



REVIEW | **Annals of Internal Medicine**

Are Organic Foods Safer or Healthier Than Conventional Alternatives? A Systematic Review

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Background: The health benefits of organic foods are unclear.

Purpose: To review evidence comparing the health effects of organic and conventional foods.

The evidence does not suggest marked health benefits from consuming organic versus conventional foods, although organic produce may reduce exposure to pesticide residues and organic chicken and pork may reduce exposure to antibiotic-resistant bacteria.

Between 1997 and 2010, U.S. sales of organic foods increased from \$3.6 to \$26.7 billion (1, 2). Although prices vary, consumers can pay up to twice as much for organic than conventional foods (3-5).

Organic certification requirements and farming practices vary by country and organization, but generally, organic food is produced without synthetic pesticides or fertilizers or routine use of antibiotics or growth hormones (6, 7). Organic livestock are fed organically produced feed that is free of pesticides and antibiotics and are provided access to the outdoors, direct sunlight, fresh air, and freedom of movement (7). In addition, organic regulations typically require that organic food be minimally processed, contain no artificial food additives and are not grown from genetically modified organisms (6, 8). The International Federation of Organic Agriculture Movements endorses the principles of "health, ecology, fairness, and care" (9).

Consumer purchase organic foods for different reasons, including concerns about the effects of conventional farming practices on the environment, human health, and animal welfare and perceptions that organic foods are tastier than their conventional alternatives (2, 10-13).

Several prior reviews have attempted to synthesize the available literature on the health, nutritional, and safety characteristics of organic and conventional foods. Previous reviews comparing the nutritional content of organic and conventional foods, summarized in tables narratively (13-18), reported differences in nutrient levels without assessing the statistical significance of those differences or weighting outcomes by sample size (19-22), or considered only humans (23).

METHODS

Data Sources and Searches

With a preformed literature, we developed search strategies for 7 databases: MEDLINE (January 1966 to May 2011), EMBASE, CAB Direct, AgriNet, TOXNET, and Cochrane Library (January 1966 to May 2009) with such terms as *organic, vegetable, fruit, and beef* (Supple-

See also:
Web-Only Supplements

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Ann Intern Med. 2012;157:348-366.

日劇線上看 陸劇線上看 電視劇線上看

研究：有機食物沒有更營養 無益健康 2012-09-08 23:43

好文轉寄 醫療保健 暫 11

即時新聞 | 政治 | 社會 | 科技 | 國際 | 財經 | 生活 | 體育 | 影劇 | 趣聞

國際 字型：+ - | 列印 | 分享： +1 訂閱 { 4 }

有機食品比較營養？美研究：沒差別 [2012/9/4 18:00]

