

Global Market

Total global herbal market¹ is of size 62.0 billion dollars, in this India's contribution is only one billion dollars. The table in annexure 5 explains the position of India in the global market. European union is the biggest market with the share 45% of total herbal market. North America accounts for 11%, Japan 16%, ASEAN countries 19% and rest of European Union 4.1%. Countries like Japan and China have successfully marketed their traditional medicines abroad. Their alternative therapies are well-accepted in Europe and US. Product like **Ginseng** – the famed aphrodisiac from China is having the same property as of **Ashwagandha**- an ayurvedic medicine, yet it accounts for over US \$ 800 M of international market as compared to all our herbs put together (which is less than US \$ 1 M). When compared to the Chinese and the Japanese level of penetration in the global market India is not at all figuring anywhere.

But there are positive signals also for us in the global market. India has 16 Agro-climatic zones, 10 vegetative zones, 15 biotic provinces, 426 biomes, 45000 different plant species and 15000 medicinal plants that include 7000 ayurveda, 700 in Unani medicine, 600 in Siddha medicine and 30 in modern medicine. This makes India one among 12 mega bio-diverse countries of the world, which despite having only 2.5 % total land area, accounting for over 8 % of the recorded species of the world.

The forecast is that the global market for herbal products is expected to be \$5 Trillion by 2050. Herbal remedies would become increasingly important especially in developing countries. India, with its biodiversity has a tremendous potential and advantage in this emerging area. Acupuncture is one such therapy that has gained worldwide recognition.

Global Herbal Market

The exports of Ayurvedic and Unani medicines put up for retail sale to other countries have increased from Rs. 17 crores in 1992-93 to 98 crores in 1998-99. The data is given in **Annexure 1(vi)**. In USA our exports have

¹ as estimated by Dabur Research Foundation

increased from Rs.47 lakhs in 1992-93 to 8 crores in put up for retail sale. USA has stringent rules for the imported products that are used for consumption. These medicines are not exported under the category of medicines but find their way in US market as food supplements and herbal products. Similarly in UK the Indian exports of these products have increased from mere 5 lakhs of rupees to above one crore from the year 1992-93 to 1998-99. European Union is the biggest market in global herbal products. Indian products to other countries like Germany, France, Italy and Netherland have also increased. In 1992-93 Germany was the biggest importer of the ayurvedic and unani medicines followed by Nigeria but their importance decreased drastically in terms of share of the exports of Indian Ayurvedic & Unani products.

Russia was the biggest importer and destination market for Ayurvedic and Unani products in 1996-97. Russia is one of the most important partners for India in the exports of Ayurvedic and Unani finished products.

The exports for Ayurvedic and Unani medicines have been increasing but nothing can be predicted from the yearly exports because that has been fluctuating. This section for not put up for retail sale constitutes of raw materials, crude herbs and other products. This requirement keeps changing from one year to other.

From the table given in annexure 1(viii) and annexure 1(ix), we can conclude that USA has emerged as one of the important countries as the buyer of Ayurvedic and Unani medicines both put up for retail sale and not put up for retail sale. Among other countries South East Asian countries have also emerged as important market and from the table we can say that India has explored these emerging market but how far is it successful and what is their percentage share in imports of these countries is yet to be answered. UAE is another country, which import from India as herbal product category. In Middle East people's choice have shifted to herbal products, - they now use more of these types of hair oil, shampoo and other cosmetics. Germany's share in the exports of ayurvedic and Unani medicines have decreased drastically but if we take European Union together their share has increased.

Regulatory Status of Herbal Medicine Worldwide

The World Health Organization (WHO) estimates that 4 billion people--80 percent of the world population--use herbal medicine for some aspect of primary health care. Herbal medicine is a major component in all indigenous peoples' traditional medicine and is a common element in Ayurvedic, homeopathic, naturopathic, traditional oriental and Native American Indian medicine. The sophistication of herbal remedies used around the world varies with the technological advancement of countries that produce and use them. These remedies range from medicinal teas and crude tablets used in traditional medicine to concentrated, standardized extracts produced in modern pharmaceutical facilities and used in modern medical systems under a physician's supervision.

