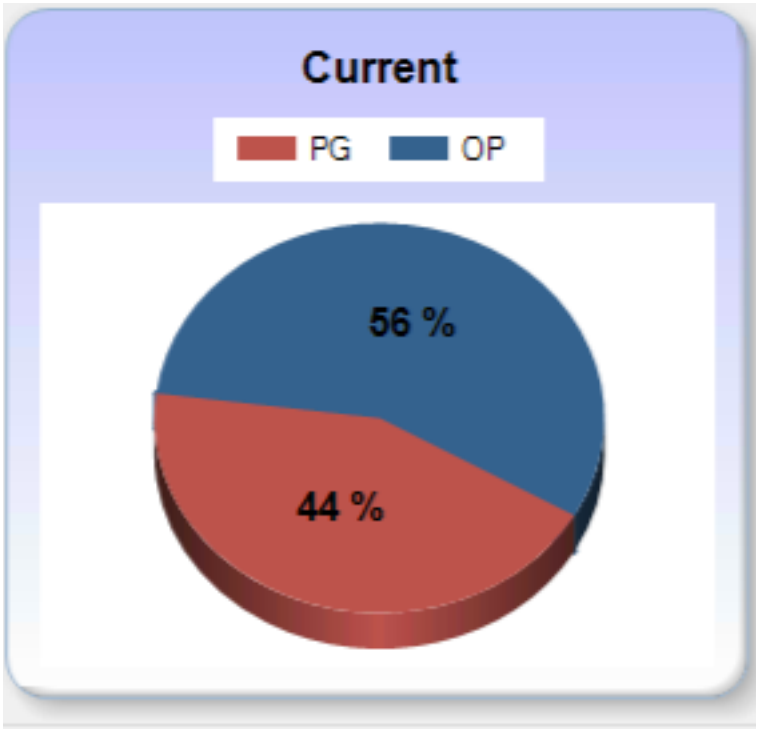
Las diferencias son lo mas importante

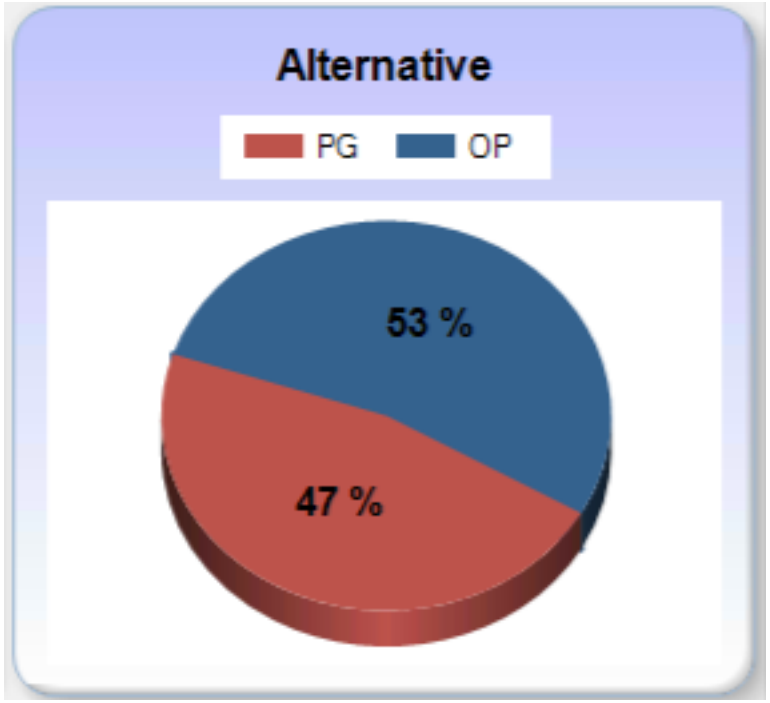




Estudia los resultados

