



Organic agriculture, organic opportunities, what, why, the big picture, the global picture & where China fits.



A map of the world from an organics perspective - a density equalizing map. The size of each territory is proportional to the certified organic hectares. Australia is #1; China in #4. If China is to be number 2 then it needs to leapfrog Argentina and USA. To get the top spot China would need to beat Australia.

有机农业增长 (2001-2011)

Organic Agriculture Growth (2001-2011)

Ranking	Country	2001 (hectares)	2011 (hectares)	Increase (hectares)	Growth Multiple
1	Australia	7,854,824	12,001,724	4,146,900	x 1.57
2	China	8,639	1,853,000	1,844,361	x 214.49
3	Brazil	100,000	1,795,793	1,695,793	x 17.66
4	Argentina	3,000,000	4,397,851	1,397,851	x 1.47
5	India	1,711	1,193,000	1,191,289	x 688.66
6	USA	900,000	1,948,946	1,048,946	x 2.17
7	Spain	352,154	1,330,774	978,610	x 3.70
8	Malaysia	1,300	900,965	899,665	x 716.13
9	Canada	188,195	700,578	512,383	x 3.74
10	France	452,279	947,115	494,836	x 2.09

Paul 2013

The past decade has been a decade of growth for organic agriculture (OA). Of the 160 countries that report OA, Australia & China take the 2 lead positions for growth over the past decade.



Let me introduce you to three people who are a part of the organics story. First there is Professor Franklin King, a US professor of agriculture. Disenchanted with the USDA and its recommendations, in 1909 he came to see how China, Japan and Korea were producing food. His detailed account was released in 1911 as *Farmers of Forty Centuries*. King was enthusiastic about the Chinese way of food production.



Second is Rudolf Steiner, an Austrian philosopher. He was the first to call for a new and differentiated agriculture that rejected the developing paradigm of chemical agriculture.



Third, Rudolf Steiner influenced Lord Northbourne in the UK. Northbourne studied and taught agriculture at Oxford University. He coined the term 'organic agriculture'. He framed the issue as a contest of organic agriculture versus chemical agriculture.



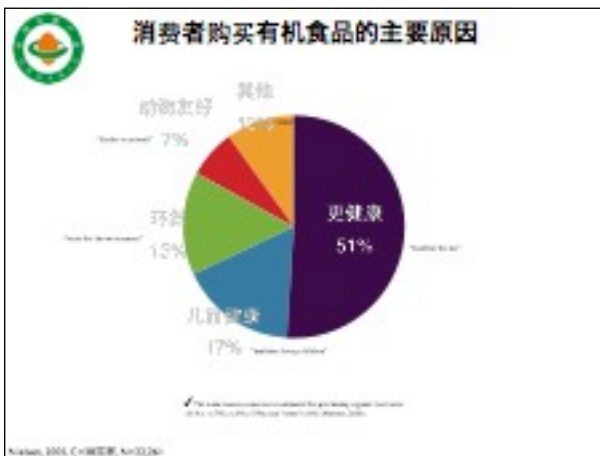
## 什么是有机食品

what is organic food?

- ✗ 合成肥料 (Synthetic fertilizers)
- ✗ 化学合成的农药 (Synthetic pesticides)
- ✗ 转基因 (GMOs)
- ✗ 纳米技术 (Nanotechnology)
- ✗ 放射 (Irradiation)

The 5 Nos of OA:

no synthetic fertilizers, no synthetic pesticides, no GMOs, no nanotechnology and no irradiation.

