

工業局94年度農業生技產業化策略推動計畫

Nutraceutical Industry Analysis



台灣經濟研究院

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2005/08/17

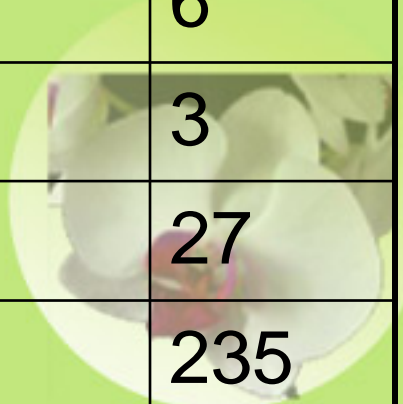
Obesity

- An estimated 130 million Americans- 64% of us- are overweight or obese
- 59 million- a full 30%- of adults are obese
- Obesity is driving serious health risks, including heart disease and diabetes
- According to a RAND Corporation Study, healthcare costs related to obesity could reach 20% by 2020



USDA suggest Federal Nutrition Panel

2200 calorie diet	2000	2004
Fruits (servings per day)	3	4
Vegetables (servings per day)	4	6
Grains (servings per day)	9	7
Meat and Beans (ounces per day)	6	6
Milk (servings per day)	2	3
Oil (grams per day)	NA	27
Discretionary daily calories	NA	235



U.S. Nutrition Industry Growth, 2001 to 2003

				2003	2004-2009
Products	2001	2002	2003	Growth	EST CAGR
Vitamins	6,025	6,179	6,648	7.6%	3.2%
Herbs/Botanicals	4,397	4,276	4,197	-1.8%	0.0%
Sports Nutrition	1,729	1,828	1,975	8.0%	6.1%
Minerals	1,392	1,527	1,765	15.6%	4.4%
Meal Supplements	2,305	2,571	2,522	-1.9%	4.3%
Specialty/Other	2,230	2,374	2,715	14.4%	9.5%
Supplements	18,078	18,755	19,821	5.7%	4.2%
Natural & Organic Food	13,158	14,362	16,240	13.1%	9.2%
Functional Foods	18,820	20,480	21,890	6.9%	6.8%
Natural Personal Care	4,113	4,523	4,917	8.7%	8.3%
Nutrition Industry	54,170	58,120	62,868	8.2%	6.7%
Annual Growth	7.4%	7.3%	8.2%		

CAGR= Compound Annual Growth Rate. Forecast is annual average.

U.S. Nutrition Industry Growth, 2001 to 2003

				2003	2004-2009
Sales Channels	2001	2002	2003	Growth	EST CAGR
Retail-Natural & Specialty	17,343	18,673	20,916	12.0%	7.5%
Retail-Mass Market	28,827	31,099	33,102	6.4%	6.9%
Mail Order/DRTV	1,289	1,346	1,432	6.4%	4.9%
Multilevel Network	5,081	5,218	5,407	3.6%	2.7%
Practitioner	1,331	1,419	1,523	7.3%	6.0%
Internet	307	375	495	32.2%	18.0%
Totals	54,179	58,130	62,876	8.2%	6.8%

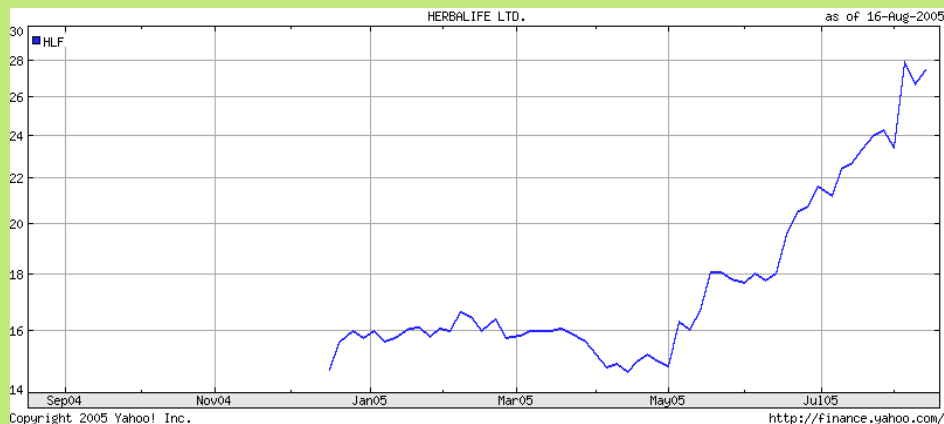
Source: Nutrition Business Journal and Penton Media Inc.