当前位置：首頁 >> 世界萬象 >> 社會鏡頭

文章取自世界各大新聞媒體和網站論壇，內容並不代表本網立場！

斯坦福研究：有機食品未必更健康

內容摘要：美國科學家發現，有機農產品和肉類包含的維他命和營養成分並不比傳統食物多，但可

首頁 政治 社會 國際 兩岸 地方 財經 科技 運動 娛樂

有機食品減少使用殺蟲劑、一樣營養



有機農業的原則

IFOAM 有機農業運動國際聯盟

健康

有機農業維護並且增進土壤、植物、動物、人類、以及地球之間作為不可分割，同為一體之健康。

生態

有機農業乃是基於生態系統及其循環，其操作需要仰賴、學習、以及維護生態循環的生產體系。

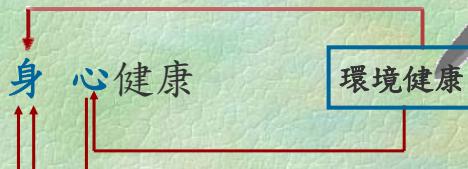
公平

有機農業的運作需要建立各種關係，以確保各類環境與生命機會的公平。

謹慎

有機農業的運作需要採取預警的以及負責的態度，來保護環境與今生來世人類的健康與福祉。

何謂健康？



慣行農業

化學肥料
化學農藥
抗生素
基改作物
單一作物

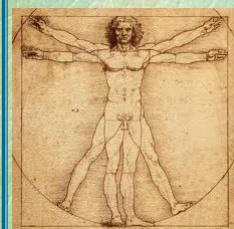
食 品

營養成分

主要成分：澱粉、蛋白質、脂質
礦物質：
維生素：
抗氧化成分：

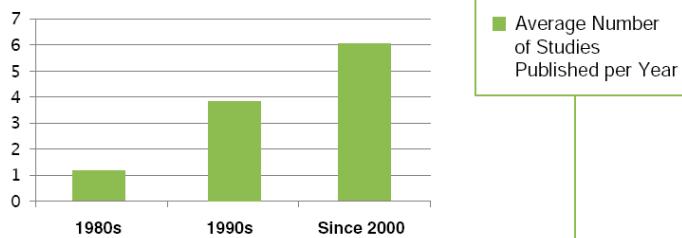
有毒物質

硝酸鹽
病菌、毒素
農藥、抗生素



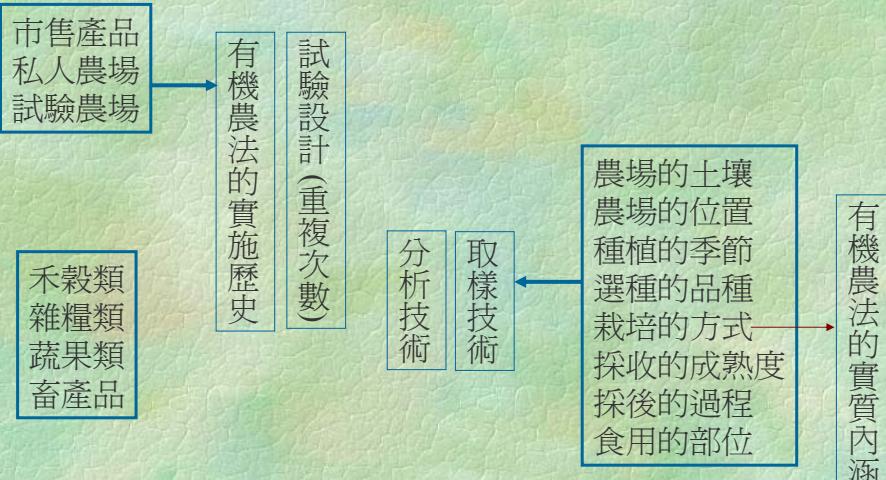
有機產品的成分與營養

Increase in the Number of Studies Published per Year Comparing the Nutrient Content of Organic and Conventional Foods