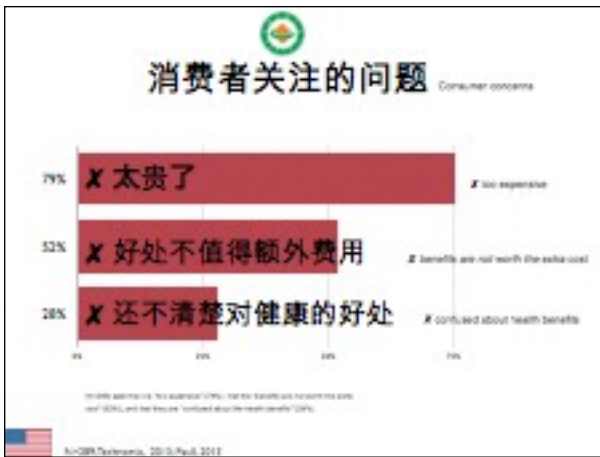


The 4 Yeses of OA - the reasons customers buy organic:

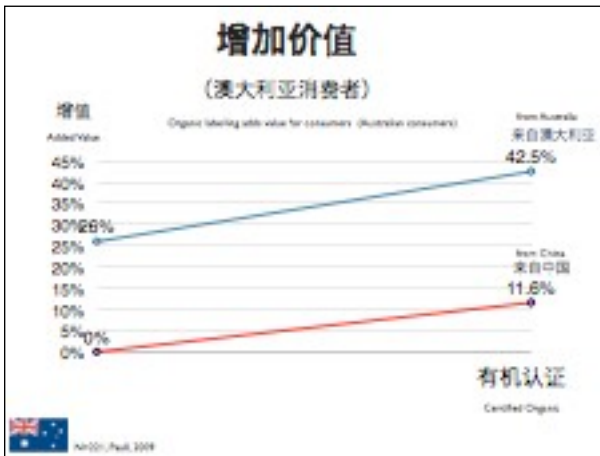
healthier for me, healthier for my children, better for the environment, and kinder to animals.



A study this year reported that consumers from USA buy organic to avoid 4 things: pesticides, hormones, antibiotics, and preservatives.



3 consumer concerns:  
the price, are benefits worth it, what are the health benefits?



Certified Organic added 17% to the value of Australian produce,  
Certified Organic added 12% to the value of Chinese produce.  
For Australian consumers, for food from China, organic helps close the gap between the attributed value of Australian & Chinese produce (reducing the gap to 14.4%).



Why should China embrace organic production?  
This brings us to pollution!  
I have observed and visited China over nearly 30 years.  
I witness an economic miracle but an environmental catastrophe.



The view in Hobart.  
What can you see?  
The answer is everything - colour, and as far as the eye can see.



This is Australia.  
Hobart is our most southerly city.



Hobart.  
Healthy air.



Wuhan.  
Dangerous air.



Colour of water, trees.



Here is the contrast.



This is China - you see that pollution is not just a Wuhan issue. It is a China issue.  
The opportunity is to adopt more clean & green practices - and that includes organic food production.






Mao Tse Tung said: "Let a thousand flowers blossom".  
OA cannot solve all of China's pollution problems but Organic agriculture can be one of those flowers and can contribute to working towards the cleaner & greener China.



China's supermarkets are making an effort to educate consumers.  
Organic also needs a push from China's universities, government, and food companies.

## 有机农业面积

文章	国家	统计
 金	澳大利亚	12001724公顷
 银	阿根廷	4177653公顷
 铜	美国	1948948公顷




许多=机会



年份	2010	2011	2012
金	12001724	12001724	12001724
银	4177653	4177653	4177653
铜	1948948	1948948	1948948

Page 6, 2012

I take the view that China always aspires to be number 1. Let's look at who is leading the world in OA - I will look at 12 different ways of measuring leadership. For certified organic hectares: Australia, Argentina, and USA lead the world - as we saw China is #4 - but organic is more than just agriculture.

## 野生有机面积

文章	国家	统计
 金	芬兰	7,800,224公顷
 银	巴西	6,200,380公顷
 铜	喀麦隆	6,000,000公顷

 中国900,000公顷 (2013) ...  
 澳大利亚0公顷 (2013) ...




许多=机会

年份	2010	2011	2012
金	7800224	7800224	7800224
银	6200380	6200380	6200380
铜	6000000	6000000	6000000

Page 6, 2012

For certified organic wild, Finland, Brazil, Cameroon are the world leaders. China has almost 1 million hectares of certified organic wild hectares.