Europe

Drug approval considerations for phytomedicines (medicines from plants) in Europe are the same as those for new drugs in the United States, where drugs are documented for safety, effectiveness, and quality. Two features of European drug regulation make that market more hospitable to natural remedies.

1. In Europe it costs less and takes less time to approve medicines as safe and effective. This is especially true of substances that have a long history of use and can be approved under the "doctrine of reasonable certainty." According to this principle, once a remedy is shown to be safe, regulatory officials use a standard of evidence to decide with reasonable certainty that the drug will be effective. This procedure dramatically reduces the cost of approving drugs without compromising safety.
2. There is no inherent prejudice in Europe against molecularly complex plant substances; rather, they regard them as single substances.

The European Economic Community (EEC), recognizing the need to standardize approval of herbal medicines, developed a series of guidelines, *The Quality of Herbal Remedies*²). These guidelines outline standards for quality, quantity, and production of herbal remedies and

² EEC Directive, undated

provide labeling requirements that member countries must meet³. According to these guidelines, a substance's historical use is a valid way to document safety and efficacy in the absence of scientific evidence to the contrary.

A guiding principle should be that if the product has been traditionally used without demonstrated harm, no specific restrictive regulatory action should be undertaken unless new evidence demands a revised risk-benefit assessment. Prolonged and apparently uneventful use of a substance usually offers testimony of its safety.

The WHO guidelines give further advice for basing approval on existing monographs:

If a pharmacopoeia monograph exists it should be sufficient to make reference to this monograph. If no such monograph is available, a monograph must be supplied and should be set out in the same way as in an official pharmacopoeia.

To further the standardization effort and to increase European scientific support, the phytotherapy societies of Belgium, France, Germany, Switzerland, and the United Kingdom founded the European Societies' Cooperative of Phytotherapy (ESCOP). ESCOP's approach to eliminating problems of differing quality and therapeutic use within EEC is to build on the German scientific monograph system (below) to create "European" monographs.

In Europe, herbal remedies fall into three categories. The most rigorously controlled are prescription drugs, which include injectable forms of phytomedicines and those used to treat life-threatening diseases. The second category is OTC phytomedicines, similar to American OTC drugs. The third category is traditional herbal remedies, products that typically have not undergone extensive clinical testing but are judged safe on the basis of generations of use without serious incident.

³ The EEC guidelines are based on the principles of the WHO's Guidelines for the Assessment of Herbal Medicines (1991)

The following brief overviews of phytomedicine's regulatory status in France, Germany, and England are representative of the regulatory status of herbal medicine in Europe.

France, where traditional medicines can be sold with labeling based on traditional use, requires licensing by the French Licensing Committee and approval by the French Pharmacopoeia Committee. These products are distinguished from approved pharmaceutical drugs by labels stating "Traditionally used for . . ." Consumers understand this to mean that indications are based on historical evidence and have not necessarily been confirmed by modern scientific experimentation.

Germany considers whole herbal products as a single active ingredient; this makes it simpler to define and approve the product. The German Federal Health Office regulates such products as ginkgo and milk thistle extracts by using a monograph system that results in products whose potency and manufacturing processes are standardized. The monographs are compiled from scientific literature on a particular herb in a single report and are produced under the auspices of the Ministry of Health Committee for Herbal Remedies. Approval of such remedies requires more scientific documentation than traditional remedies, but less than new pharmaceutical drug approvals.

In Germany there is a further distinction between "prescription-only drugs" and "normal prescription drugs." The formers are available only by prescription. The latter are covered by national health insurance if prescribed by a physician, but they can be purchased over the counter without a prescription if consumers want to pay the cost themselves. OTC phytomedicines--used for self-diagnosed, self-limiting conditions such as the common cold, or for simple symptomatic relief of chronic conditions--are not covered by the national health insurance plan.