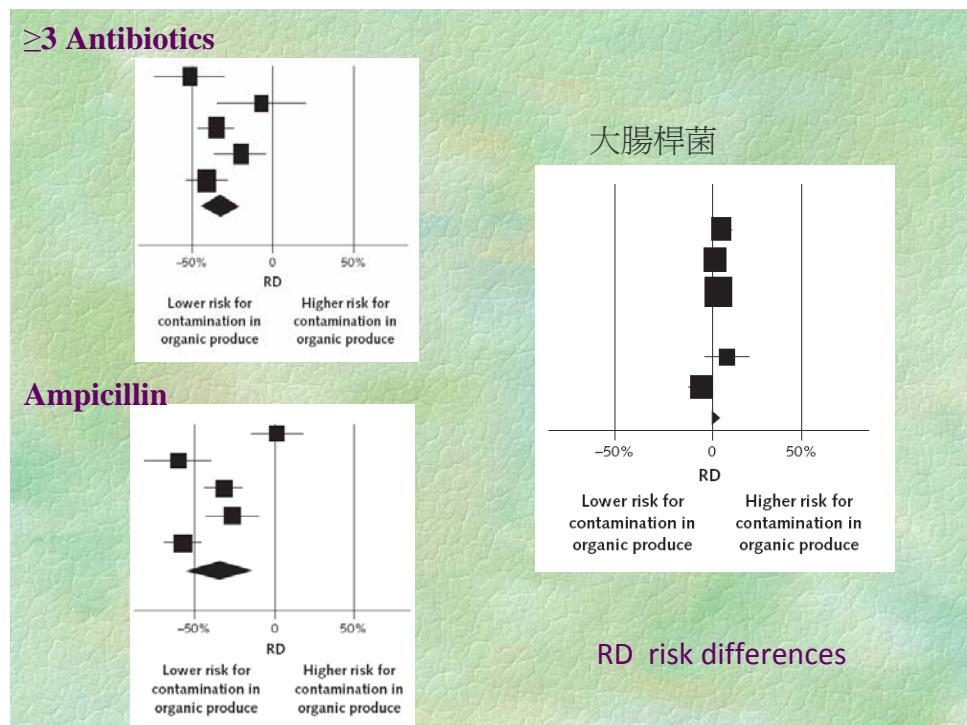
研究報告越來越多

研究的複雜程度

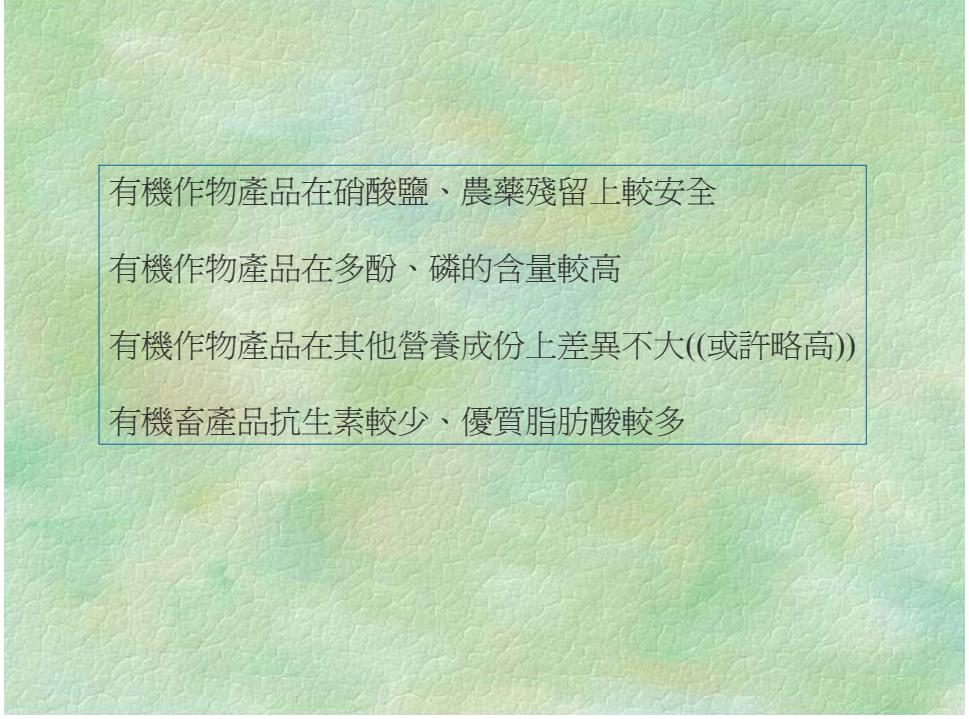


2008 ①	Benbrook et al. , New evidence confirms nutritional superiority of plant-based organic foods. <i>The Organic Center</i> , pp. 53. (美國, 農業科學)
2009 ①	Dangour et al. , Nutritional quality of organic foods: a systematic review. <i>American Journal of Clinical Nutrition</i> 90: 680-685. (英國, 營養學)
2010 ②	Lima & Vianello Review on the main differences between organic and conventional plant-based foods. <i>International Journal of Food Science & Technology</i> 46: 1-13. (巴西, 生化)
2011 ②	Huber et al., Organic food and impact on human health: assessing the status quo and prospects of research. NJAS—Wageningen Journal of Life Sciences. 58:103-109. (荷蘭, 營養學)
2011 ③	Lairon, D. Nutritional Quality and Safety of Organic Food. <i>Sustainable Agriculture</i> 2: 99-110. (法國, 營養學)
2011 ④	Hunter et al., Evaluation of the micronutrient composition of plant foods produced by organic and conventional agricultural methods. <i>Critical Reviews in Food Science and Nutrition</i> 51: 571-582. (澳洲, 分子生物學)
2011 ⑤	Palupi et al., Comparison of nutritional quality between conventional and organic dairy products: a meta-analysis. <i>Journal of the Science of Food and Agriculture</i> . DOI 10.1002/jsfa.5639 (德國, 食品學)
2012 ③	Smith-Spangler et al., Are organic foods safer or healthier than conventional alternatives. <i>Annals of Internal Medicine</i> 157: 348-366. (美國, 醫學)





