

Taiwan Extension Program

Reproductive Data Evaluation of Ten Tons Cow

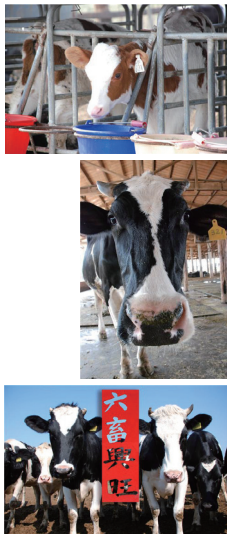
Taiwan Livestock Research Institute
Hsiu-Lien, Lin
2016/1/27



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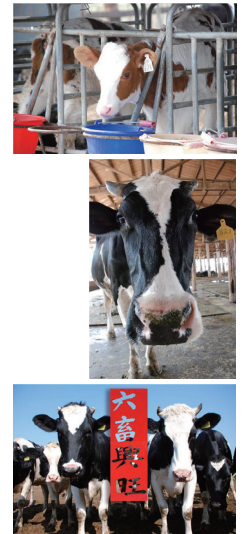
Outline

- Taiwan – ICAR Member since 2011
- Brief Introduction of DHI in Taiwan
- Selection of Ten Tons Cows
- Prolific Ten Tons Cows



Outline

- Taiwan – ICAR Member since 2011
- Brief Introduction of DHI in Taiwan
- Selection of Ten Tons Cows
- Prolific Ten Tons Cows



Switzerland

- ASR Arbeitsgemeinschaft Schweizerischer Rinderzüchter, Schützenstrasse 10, Postfach 691 3052 Zollikofen
Contact person: info@asr-ch.ch
- Associated Member
 - Datamars SA, Via ai Prati 6930 Bedano/Lugano
Contact person: Damien Pachoud damien.pachoud@datamars.com
 - WMB AG / LactoCorder, Wegenstrasse 6 9436 Balgach
Contact person: Tilman Hoefelmayer t.hoefelmayer@wmb.ch; t.hoefelmayer@bluewin.ch

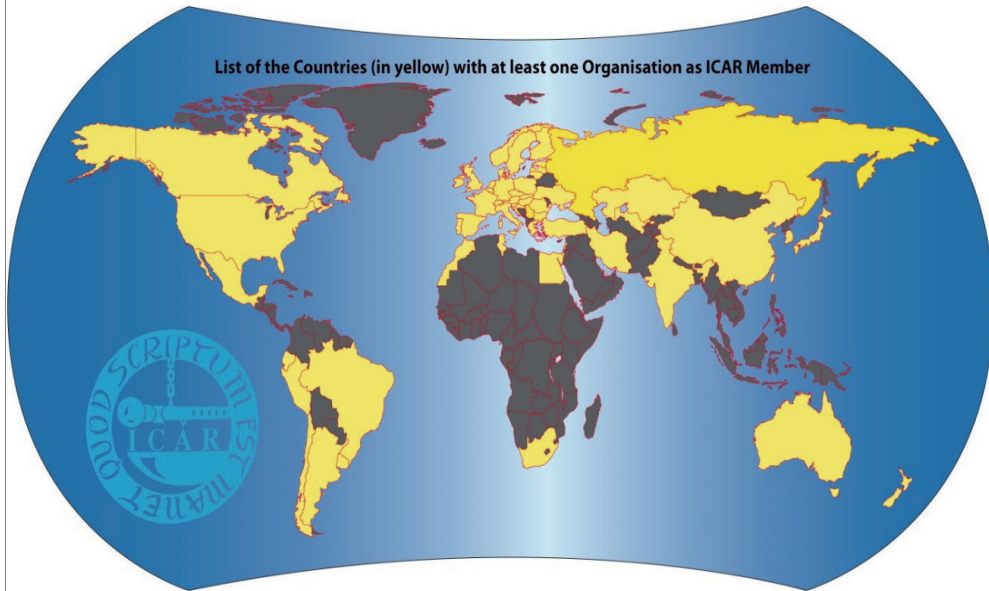
Taiwan

- Livestock Research Institute, 112 Farm Road 71246 Hsinhua,
Contact person: Ming-Che Wu mcwu@mail.tlri.gov.tw