Nutrition Industry IPO

Herbalife (HLF, Nasdaq)

Herbalife, Ltd. offers weight management, nutritional supplement, and personal care products in the United States.

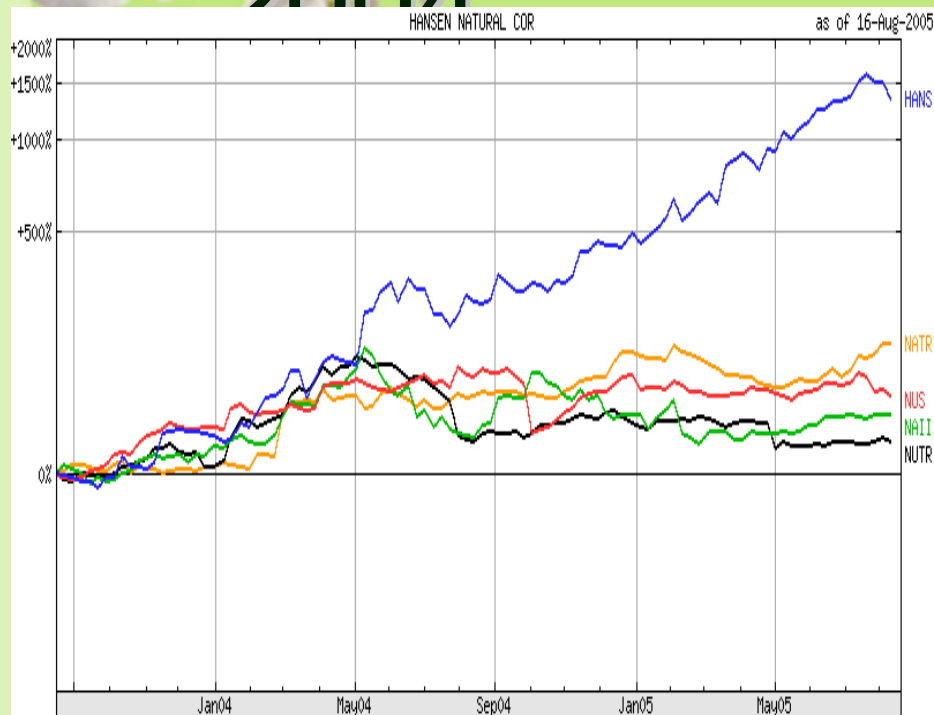


最近交易價:	27.94	最後交易日價格幅度:	27.90 - 28.00
交易時間:	2005/08/17	52周價格幅度:	14.00 - 28.55
漲跌:	0.06 (0.21%)	成交量:	15,700
昨日收盤:	28.00	平均成交量(3個月):	264,932
開盤:	27.97	市值:	19.20億
買入:	無	本益比(12個月):	169.33
賣出:	無	每股收益(12個月):	0.17
一年目標預測:	30.90	股利和股息:	無 (無)