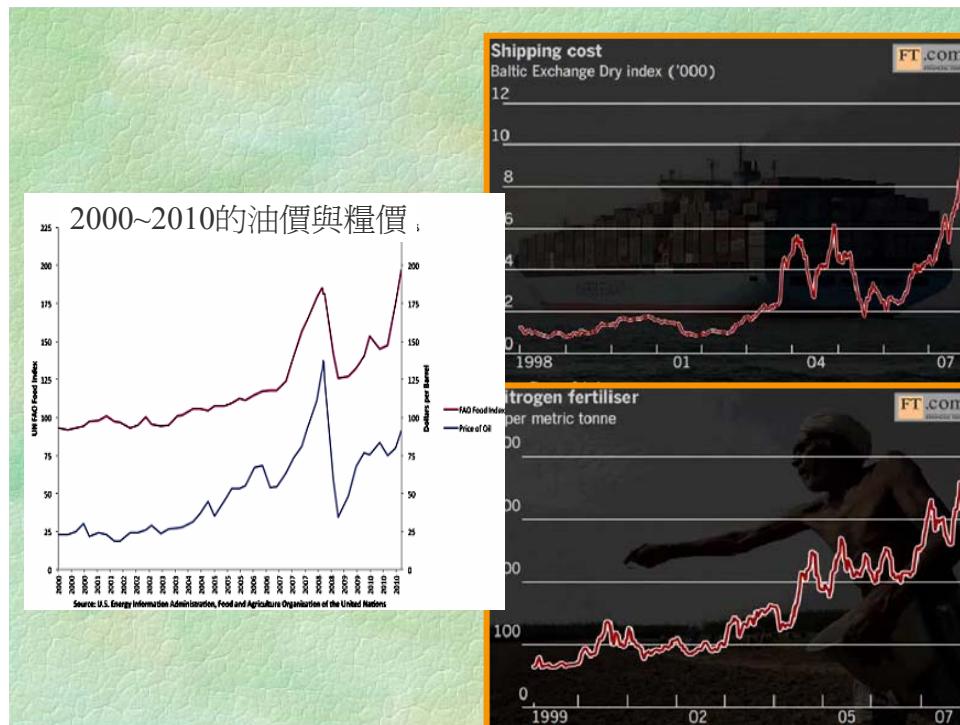
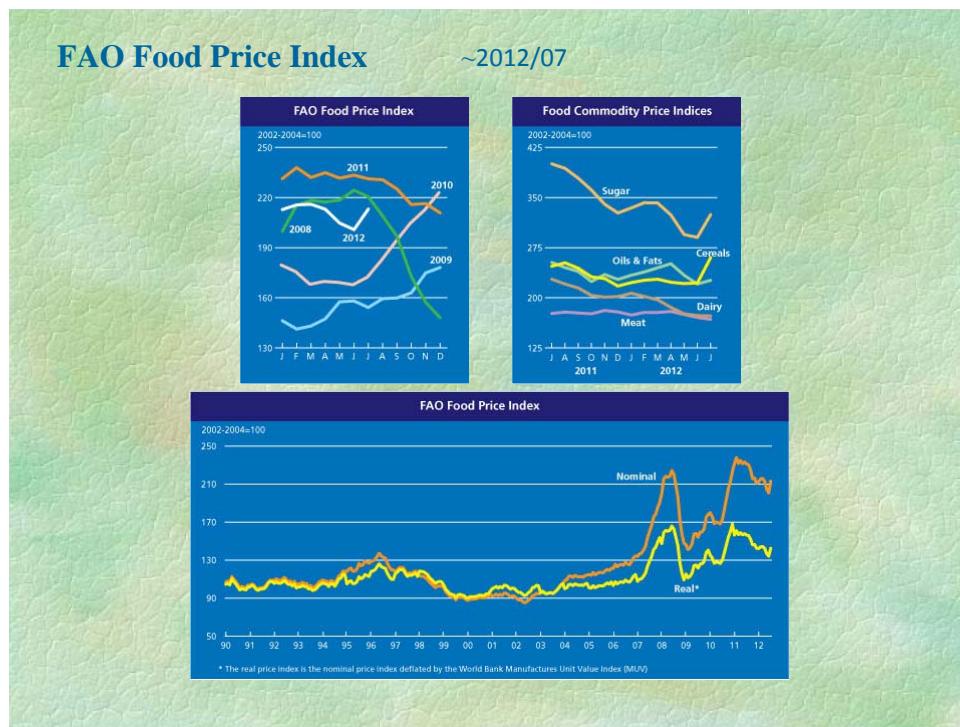
	1	2	3	4	5	1	2	3
總抗氧化能力	■							
總酚類	■	■	■			■	■	■
槲皮素Quercetin	■							
山奈酚Kaempferol	■							
水楊酸			■	■				
總維他命						■	■	
維他命C		■						
維他命A (Carotene)	■							
維他命E	■							
磷	■			■		■	■	■
鈣					■	■		
鎂			■					
鐵			■					
不飽和脂肪酸/Omega 3			■		**		■	**
蛋白質	■		■		**	■	■	■