ICAR member since 2011

The Netherland

- CRV, Wassenaarweg 20 6843 NW Arnhem
Contact person: Louwrens van Keulen Louwrens.van.Keulen@crv4all.com
- Dutch Organisation for Cattle Improvement (NVO), Postbus 544 8901 BH Leeuwarden
Contact person: Joop Olieman joop.olieman@nvo-veeverbetering.nl
- Associated Members
 - Fusion Electronics BV, Duwboot 7 3991 CD Houten
Contact person: Toon Kromwijk tkromwijk@fusion-electronics.nl;
 - Lely International N.V., Cornelis van der Lelylaan 1 3147 PB Maassluis
Contact person: Jeroen van den Ban Jvandenban@lely.com
 - Nedap N.V., Marktgroep Agri Parallelweg 2, P.O. Box 104 7140 AC Groenlo
Contact person: Woltherus Karsijns woltherus.karsijns@nedap.com
 - Wageningen UR Livestock Research (WLR), P.O. Box 338 6700 AH Wageningen
Contact person: Annie de Veer Annie.deVeer@wur.nl



(108/54/51)

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- Workshops
- Value for money
- Scientific and technical rigour inherent in all undertakings
- Brings together international organisations to a common forum
- Provision of practical standards which are science derived
- Newsletters
- On-line database on production recording for cattle, sheep and goats
- Choice of membership: Full & Associated
- Gives a voice to organisations and countries in an agreeable forum
- Published Statutes
- The ICAR International Recording Guidelines
- Scientific and Technical publications
- Proceedings of annual conferences and workshops
- Flexibility in arranging specific tasks
- Can address other species than ruminants if the members so decide
- Cooperation in international research
- Established contacts and co-operation with international organisations
- Well recognised with the EU and other national and regional governments
- Registration authority for RFID
- Interbull is the EU reference laboratory for bovine genetic matters
- Provision of manufacturers' codes internationally
- Laboratory and Test Centre accreditation for milk analysis, DNA and animal identification
- Willingness of preminent technicians to join in subcommittees, working groups and task forces

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Membership

Benefits of Membership

- Independent international non-governmental organisation
- Accountable to its members
- Relevant to developed and developing countries
- Relevant to all organisations involved in animal identification
- Relevant to all organisations involved in ruminant production
- Relevant to all organisations involved in genetic evaluations of ruminants
- Relevant to all organisations involved in the collection and processing of ruminant phenotypic data
- Relevant to manufacturers and providers of identification, production recording and genetic investigative devices
- Elected Board
- International recognition by national and international organisations
- Networking opportunities with world experts and peers
- Readily available technical information
- Subcommittees and Working Groups made up of international experts
- Ease of availability of information via the website
- Electronic forums provided
- International recognition of work and standards
- Published Guidelines which are internationally recognised
- Membership is global
- Patenting Sentinel and Action Services
- Certificate of Quality
- Benchmarking
- Annual meetings

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Portfolio of Interbull evaluations

國際種公牛後裔女兒牛性能評估年曆



國際畜政聯盟
乳牛性能分項

1995	Production							
1999	Production	Type						
2001	Production	Type	Cellcount					
2004	Production	Type	Cellcount	Longevity				
2005	Production	Type	Cellcount	Longevity	Calving			
2007	Production	Type	Cellcount	Longevity	Calving	Fertility		
2008	Production	Type	Cellcount	Longevity	Calving	Fertility	Workability	