England generally follows the rule of prior use, which says that hundreds of years of use with apparent positive effects and no evidence of detrimental side effects are enough evidence--in lieu of other scientific data--that the product is safe. To promote the safe use of herbal remedies, the Ministry of Agriculture, Fisheries, and Food and the Department of

Health jointly established a database of adverse effects of nonconventional medicines at the National Poisons Unit.

Asia

In more developed Asian countries such as Japan, China, and India, "patent" herbal remedies are composed of dried and powdered whole herbs or herb extracts in liquid or tablet form. Liquid herb extracts are used directly in the form of medicinal syrups, tinctures, cordials, and wines.

In China, traditional herbal remedies are still the backbone of medicine. Use varies with region, but most herbs are available throughout China. Until 1984 there was virtually no regulation of pharmaceuticals or herbal preparations. In 1984, the People's Republic implemented the Drug Administration Law, which said that traditional herbal preparations were generally considered "old drugs" and, except for new uses, were exempt from testing for efficacy or side effects. The Chinese Ministry of Public Health would oversee the administration of new herbal products. Traditional Japanese medicine, called kampo, is similar to and historically derived from Chinese medicine but includes traditional medicines from Japanese folklore. Today 42.7 percent of Japan's Western-trained medical practitioners prescribe kampo medicines, and Japanese national health insurance pays for these medicines. In 1988, the Japanese herbal medicine industry established regulations to manufacture and control the quality of extract products in kampo medicine. Those regulations comply with the Japanese government's Regulations for Manufacturing Control and Quality Control of Drugs.

Developing Countries

Herbal medicines are the staple of medical treatment in many developing countries. Herbal preparations are used for virtually all minor ailments. Visits to Western-trained doctors or prescription pharmacists are reserved for life threatening or hard-to-treat disorders.

Individual herbal medicines in developing regions vary considerably; healers in each region have learned over centuries which local herbs have medicinal worth. Although trade brings a few important herbs from other regions, these healers rely mainly on indigenous herbs. Some have extensive herbal material medical. A few regions, such as Southeast Asia, import large amounts of Chinese herbal preparations. But the method and form of herb use are common to developing regions.

In the developing world, herbs used for medicinal purposes are "crude drugs." These are unprocessed herbs--plants or plant parts, dried and used in whole or cut form. Herbs are prepared as teas (sometimes as pills or capsules) for internal use and as salves and poultices for external use. Most developing countries have minimal regulation and oversight.

Market Scenario

USA

There is growing awareness among people in US about health and there is a shift in attitude of the people towards nature care products due to a powerful "green wave". This is because of the perceived pernicious effects on health of individual of the alternative medicines. It is believed by many in the US now that high-tech medicines do not pay attention to a patient's belief system and the possible side effects that may be caused by protracted use of allopathic drugs. This has helped the herbal medicines to make an impact in the US market.

The World Health Organisation has estimated that at least 25% of all allopathic medicines contain a plant derivative.

It is difficult to estimate US herbal market because these activities are not econometrically tracked. However there is strong indication that alternative medicine markets are growing.

In US, Ayurveda is not a licensed practice but many health practitioners in related areas do practice some aspects of it. At least several hundred physicians have trained themselves in the US at Ayurvedic institutes. There were approximately 10 Ayurveda clinics in North America that

served more than 25,000 patients since 1985. More than 200 physicians have received the training for Ayurveda through the American Association of Ayurvedic medicines. A modern revitalisation of Ayurveda is now being practiced as Maharishi Ayurveda. A number of Indian trained Ayurvedic physicians practice or teach Ayurveda in the United States.

The Ayurvedic and Siddha products are not approved medicines in US. They enter US market as para-medicines or health food supplements. FDA approves these medicines to be sold in their domestic market. FDA does not even consider any herb as medicines therefore, they are labelled as dietary supplements. This is one of the reasons for allopathic medical schools not informing their students about the herbal medicines. According to the results of the study conducted by Health Policy Institutes at the medical college of Wisconsin the per capita supply of alternative physicians is expected to rise by 124% between 1994 to 2010 compared to rate of growth of 16% for conventional doctors.