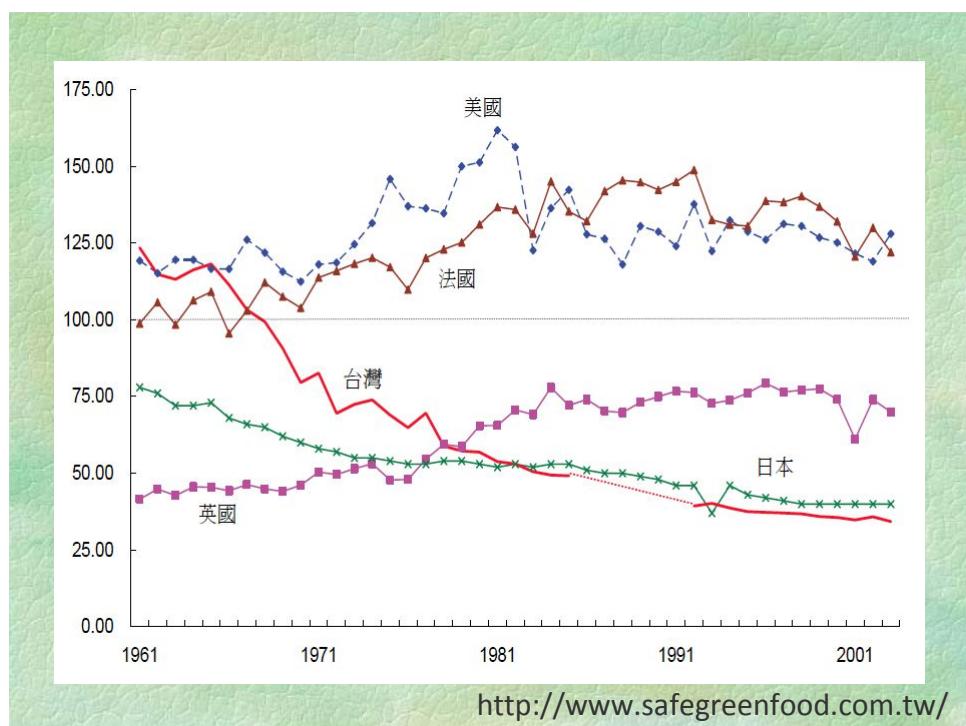
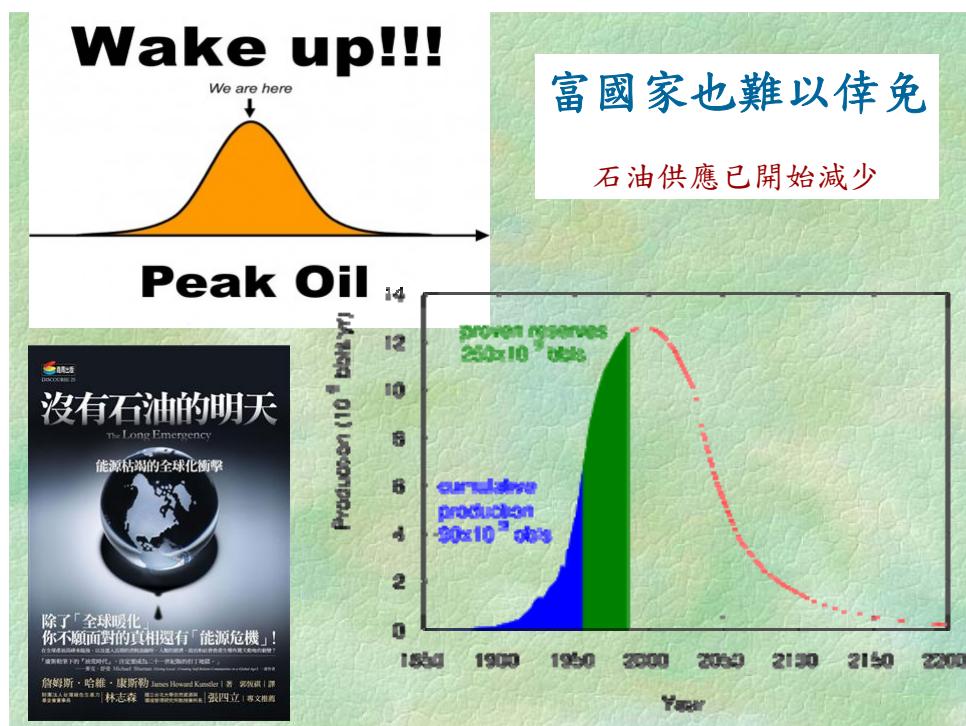