乳量乳質—體型—體細胞數—高繁—產犢順—易懷孕—好擠乳

International Information

Cross-reference list

Interbull Cross-reference lists of bulls with multiple registrations

Production 乳量乳質

Evaluation summaries for production traits

Conformation 體型

Evaluation summaries for conformation traits

Udder health 體細胞數

Evaluation summaries for udder health traits

Direct longevity 高繁

Evaluation summaries for direct longevity traits

Calving Traits 產犢順

Evaluation summaries for calving traits

Female Fertility 易懷孕

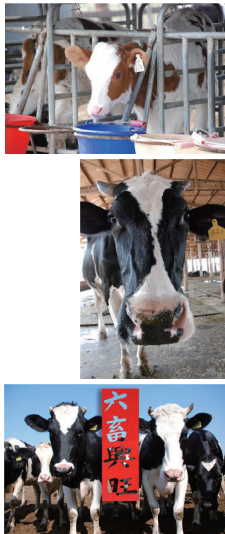
Evaluation summaries for female fertility traits

Workability 好擠乳

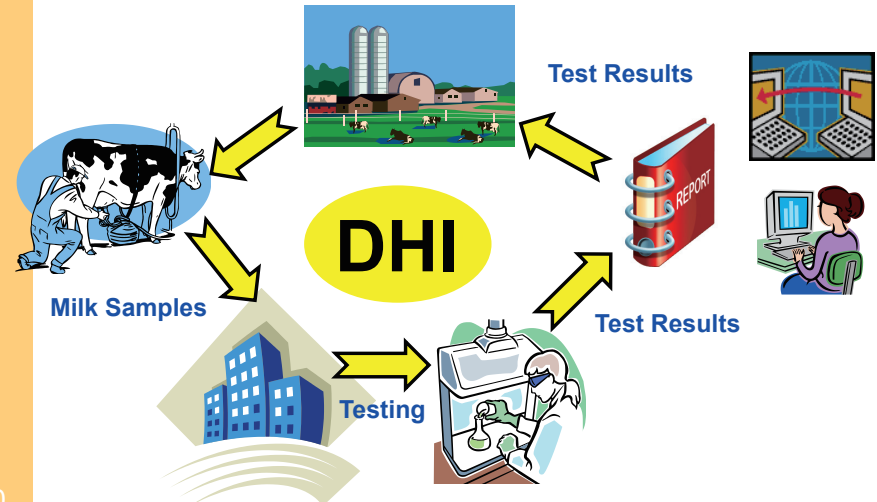
Evaluation summaries for milking speed and temperament

Outline

- Taiwan – ICAR Member since 2011
- Brief Introduction of DHI in Taiwan
- Selection of Ten Tons Cows
- Prolific Ten Tons Cows



★ Dairy Herd Improvement in Taiwan



★ DHI Farms in Taiwan

2015 年台灣網路酪農有 173 DHI 戶資料上網

查詢日期：2016/1/24

台南市 43 戶	屏東縣 38 戶	彰化縣 26 戶	雲林縣 17 戶	苗栗縣 10 戶	高雄市 10 戶	嘉義縣 10 戶
桃園市 5 戶	台中市 4 戶	花蓮縣 3 戶	台北市 1 戶	台東縣 1 戶	金門縣 1 戶	南投縣 1 戶
新竹縣 1 戶	嘉義市 1 戶					

Year	Farms	Heads	Samples
2013	170	24,870	170,680
2014	167	25,706	179,715
2015	173	26,785	185,807



台灣乳牛的乳量乳質統計(Dairy Taiwan)