## 有机水产养殖面积

文章	国家	统计
 金	越南	11,650公顷
 银	孟加拉国	7,717公顷
 铜	巴西	2,700公顷

 中国0公顷 China  
 澳大利亚0公顷 Australia

许多=机会

年份	2010	2011	2012
金	11650	11650	11650
银	7717	7717	7717
铜	2700	2700	2700

Page 6, 2012

For organic aquaculture, Vietnam, Bangladesh, and Brazil lead the world. No data for China.



## 有机森林面积

奖章	国家	统计
	葡萄牙	9,977公顷
	冰岛	2,800公顷
	马拉维	1,850公顷

 中国 0公顷  
 澳大利亚 0公顷

许多=机会

年份	2010	2011	2012
有机森林面积 (公顷)	10,000	10,000	10,000

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For organic forestry, Portugal, Iceland, and Malawi lead the world. None reported for China.

## 生物动力面积

奖章	国家	统计
	德国	66,247公顷
	意大利	8,227公顷
	法国	7,500公顷

 没有数据

许多=机会

年份	2010	2011	2012
生物动力面积 (公顷)	70,000	70,000	70,000

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Biodynamic is a specialised form of organic agriculture, it follows the principles of Rudolf Steiner. Germany, Italy, and France are the world leaders. No data for China.

## 有机生产者

奖章	国家	统计
	印度	400,551人
	乌干达	188,625人
	墨西哥	128,862人

 中国 (无数据) (2013年)  
 澳大利亚 212家生产者 (2013年)

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年份	2010	2011	2012
有机生产者 (人数)	400,000	400,000	400,000

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For organic producers, India, Uganda, and Mexico are the world leaders. No data reported for China.

## 有机面积占农业用地面积百分比

奖章	国家	统计
金	福克兰群岛 (马尔维纳斯群岛)	38%
银	列支敦士登	28%
铜	奥地利	20%



For the proportion of organic agriculture to total agriculture, the Falkland Islands, Liechtenstein, and Austria are the world leaders. China is 0.36% organic, which is below the World average of 0.86%, and well below Australia's 2.93%. So for China a first aspiration could be to achieve the world average.

## 有机人均消费

奖章	国家	统计
金	瑞士	€153 (213美元)
银	丹麦	€142 (198美元)
铜	卢森堡	€127 (177美元)

中国数据 (2013年)  
澳大利亚41.7 (2013年)

许多=机会

For per capita organic consumption, Switzerland, Denmark, and Luxembourg lead the world.

## 有机市场值



奖章	国家	值
金	美国	€20.2亿美元 (26.7十亿美元)
银	德国	€6.0亿 (美元840亿美元)
铜	法国	€3.4亿欧元 (4.7美元亿美元)

许多=机会

For the national organics market, USA, Germany, and France are the world leaders.

## 有机农业公顷, 同比上年度增长百分比

(2010/2009)




文章	国家	提高	
	全	法罗群岛	2008%
	银	毛里求斯	483%
	铜	刚果民主共和国	388%

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For the year-on-year increase in organic hectares, the world leaders are the Faroe Islands, Mauritius, and the Congo

- with big increases in a single year they demonstrate that much progress can be made in a short time.

## IFOAM 分支机构




文章	国家	统计	
	全	德国	104个分支机构
	银	印度	53个分支机构
	铜	中国	45个分支机构

许多=机会

For membership of IFOAM, the International Federation of Organic Agriculture Movements, the world leaders are

Germany, India, and China - this it suggests that China is serious and on the move with the adoption of organics.

## 有机研究论文数

文章	国家	统计	
	全	德国	3,325篇
	银	丹麦	3,000篇
	铜	瑞士	1,900篇

 中国 (12篇)  
 澳大利亚 (97篇)

许多机会

For organic research papers, Germany, Denmark, and Switzerland lead the world.

In the organics database of research (orgprints.org), China has 12 papers recorded, and Australia has 97 papers recorded.

