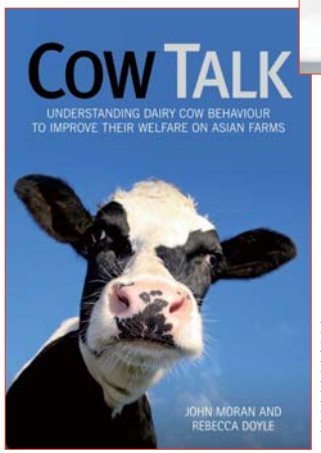
Dairy Industry Development in Tropical Climate

Mingche WU
Taiwan Livestock Research Institute



What is the MOST important - **GOAL?**

Photographs, Illustrations
256 pages, 245 x 170 mm
Publisher: CSIRO Publishing
February 2015
ISBN: 9781486301614

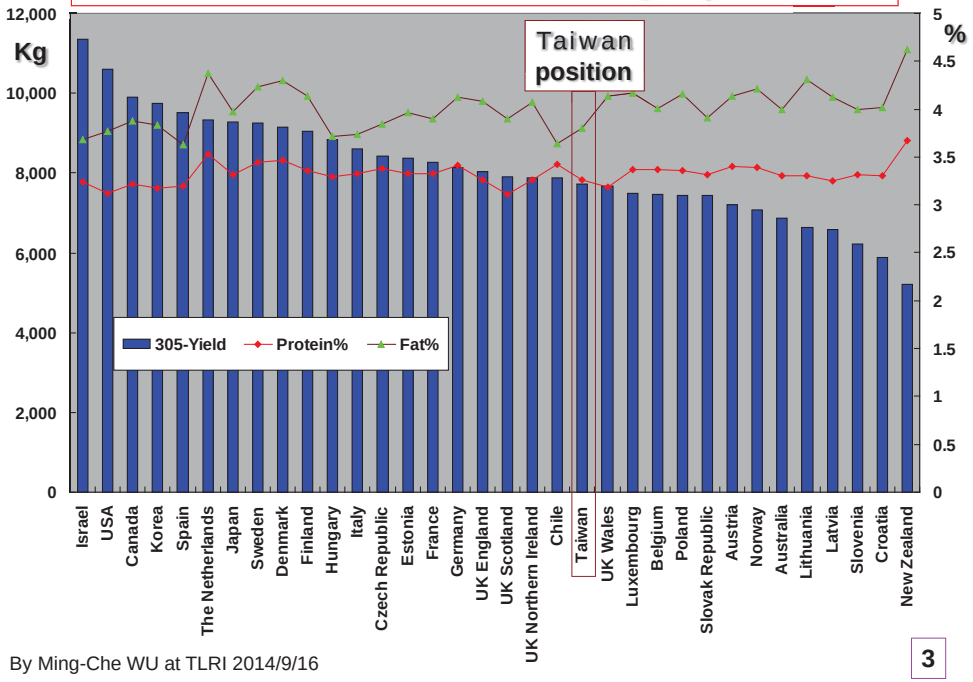
International Non-Governmental Organization (1951 Rome Italy)

Members of ICAR (International Committee for Animal Recording)

2011 (in blue)

Japan
Korea
Taiwan

Taiwan Position on Cow Milk Production and Quality of Year 2013

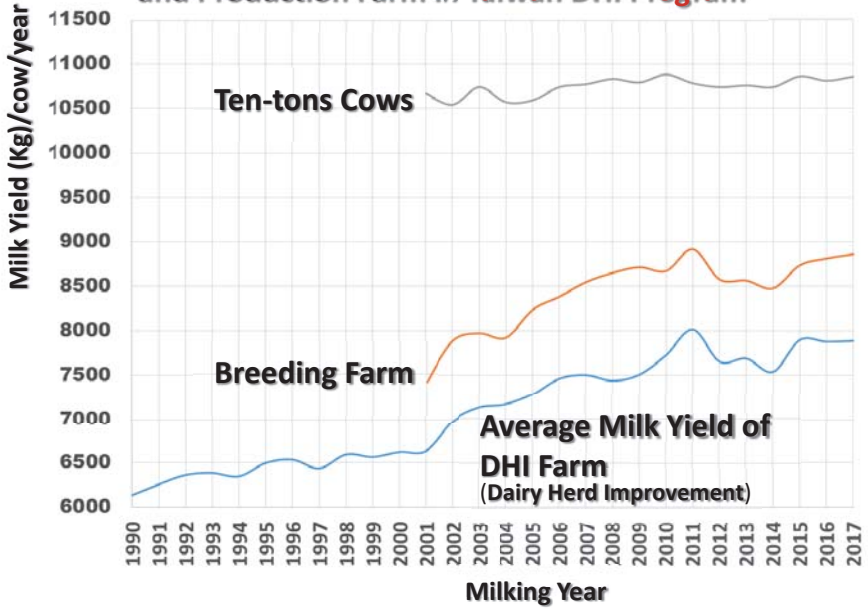


By Ming-Che WU at TLRI 2014/9/16

APPENDIX TABLE 19: MILK AND MILK PRODUCTS STATISTICS
(thousand tonnes, milk equivalent)