TWN_DHI 資料庫之最近測乳日期：2016/1/14

測乳年	測乳戶數	測乳月次合計	平均每月測乳次數	每戶每月測乳頭數	測乳頭次合計	年度最高單日乳量 (Kg)	每日乳量 (Kg)		脂肪率 (%)		蛋白質率 (%)		乳糖率 (%)		SNF (無脂固形物) (%)		總固形物 (%)		體細胞數 (萬/ml)		尿素氮 (mg/dL)		檸檬酸 (mg/dL)		蛋白質與脂肪比 (P/F ratio)
							檢測	矯正頭數	檢測	矯正乳量	檢測	矯正乳量	檢測	矯正乳量	檢測	矯正乳量	檢測	矯正乳量	檢測	矯正乳量	檢測	矯正乳量	檢測	矯正乳量	
2016	99	99	1.0	98	9794	59.60	24.69	24.79	4.00	3.89	3.37	3.28	4.83	4.85	8.90	8.84	12.90	12.73	31.73	29.13	11.2	11.1	155.2	155.5	0.87
2015	173	1824	10.5	101	185425	87.78	23.82	24.10	3.93	3.83	3.37	3.30	4.79	4.82	8.86	8.82	12.79	12.65	33.26	29.42	9.8	9.9	152.1	152.9	0.89
2014	167	1789	10.7	100	179381	69.44	23.48	23.67	3.93	3.84	3.37	3.29	4.76	4.79	8.83	8.78	12.76	12.62	37.30	31.89	9.9	10.3	159.2	161.0	0.89
2013	170	1735	10.2	98	170284	72.30	23.78	23.91	3.89	3.80	3.33	3.26	4.72	4.75	8.76	8.72	12.65	12.51	36.96	32.81	11.6	12.0	185.1	184.7	0.88
2012	187	1869	10.0	96	180957	71.61	23.18	23.36	3.92	3.82	3.32	3.24	4.75	4.79	8.77	8.73	12.69	12.55	37.79	34.03	10.9	11.0	189.3	191.4	0.87
2011	197	2038	10.3	92	187698	69.00	23.87	24.16	3.81	3.70	3.33	3.25	4.77	4.81	8.80	8.76	12.61	12.46	33.35	29.26	10.8	10.9	189.7	191.6	0.91
2010	209	2072	9.9	81	168913	71.61	23.43	23.93	3.74	3.65	3.30	3.23	4.77	4.81	8.77	8.74	12.51	12.39	33.36	28.65	12.6	12.6	186.0	187.2	0.91
2009	212	2217	10.5	75	168398	67.68	22.92	23.45	3.76	3.67	3.32	3.25	4.78	4.82	8.80	8.77	12.56	12.44	36.60	30.79	14.0	14.0	181.2	182.0	0.91
2008	260	2601	10.0	73	191135	72.20	22.48	22.98	3.76	3.68	3.33	3.26	4.75	4.79	8.77	8.75	12.54	12.43	35.73	30.10	9.9	9.9	183.9	184.9	0.91
2007	280	2773	9.9	73	202925	68.00	22.78	23.17	3.82	3.74	3.30	3.25	4.77	4.80	8.77	8.75	12.59	12.49	38.57	33.24	14.1	14.2	180.0	180.6	0.89
2006	296	3026	10.2	72	218816	63.00	22.75	23.20	3.81	3.74	3.30	3.25	4.79	4.82	8.79	8.77	12.59	12.51	32.24	29.11	11.9	11.9	177.9	178.8	0.89

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10,000 Kg

= 10 Tons

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What is

**Ten Tons
Cows**

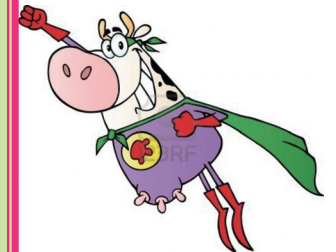


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Competition Rules 305-2X-ME

1. Milk yield >12,000 Kg
2. B.V. Of Milk Yield > +350 Kg
3. Protein > 3.5%
4. SCC < 100,000/mL

★ Ranking: According to SCC
Lowest SCC is the champion



4 Phases of Competition

03 Spring (Oct to Mar)		
	07 Summer (Feb to Jul)	
	09 Hot (April to Sep)	
	11 Autumn (Jun to Nov)	

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Ten Tons Cows Farms in Taiwan