Ranking	COUNTRY	Area	Value	Area	Value	Area	Value	Area	Value
1	Germany	100	100	100	100	100	100	100	100
2	Australia	95	95	95	95	95	95	95	95
3	China	90	90	90	90	90	90	90	90
4	USA	85	85	85	85	85	85	85	85
5	France	80	80	80	80	80	80	80	80
6	UK	75	75	75	75	75	75	75	75
7	Canada	70	70	70	70	70	70	70	70
8	Spain	65	65	65	65	65	65	65	65
9	Italy	60	60	60	60	60	60	60	60
10	Japan	55	55	55	55	55	55	55	55
11	India	50	50	50	50	50	50	50	50
12	South Korea	45	45	45	45	45	45	45	45
13	South Africa	40	40	40	40	40	40	40	40
14	USA	35	35	35	35	35	35	35	35
15	France	30	30	30	30	30	30	30	30
16	UK	25	25	25	25	25	25	25	25
17	Canada	20	20	20	20	20	20	20	20
18	Spain	15	15	15	15	15	15	15	15
19	Italy	10	10	10	10	10	10	10	10
20	Japan	5	5	5	5	5	5	5	5
21	India	0	0	0	0	0	0	0	0
22	South Korea	0	0	0	0	0	0	0	0
23	South Africa	0	0	0	0	0	0	0	0
24	USA	0	0	0	0	0	0	0	0
25	France	0	0	0	0	0	0	0	0
26	UK	0	0	0	0	0	0	0	0
27	Canada	0	0	0	0	0	0	0	0

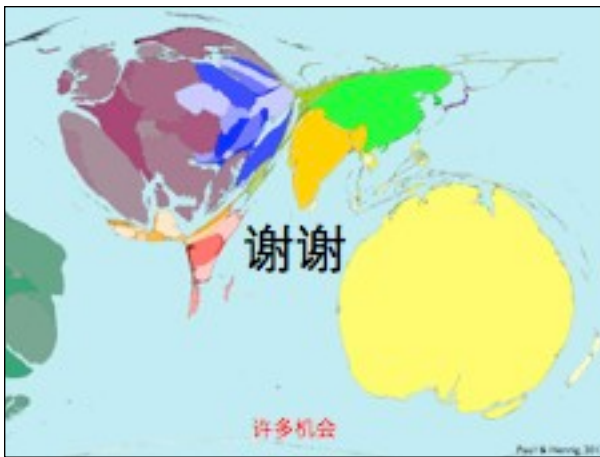
Of the 27 leaders in organic agriculture identified here, Germany tops the list, and both Australia and China are there.

中国 - 澳大利亚  
有机机会  
China - Australia  
Organic Opportunities  
许多机会  
many opportunities

There are many opportunities in organic agriculture for China. I hope this prompts thinking about the variety of organic opportunities, and in particular thinking about growing some aspects of organic production.

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有机系统报  
许多机会  
作者  
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www.organic-systems.org/journal  
john.Paul@gmail.com

And one final opportunity - I invite you to publish your organics research in the Journal of Organic Systems (JOS), or volunteer to be a reviewer, or you could be a guest editor for an issue.



Thank you.

#### Abstract

A century ago, China's sustainable agricultural practices were documented and praised by US Professor of Agriculture, Franklin King, for the successful stewardship of agricultural land over four millennia. Over the past decade, Australia and China have converted more land to organic agriculture than any other of the 160 countries reporting organic agriculture statistics (for Australia, 4.3 m newly converted hectares, and for China, 1.8 m hectares). Australia accounts for about a third of the world's certified organic agriculture hectares. China's 'economic miracle' has been at the great cost of environmental degradation. There is a role for the development of organic agriculture in China to help achieve a clean green future. Added to this, consumers want safe food and they attribute a premium price to certified organic food. This paper presents a spectrum of indices of organics leadership and reveals great opportunities for growth in the organics sector. There are opportunities for the development of organic aquaculture, organic wildculture, organic forestry, for growing the domestic market and per capita organic consumption, and for publishing organics research. Organic accounts for 0.88% of global agricultural land, Australia's agricultural land is 2.93% certified organic, and for China the figure is 0.36% which offers plenty of room for improvement. China's prevailing levels of pollution call for massive remediation action, and the uptake of organic agriculture can be one component of the solution in restoring China's environment to a healthy state and to providing safe food for consumers.