<http://www.herbalife.com/>

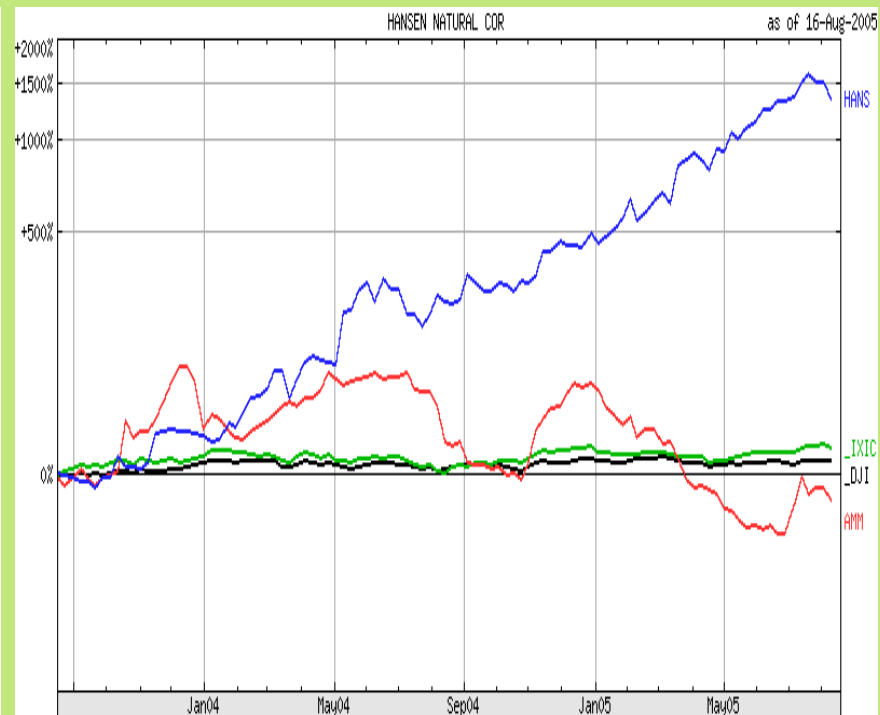


Burrill Nutraceuticals Index 2004



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HANS : HANSEN NATURAL COR

NATR : NATURE S SUNSHINE

NUS : NU SKIN ENT INC

NAI : NATURAL ALTERNATIV

NUTR : NUTRACEUTICAL INTL

ISIC : Nasdaq

DJI : Dow

AMM : AMC INC CMN STK

M&A and Other Financing Transactions

- German Company **Bayer** announced the purchase of **Roche's** consumer health business for \$2.85 billion.
- **Abbott Laboratories** acquired nutritional food and supplements maker **EAS** for \$ 320 million.
- **Ripplewood Holding** and **Activated Holdings'** purchase of nutritional supplement maker **Shaklee** from **Yamanouchi** for \$ 310 million.
- **Industrial Bank of Taiwan** also join the international VCs. (**Efficas** company)

Developing Good Science in the field of dietary supplements

- **Government Department NIH**

NIH alone invested over \$770 million in supporting nearly 2,600 research projects related to dietary supplements(1999~2003).

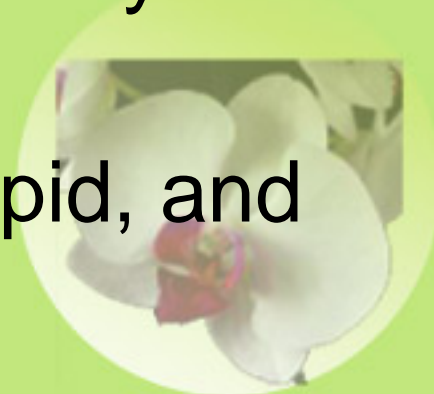
- **Office of Dietary Supplements (ODS)**

The budget for ODS grew from \$ 3.5 to \$26 million. (1999, 2004)



Research Field

- Evidence-based reviews of dietary supplement efficacy and safety
- Development database of dietary supplement ingredients
- Development validation, and analytical method
- Others such as vitamin E, B, lipid, and St. John's Wort.



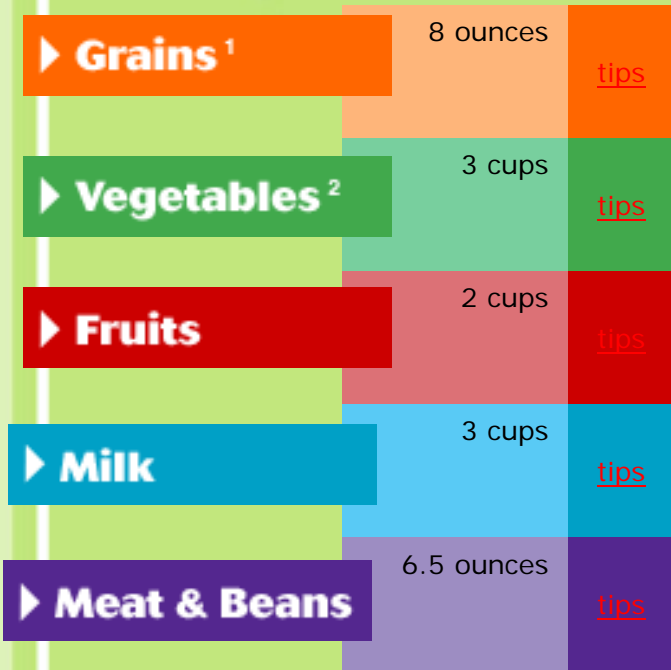
Government Agencies Revisit Dietary Guidelines

- Calorie, nutritional information, and food labels
- Restaurants and industries are being encouraged to make sure food labels are accurate.
- Americans don't eat enough fruit and vegetables.





USDA Food Pyramid



Based on the information you provided and the average needs for your age, gender and physical activity [Age: 30, Sex: male, Physical Activity: Less than 30 Minutes] your results indicate that you should eat these amounts from the following food groups daily. Your results are based on a 2400 calorie pattern.