2001~2016年天噸乳牛(Ten Tons)飼養戶數累計

年度	縣市數	縣市															飼養戶數
		屏東	高雄	台南	嘉義	雲林	彰化	南投	台中	苗栗	新竹	桃園	新北	台北	花蓮	台東	
2016	8	11	7	19	3	6	14	0	0	0	1	3	0	0	0	0	64
2015	12	13	8	27	6	11	23	0	0	2	1	5	0	1	2	1	100
2014	12	17	8	24	8	12	24	1	0	1	1	4	0	1	2	0	103
2013	10	14	5	12	4	11	18	0	1	0	1	3	0	1	0	0	70
2012	11	11	9	17	5	14	19	0	2	2	1	4	0	1	0	0	85
2011	11	13	10	20	12	14	18	1	2	0	0	2	0	1	1	0	94
2010	10	11	8	10	7	10	18	1	1	0	0	3	0	0	1	0	70
2009	11	10	7	15	5	11	17	0	2	1	0	4	0	1	1	0	74
2008	14	9	5	22	7	11	24	1	2	1	1	6	0	1	1	1	92
2007	10	11	8	20	8	13	19	0	2	1	0	7	0	1	0	0	90
2006	9	10	9	16	7	19	20	1	2	0	0	3	0	0	0	0	87
2005	13	11	8	17	7	18	19	1	2	2	2	4	0	1	1	0	93
2004	14	14	9	10	10	16	14	1	2	3	3	3	1	1	1	0	88
2003	13	9	5	12	6	10	13	1	2	3	2	1	1	0	1	0	66
2002	10	8	5	8	4	7	12	1	1	2	2	0	0	0	0	0	50
2001	7	11	1	3	1	2	6	0	0	0	0	0	0	0	1	0	25

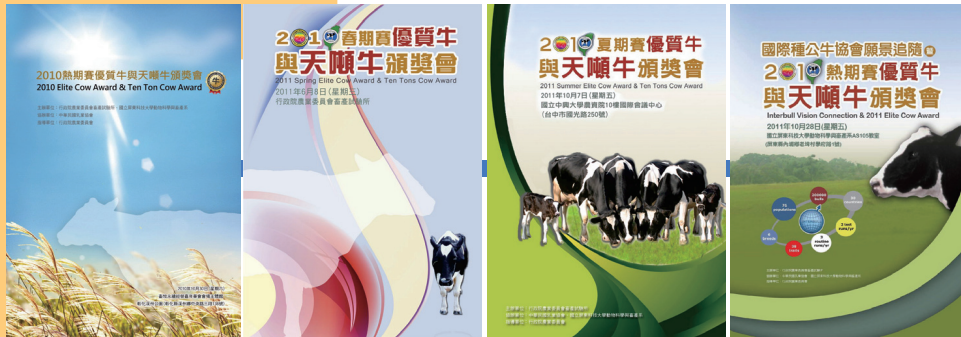


Ten Tons Cows in Taiwan

2001~2016年天噸乳牛(Ten Tons)頭數累計

年度	縣市數	縣市															總頭數
		屏東	高雄	台南	嘉義	雲林	彰化	南投	台中	苗栗	新竹	桃園	新北	台北	花蓮	台東	
2016	8	119	29	146	4	72	180	0	0	0	24	39	0	0	0	0	613
2015	12	90	22	318	26	71	720	0	0	3	5	91	0	2	93	3	1444
2014	12	112	42	288	25	107	448	1	0	1	4	78	0	2	34	0	1142
2013	10	104	17	105	5	45	152	0	3	0	7	15	0	1	0	0	454
2012	11	58	43	231	10	43	143	0	13	4	1	8	0	3	0	0	557
2011	11	39	30	118	53	75	173	1	17	0	0	4	0	1	20	0	531
2010	10	24	31	71	23	23	125	3	1	0	0	11	0	0	2	0	314
2009	11	22	11	70	15	33	92	0	4	2	0	31	0	3	8	0	291
2008	14	32	10	90	13	125	200	3	10	1	5	40	0	2	4	1	536
2007	10	49	16	64	20	66	80	0	4	1	0	22	0	1	0	0	323
2006	9	28	15	61	15	112	79	1	7	0	0	8	0	0	0	0	326
2005	13	27	16	48	13	50	69	14	3	5	42	34	0	1	2	0	324
2004	14	25	21	30	24	32	68	10	2	4	18	5	4	1	2	0	246
2003	13	10	13	24	7	23	41	3	3	5	10	2	2	0	1	0	144
2002	10	20	5	13	5	16	31	2	2	6	2	0	0	0	0	0	102
2001	7	16	1	4	2	2	6	0	0	0	0	0	0	0	1	0	32