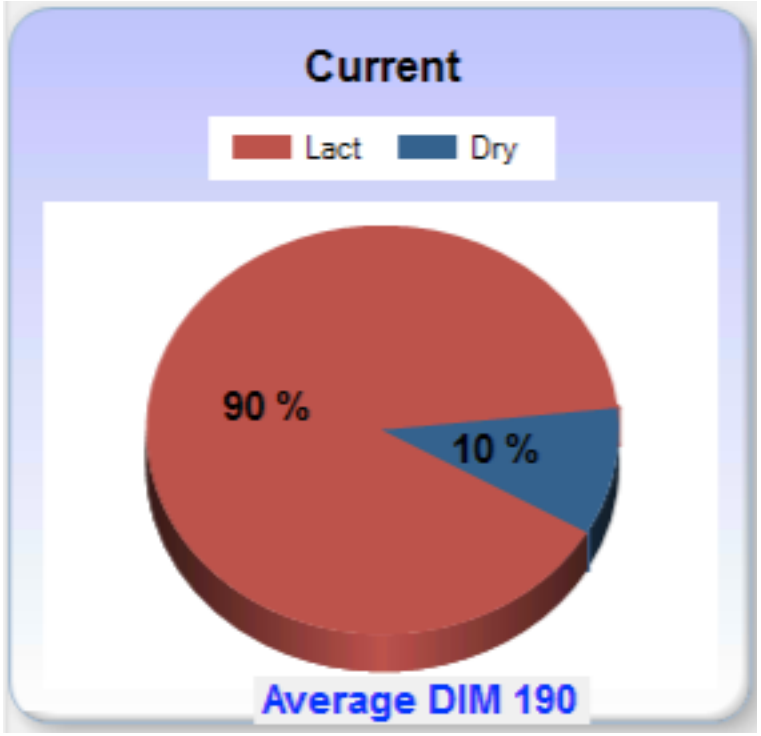
Relación de vacas preñadas y abiertas

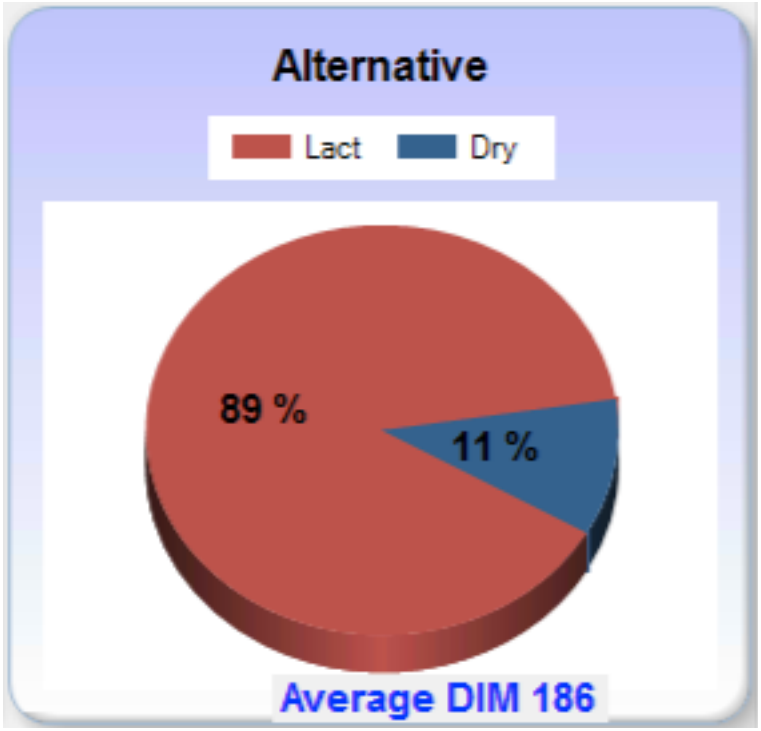




Estudia los resultados