<http://www.mypyramid.gov/>



Special Diet Plans

- Atkins Diet (low-carb craze)
- Low-Carb Corn
- Low-Carb Alternatives

3375 products being launched by food companies in the US in 2004

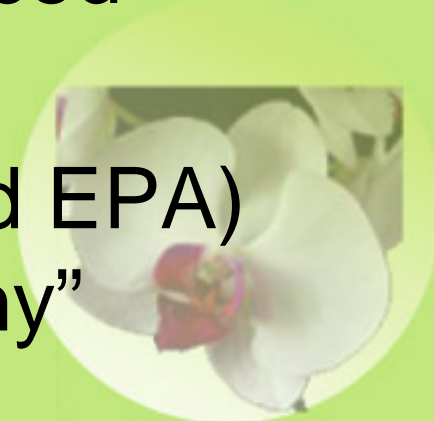
- Sucralose

In 2004, health became the new standard for the global food industry.



Diet, Diabetes, and Disease

- Diabetes is the sixth leading cause of death in the United States, affecting over 18 million people.
- Soft drinks are link to weight gain, and **Pepsi** and **Coca-Cola** introduced reduced-sugar colas.
- Omega-3 fatty acids (DHA and EPA) could be labeled “Heart Healthy”



Nutraceuticals and Disease

- Vitamin A, C, and E, are most popular antioxidants
- Vitamin E, Green Tea, and Soy are ready to take on cancer
- Choline, folic acid, and Vitamin B could help neuron growth.
- Soy extracted phytoestrogen (plant-based estrogens) could replace hormone therapy
- Lutein be found in such foods as dark-green leafy vegetables, can reverse damage to the eyes from aging.

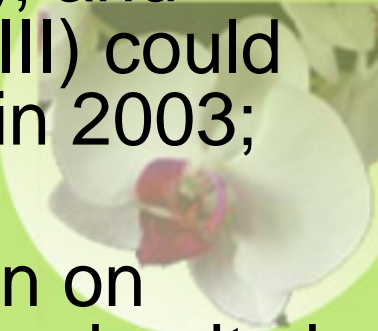
LDL, Cholesterol, HDL

- Average Americans LDL is 127(normal is 100), and there are current 29 million patients at risk for heart problems, and only 18 million on statin regimen.
- Lipitor (**Pfizer**), Crestor (**AstraZeneca**), Vytorin (**Schering-Plough**), and Zocor (**Merck**) etc. These statins could help reduce LDL or cholesterol, and prevent cardiovascular diseases.
- Statins in the 2004 pharmaceutical markets values are more than 20 millions.



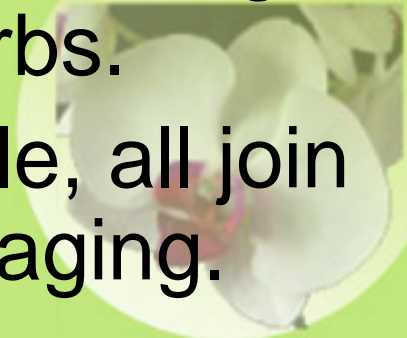


Obesity is still a growing problem worldwide

- Obesity could increase related chronic diseases rates such as diabetes, cardiovascular diseases, osteoarthritis, and cancer.
 - Some biomolecular such as leptin, ghrelin, protein YY (PYY), and cholecystokinin, may related to fighting obesity.
 - Xenical (**Roche**), Reductil (**Abbott**), and Acomplia (**Sanofi-Aventis**, Phase III) could treatment for obesity(\$ 500 million in 2003; 2.3 billion in 2013).
 - United States spent over \$ 75 billion on medical expenditures attributable to obesity in 2004.
- 

Functional food blur the line between food and medicine

- Functional foods are cheaper and safer alternative to pharmaceuticals.
- Americans spent 10 of billion of dollars in 2004 on functional foods, drinks, and supplements.
- Energy-boosting ingredients including amino acids, vitamins, and herbs.
- Avon, Shiseido, L'Ore'al, Nestle, all join the market, especially on anti-aging.



Products to Watch in 2005

- Omega-3 fatty acids
- Low-carb food products
- Liquid meal replacements
- Drinks



Potential annual savings with nutraceuticals / functional foods

- Disease Prevention \$ 20 billion
- Disease Management \$ 10 billion

Focus Disease Markets on

- Cardiovascular disease, and risk factors
- Type II diabetes
- Cancer
- Osteoporosis
- Kidney disorders
- Inflammatory conditions
- Psychiatric disorders
- Others



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