#### 摘要

一个世纪以前，美国农业学家富兰克林·金就记载了中国的可持续农业实践，并赞扬了四千年来中国对耕地的成功管理和使用。在过去十年，澳大利亚和中国投入有机农业的耕地比其他160个有机农业数据报国的国家都多(澳大利亚新增430万公顷，中国新增180万公顷)。澳大利亚有机农业面积占世界认证的有机农业总面积的三分之一，中国的“经济奇迹”是以对环境的巨大破坏为代价的，而发展有机农业可以为中国带来一个绿色的未来。不仅如此，消费者也需要安全的食品，他们也愿意为认证的有机食品付更多的钱。本文展示了有机领导力的几项测量方式，以及在有机方面巨大的发展机会。这些机会包括有机水产、有机野外产业、有机森林产业、国内有机市场和人均有机消费量的增长，以及有机研究成果的发表。全球有机耕地面积占耕地总面积的0.88%，澳大利亚有机耕地面积占其耕地总面积的2.93%，中国有机耕地面积占其耕地总面积的0.36%。这对中国来说还有很大的发展空间，中国现在的环境急需改善，而有机农业的推广可以成为修复中国环境以及提供健康食品的方法。

## References

- Nielsen, (2005). Consumer attitudes towards organic foods: A global consumer survey. *IFO/Unilever*.
- Paul, J. (2008). The farm as ecosystem: the functional role of organic agriculture. *Journal of Bio-Economic* *Technica*, 20, 14-18.
- Paul, J. (2009). The value of Eco-Labeling: Price premiums & consumer valuation of organic, natural, and local of high food items. *Switzerland: University of Zurich*.
- Paul, J. (2014a). Meeting the Five Organic Agriculture Goals: Rudolf Steiner's Agriculture Course at Kitzbühel, 1924. *European Journal of Social Sciences* 2 (1), 84-92.
- Paul, J. (2015a). The making of an agricultural domain: Farmers of Early Colonies or Permanent Agriculture in China, Korea and Japan, 1801-2011. *Agriculture Sciences* 2(3), 176-182.
- Paul, J. (2015b). The uptake of organic agriculture: A decade of worldwide development. *Journal of Social and Development Sciences* 2(2), 101-110.
- Paul, J. (2016). Organic Certified 2016: Global Indices of Leadership in Organic Agriculture. *Organic World*, 28 (July, 2 August, 1 August).
- Paul, J. (2017). USA: Organic demand to increase. *Organic News*, 28 January.
- Paul, J., & Haring, B. (2015). The World of Organic Agriculture - Density-equating map. In H. Weber, J. Lamour & L. Kitchin (Eds.), *The World of Organic Agriculture: Statistics and Emerging Trends 2014* (pp. 1-10). Bonn, Switzerland: Research Institute of Organic Agriculture (FiBL) & IFOAM, International Federation of Organic Agriculture Movements (IFOAM).
- Permonio, (2016). *Healthy Living Consumer Trend Report*. (Chicago: Technomic Inc).
- Weber, H., & Kitchin, L. (Eds.). (2011). *The World of Organic Agriculture: Statistics and Emerging Trends 2011*. Bonn, International Federation of Organic Agriculture Movements (IFOAM).
- Weber, H., Lamour, J., & Kitchin, L. (Eds.). (2015). *The World of Organic Agriculture: Statistics and Emerging Trends 2015*. Bonn, Switzerland: Research Institute of Organic Agriculture (FiBL) & IFOAM, International Federation of Organic Agriculture Movements (IFOAM).
- Weber, H., & Hussak, W. (Eds.). (2017). *Organic Agriculture worldwide 2017: Statistics and Future Prospects*. Bad Dürkheim, Germany: Stiftung Ökologie & Landbau (SOL).



# 中国 - 澳大利亚 有机=机会

China - Australia  
Organic Opportunities

约翰·保尔博士  
Dr John Paul  
jpaul@unsw.edu.au

2013年11月12日  
华中农业大学, 武汉, 中国  
12 November 2013  
Huazhong Agricultural University, Wuhan, China