- 有機作物產品在硝酸鹽、農藥殘留上較安全
- 有機作物產品在多酚、磷的含量較高
- 有機作物產品在其他營養成份上差異不大((或許略高))
- 有機畜產品抗生素較少、優質脂肪酸較多

有機不只有益健康

有機更是攸關生存

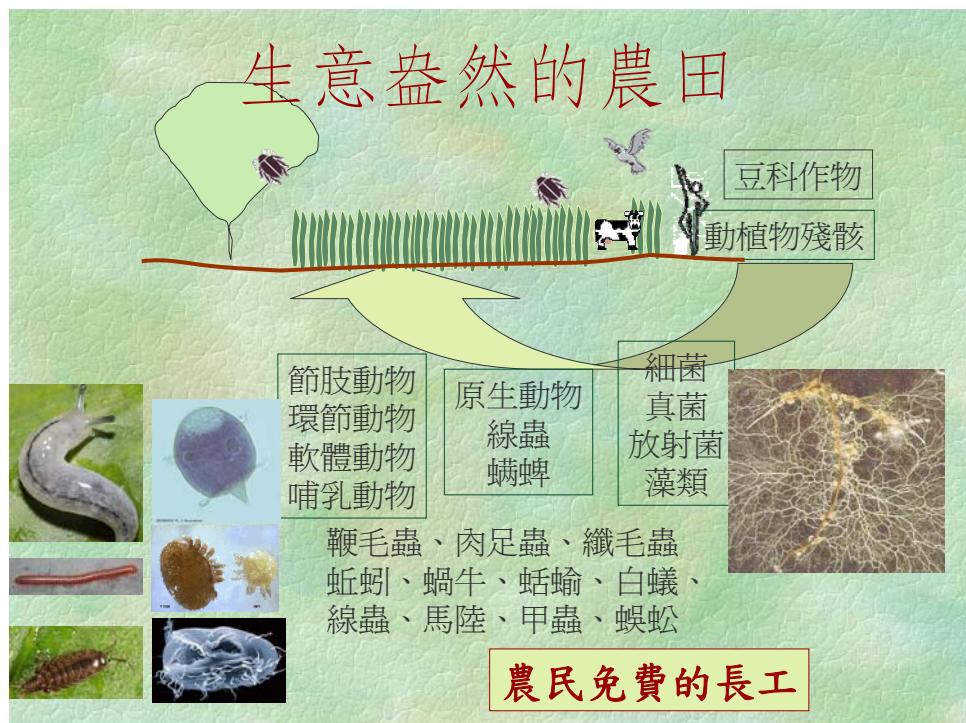
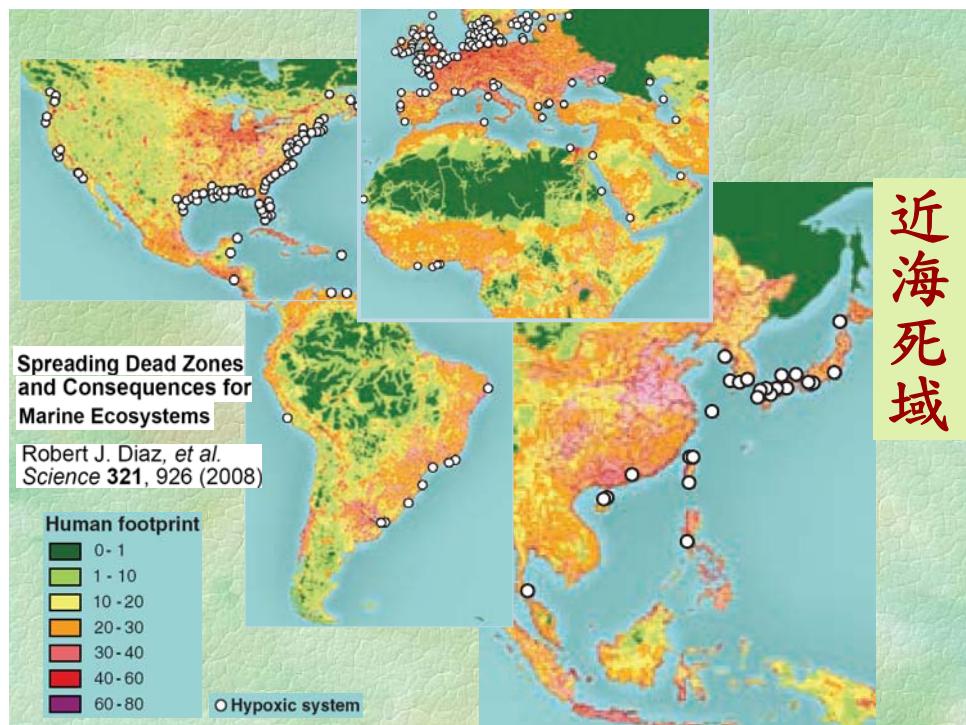