Herbal companies dwarf in comparison to pharmaceutical companies, still some companies have gained their foot in US market such as Herbal Life and Madaus, Murdock Schwabe. Herbal Life Company is expanding globally almost adding a new country every year for its products. Some pharmaceutical companies like Novartis have started marketing natural alternatives.

In 1992, Congress created the office of Alternative Medicines (OAM) and a program advisory committee within National Institute of Health (NIH). The fund allocated to them has increased from 2 million dollars to 7.4 million dollars. There is research that is being done on herbal medicines major part of them is privately funded. A great deal of money is being given to Bastyr University for research being done on herbal effects on HIV and AIDS. Sales of vitamins accounted for 1.15-1.26 billion dollars, natural medicines took in 270-298 million dollars and herbs 520-560 million dollars in year 1995 alone.

Some insurance companies have started covering unconventional medicine through HMO's. Oxford is the first US insurance company to form a network of alternative practitioners. Other insurers such as

American Western Life, Kaiser Permanente, Blue Cross/ Blue Shield, Mutual of Omaha and Prudential offer limited coverage for alternative medicines. But still no insurance companies pay for herbs.

Acupuncture has become one of the established health care systems in USA. This therapy has its origin in China. There are about six thousand five hundred acupuncturists in US whereas the Ayurvedic doctors are lesser in number compared to the acupuncturist. Acupuncture, Chiropractic and Naturopathy are the three alternative medicines that are licensed and regulated in US. Homeopathy is the only alternative systems of medicine that has sound educational base and has officially established “alternative” drug production system regulated by FDA. The annexure 1(xi) gives the American Herbal market in a complete total perspective.

Indian Government and US

In a significant move to give the much-needed impetus to propagation of Ayurvedic drugs and medical practices in the United States, the Government of India, in association with the Indian Consulate in New York, will soon set up an Ayurveda Development Board in the US. (pharmabiz September 26, 2000). A decision to this effect was taken at the Ayurveda Conference held in New York in the second week of September, under the aegis of the department of Indian systems of medicine and Homeopathy (DISM&H). According to a government release, the Board will act as a platform from where information on Indian government’s policies and projects with regard to Ayurveda could be disseminated to the groups/scientists/institutions in the US. Importantly, the Board would function as an intermediary between Indian industry and the US-FDA with a view to identifying the promotional efforts needed to enhance the credibility of Ayurvedic products in that country. Ayurvedic drug exporters from India is now finding it difficult to obtain the FDA approvals which require detailed documentation about the safety and efficacy of the products. One of the mandates of the proposed Board would be with individual Ayurvedic drug manufactures as also apex industrial bodies like the Confederation of Indian Industry. By acting in concert with the US Medical Schools Department of Alternative Medicine, the Board would work towards introduction of academic courses on

Ayurveda. Such courses are expected to give exposure training to the US medical graduates and such other qualified groups. As a beginning, a module for training the physicians in the US would be developed. Experts from the Gujarat Ayurveda University would be entrusted to finalize the module, which would be printed and made available widely in the form of an essential curriculum. As part of the program, the DISM&H would also provide sponsorship to selected Ayurvedic college teachers as per the module. In addition, the board will establish a cell to coordinate with all NGO's who have an interest in the propagation of Ayurveda in various part of the US. Among the main functions of the Board would be alerting the CG's office or the embassy against any misuse of goodwill of Ayurveda by unscrupulous elements.