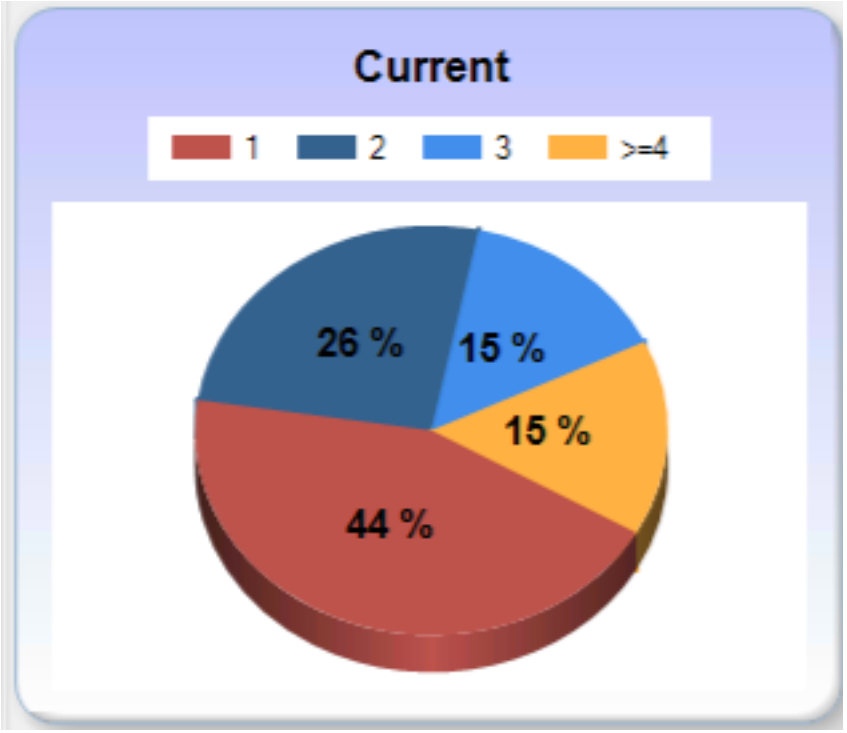
Relación de vacas productivas y secas

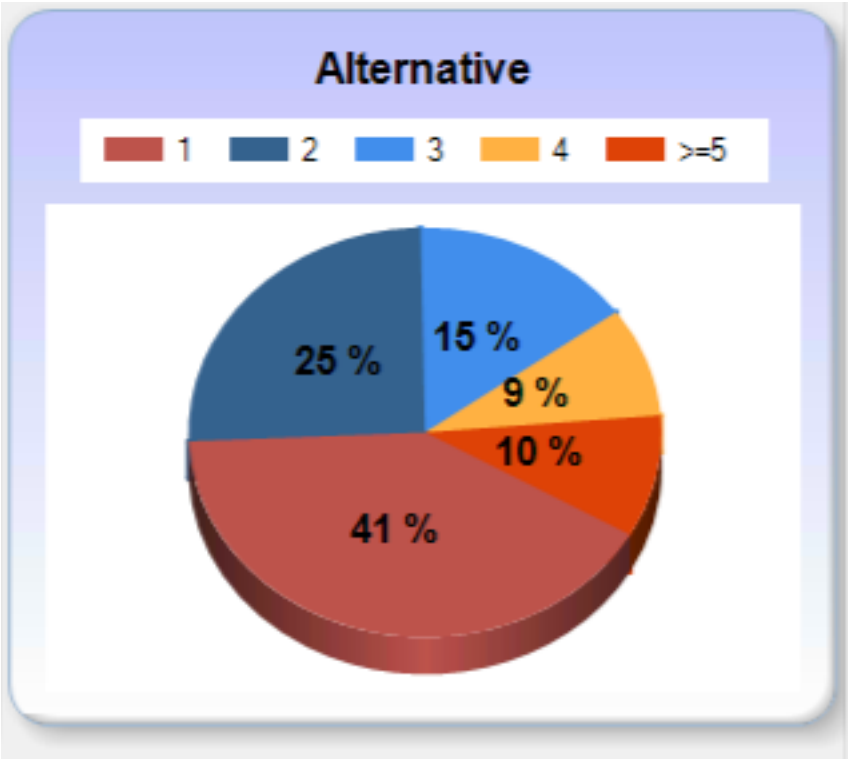




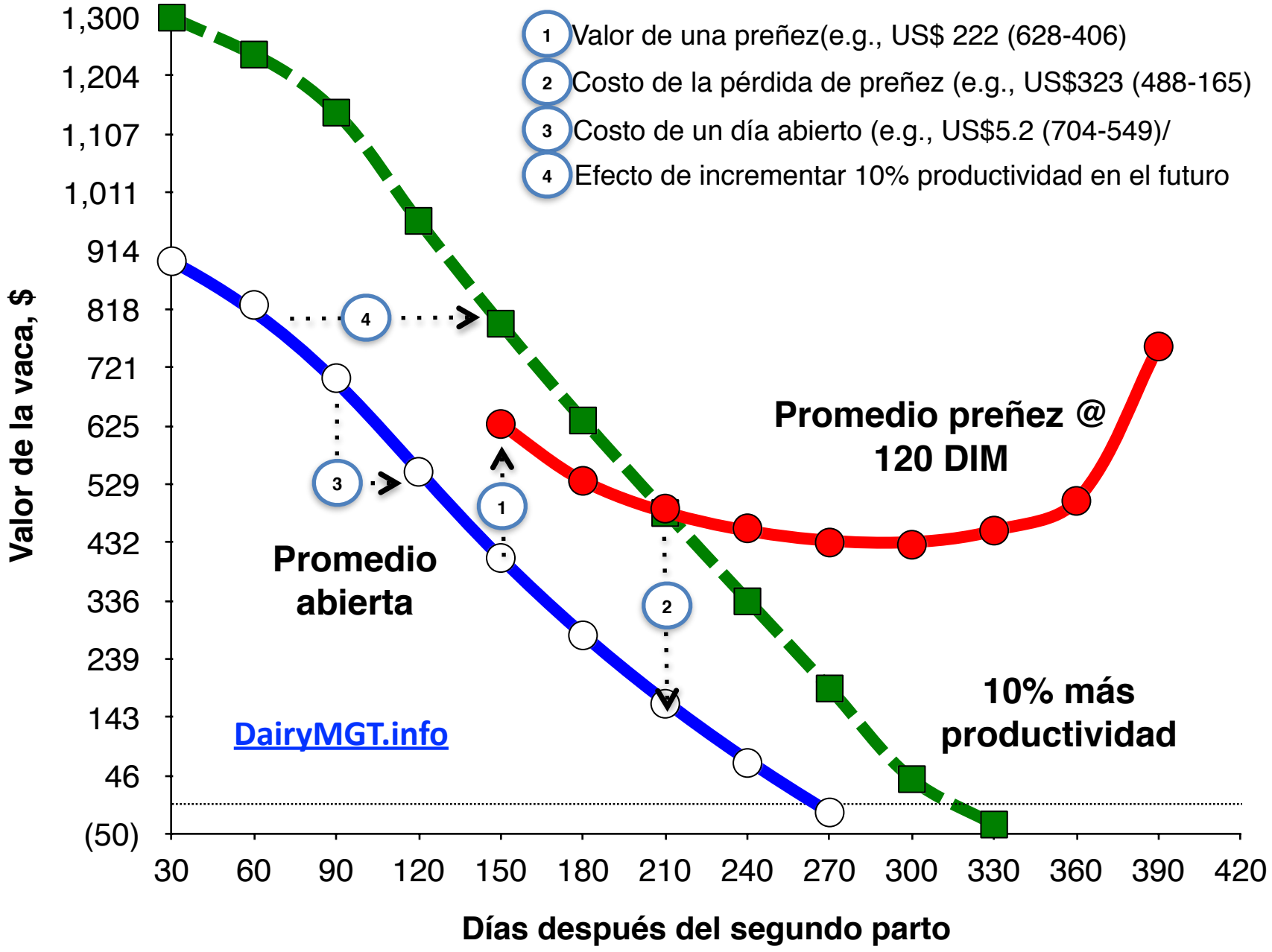
Estudia los resultados

Distribución de animales por lactancia





El Valor de Una Vaca



Agradecimientos

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GRACIAS!!!