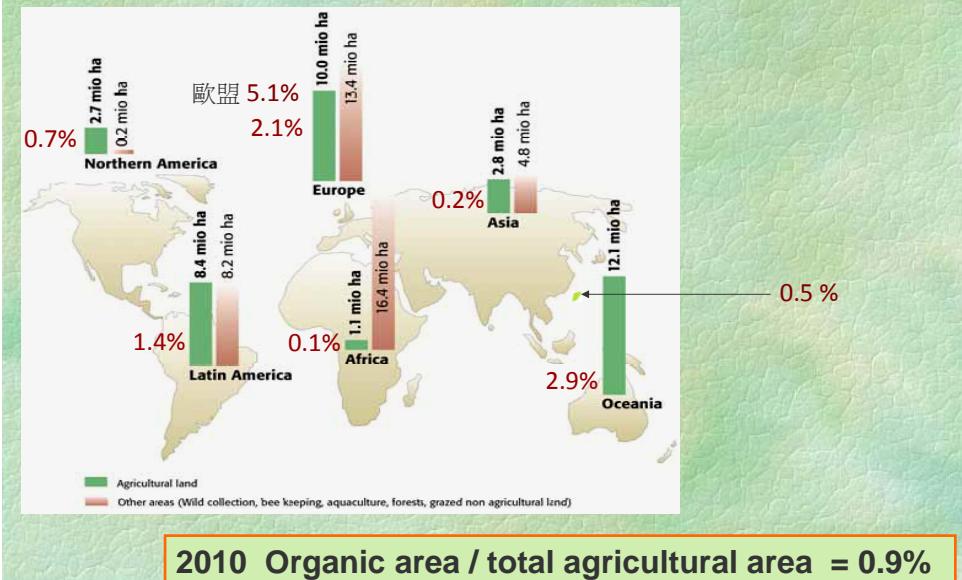
<http://www.safegreenfood.com.tw/>





各洲有機農地面積佔耕地面積的百分比

- 目前約有110個國家實施有機農業且持續增長中。

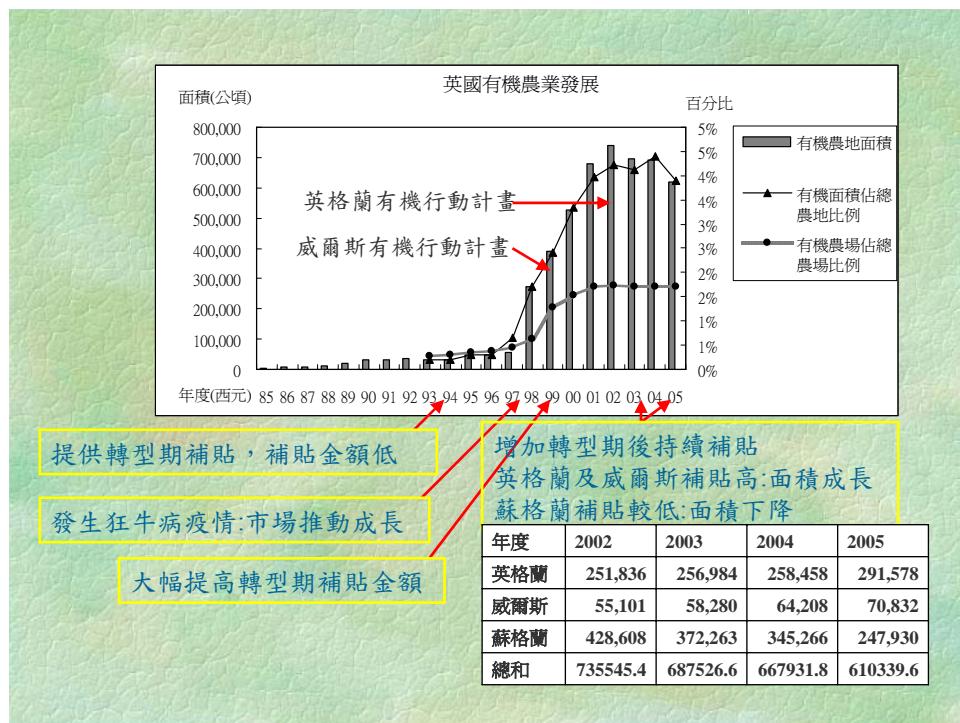


觀念難以改變

PARADIGM
SHIFT

最不相信有機農業的人

1. 老農
2. 農藥與肥料企業
3. 農委會官員
4. 農學院教授



農民轉型作有機

政策轉型挺有機

有機野譚

健康 生態 公平 謹慎

有機農業促進法修法專頁

活動報導 國外資料 本國資料