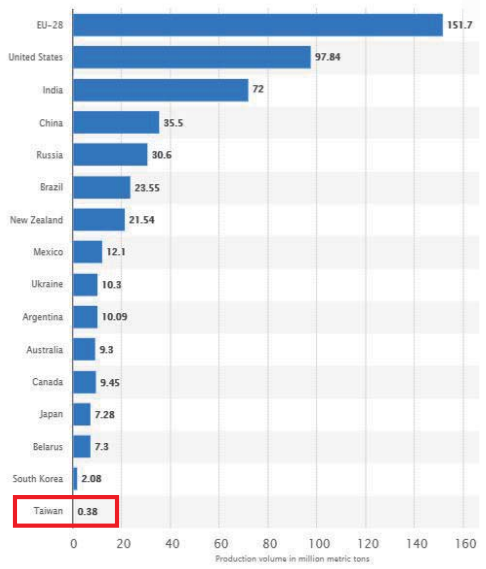
	Production			Imports			Exports		
	2014-2016 average	2017 estim.	2018 f'cast	2014-2016 average	2017 estim.	2018 f'cast	2014-2016 average	2017 estim.	2018 f'cast
ASIA	**314 197**	**323 470**	**333 153**	**40 650**	**42 327**	**43 938**	**6 528**	**6 203**	**6 029**
China	42 294	41 289	42 306	11 981	13 311	14 140	95	75	74
India [1]	153 872	165 612	172 899	104	162	181	401	244	251
Indonesia	1 453	1 510	1 530	2 639	2 738	2 777	75	37	35
Iran, Islamic Republic of	7 330	6 855	6 980	431	355	359	519	772	662
Japan	7 371	7 281	7 245	1 911	2 171	2 274	7	9	10
Korea, Republic of	2 159	2 087	2 098	975	1 101	1 162	23	24	24
Malaysia	73	53	54	2 183	2 173	2 125	683	640	657
Pakistan	40 509	40 167	40 569	571	649	665	48	33	33
Philippines	16	15	17	1 919	2 164	2 156	151	50	56
Saudi Arabia	2 531	2 740	2 720	3 258	3 142	3 241	1 276	1 115	1 086
Singapore	-	-	-	1 714	1 580	1 609	597	470	463
Thailand	1 089	1 120	1 135	1 521	1 612	1 667	212	246	246
Turkey	18 467	17 917	18 670	204	124	120	683	861	883

Average Milk Yield of Ten-tons Cows, Breeding Farm and Production Farm in Taiwan DHI Program



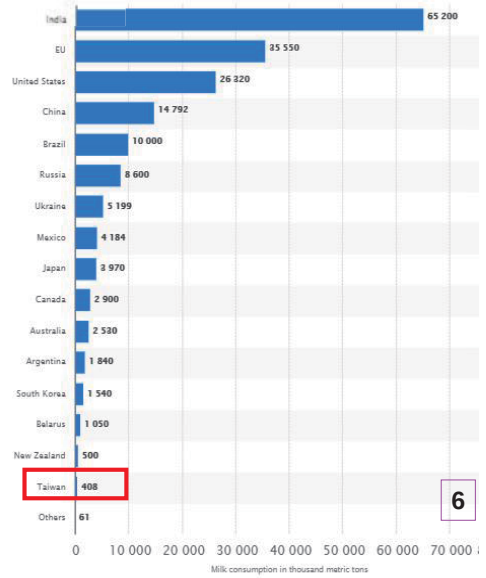
statista https://www.statista.com

Major producers of cow milk worldwide in 2017,



https://www.statista.com/statistics/268191/cow-milk-production-worldwide-top-producers/

Annual consumption of fluid cow milk worldwide 2017



https://www.statista.com/statistics/272003/global-annual-consumption-of-milk-by-region/

Farm Journal's **MILK**

APRIL 10, 2018

Where Will The Dairy Industry Be in 50 Years?

NEWS | BY: JIM DICKRELL

By **2067**, the United Nations predicts world population will grow by 3 billion to **10.5 billion** people. Most of these folks will be added in Asia and Africa. Not only will population increase, but dairy consumption will increase even more as incomes rise and the demand for diets higher in protein grows. All totaled, **milk** production will have to grow **13.2 trillion pounds** (5,987,419,284 tons). For that to happen, the average dairy cow in the world will have to double its annual milk production.

Dairy farmers in 2067 will meet the world's needs for essential nutrients by adopting technologies and practices that provide improved **cow** health and longevity, profitable dairy farms, and sustainable agriculture.
Integrated sensors, robotics, and automation will replace much of the manual labor on farms.

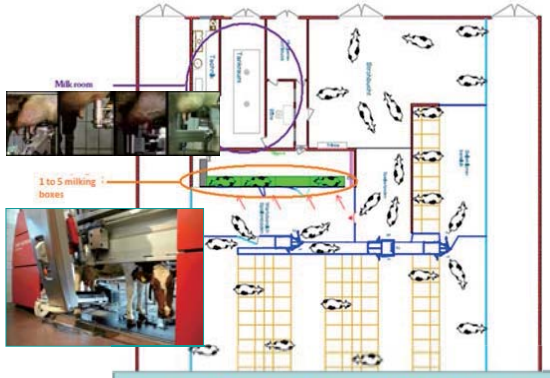
Journal of Dairy Science®
Official Journal of the American Dairy Science Association®

May 2018 Volume 101, Issue 5, Pages 3722–3741

Invited review: Learning from the future—A vision for dairy farms and cows in 2067

J.H. Britt, R.A. Cushman, C.D. Dechow, H. Dobson, P. Humblot, M.F. Hutjens, G.A. Jones, P.S. Ruegg, I.M. Sheldon, J.S. Stevenson

Smart Technology of Top Five Robotic Applications in Dairy Cattle Farm of Taiwan



Five working lines with robots in the dairy farm were designed to do smart farming as follows:

1. daily **milking** line,
2. daily **feeding** line for milking cows,
3. daily **clean up** the cow excrement and environmental clean line,
4. cycle management of **cow calving** and young **calf feeding** line, and
5. cycle monitoring of **cattle health** line for cows and heifers.

Smart Agriculture 4.0 Program for sustainable dairy farm