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Outline

- Taiwan – ICAR Member since 2011
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- Selection of Ten Tons Cows
- Prolific Ten Tons Cows



★ Prolific Ten Tons Cows



Select for

- Milk production
- Reproductive traits

Portfolio of Interbull evaluations
國際種公牛後裔女兒牛性能評估年曆

國際畜牧聯盟
乳牛性能分項

1995	Production						
1999	Production	Type					
2001	Production	Type	Cellcount				
2004	Production	Type	Cellcount	Longevity			
2005	Production	Type	Cellcount	Longevity	Calving		
2007	Production	Type	Cellcount	Longevity	Calving	Fertility	
2008	Production	Age	Cellcount	Longevity	Calving	Fertility	

Calving numbers

乳量乳質 — 體型 — 體細胞數 — 高繁 — 產犢順 — 易懷孕 — 好擠乳

International Information
[Cross-reference list](#)
 Interbull Cross-reference lists of bulls with multiple registrations
[Production](#) 乳量乳質
 Evaluation summaries for production traits
[Conformation](#) 體型
 Evaluation summaries for conformation traits
[Udder health](#) 體細胞數
 Evaluation summaries for udder health traits
[Direct longevity](#) 高繁
 Evaluation summaries for direct longevity traits
[Calving Traits](#) 產犢順
 Evaluation summaries for calving traits
[Female Fertility](#) 易懷孕
 Evaluation summaries for female fertility traits
[workability](#) 好擠乳
 Evaluation summaries for milking speed and temperament.

★ Prolific Ten Tons Cows

2015 年最後測乳之繁殖力入選天噸乳牛統計(縣市別)
(入選牛之累計測乳次數至少要有11次)

縣市	繁殖力入選						天噸乳牛				高繁天噸牛				測乳牛				序號
	高繁牛戶數	高繁牛頭數	雌親數	測乳次數	測乳月齡	年產乳量(公斤)	縣市	戶數	頭數	戶數比(%)	頭數比(%)	戶數	頭數	年產乳量(公斤)	高繁牛頭比(%)	高繁牛乳量優勢(公斤)	高繁牛乳量優勢(%)		
彰化	16	80	54	29	67	10,869	彰化	14	180	114.3	44.4	26	4737	8,660	1.69	+2,209	+25.5	1	
台南	10	34	29	25	64	10,667	台南	19	146	52.6	23.3	44	7110	7,581	0.48	+3,087	+40.7	2	
屏東	5	8	7	31	73	10,533	屏東	11	119	45.5	6.7	37	4389	7,466	0.18	+3,066	+41.1	3	
雲林	3	4	3	27	64	10,672	雲林	6	72	50.0	5.6	16	1464	7,909	0.27	+2,763	+34.9	4	
嘉義	3	4	4	21	56	10,480	嘉義	3	4	100.0	100.0	10	1163	7,560	0.34	+2,920	+38.6	5	
高雄	3	3	3	37	76	10,750	高雄	7	29	42.9	10.3	9	1125	7,625	0.27	+3,125	+41.0	6	
桃園	2	5	5	19	57	10,722	桃園	3	39	66.7	12.8	5	959	8,318	0.52	+2,404	+28.9	7	
花蓮	1	1	1	11	51	13,050	花蓮	2	93	50.0	1.1	3	696	8,108	0.14	+4,942	+61.0	8	
小計	43	139	94	27	66	10,791	全國	107	2057	40.2	6.8	168	22771	7,847	0.61	+2,945	+37.5		

Prolific

Ten Tons