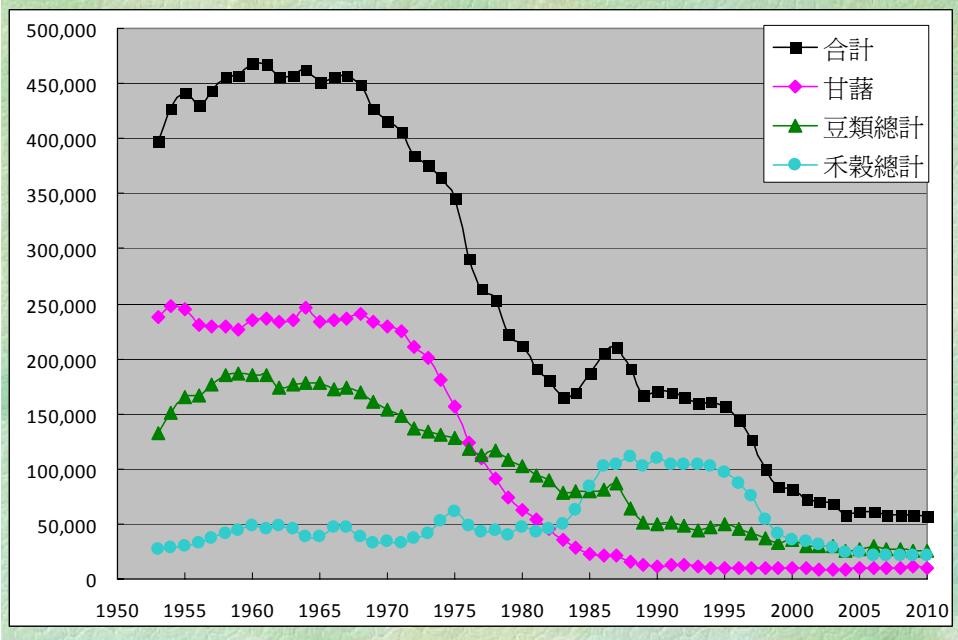
賜教：wjhkuo@ntu.edu.tw

活動報導

2012

- 0614 <夢中的國家>網路電台廣播節目與主持人張素華談「有機農業立法的必要」
 音檔下載(滑鼠右鍵下載，左鍵直接聽)
 (1)上 下 (2)上 下 (3)上 下 (4)上 下
- 0505 仰山基金會與台灣法學會舉辦研討會，報告草案內容「有機農業的必然與實現」[投影片](#) [論文](#)
- 0329 仰山基金會推動「有機農業促進條例」立法第一次記者會；[新聞稿](#)；[仰山草案第一稿](#)

主要雜糧收穫面積(公頃)



禾穀雜糧收穫面積(公頃)