European Union:

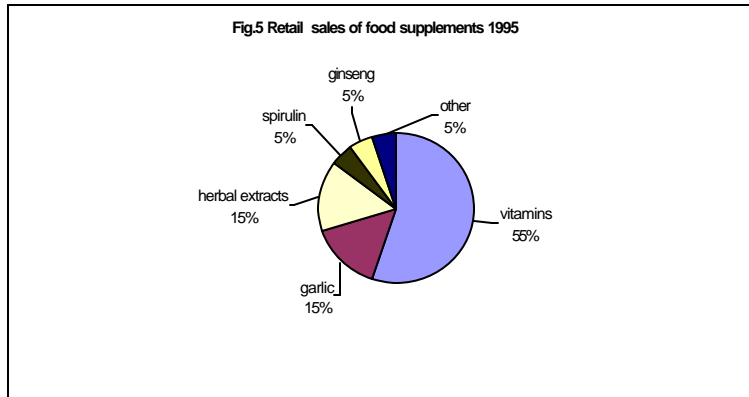
In EU, the reform/ wholefood category includes range of health and health related products, food supplements, diet foodstuffs and herbal based remedies, cosmetics and tonics. The movement towards the reform food has been strongest in Germany, United Kingdom and Netherlands. There is no standards specified for the reform/wholefood. Natural food supplements are regulated under food and drug legislation and are not subject to any compulsory medical control or licensing procedure as long as no claim are made on individual product's behalf regarding its effectiveness in preventing, healing or treating illness or ailment. If the health food products do not fall under the organic or biodynamic food then their sale is regulated by overall legislation on trade in agricultural products and by food and drug regulation.

Food supplements – mainly vitamins, minerals, concentrated foodstuffs (e.g. fatty acids, garlic, lecithin), herbs and herb extracts, and products from other culture with health claims.

In last five years according to the study conducted in 1996 the Dutch market health food market has grown rapidly. According to a market survey of the Netherlands it showed that the usage of food supplements is relatively low compared to the other major markets like UK and Germany but has increased substantially in last ten years. Vitamins and other food

supplements are sold as OTC product and can be purchased without the prescription of the doctors.

Fig. 5 Retail sales of food supplements 1995



The European Union market is the second largest market for spices and herbs. In 1997, the total EU import volume of spices and herbs amounted to 260831 tones that represented the 28% of the total imports by the developed world. In 1997 the total world production of spices and herbs was 4.5 million tones, of which 95% was produced in developing countries and of which majority is consumed in domestic markets of these producing countries. In the same year the apparent consumption of spices and herbs in EU was estimated to 158,660 tones with the value of ECU 324 million. In 1998 the total industrial sector amount to 53,900 tones. There are 43 food ingredient manufacturers in EU. The major EU retail markets are Germany, France, United Kingdom, Spain and Italy. The majority of all spices and herbs are imported from India whose export has grown by 52% between 1995 and 1997.

Limitations and Bottlenecks of the System

The medicinal plants have been traditionally obtained from forests and no systematic effort was made in past for developing the package of practices for cultivation of these plants. The best way for propagating plants and most appropriate season for raising new plants is not known for most of the plants. Though the packages of such practices have been worked out for some of the aromatic and medicinal crop have been worked out, but for others it is not standardized. Standards on quality of medicinal plants cannot be specified. The companies want a benefit of

range to be given because exact specification is a problem as the standard differs due to places and seasons.

There is shortage of medicinal plants especially those that are collected from the forests. There is a growing interest of farmer for commercial plantation of such plants. The ever increasing demand for herbal products and shift in people's interest in nature has led to indiscriminate exploitation of plants and species from the forest and other places which has led to near about extinction of such species. The investment in large-scale plantation is needed but it would be fruitful only if scientific methods of cultivation are developed.

The medicinal plants are being procured in thousands of tones but there is no organised marketing, and there is also no reliable information on their demand & availability and export potential. Procurement of this information is very difficult since the trade of medicinal plants is just unorganised.

Under present condition there is absence of co-ordination and linkage between different Departments/Organisation and their field units leading to haphazard development and absence of suitable policy. The needs of the ISM&H pharmacies, practitioners, manufacturers are to be assessed through survey.

Non Western medical science so far has failed to claim to originality. The universal attributes of the indigenous knowledge system remains unrecognised due to marginalised political status of the societies (relative position of LDCs) and due to limitation of language and ethnicity.

In Western societies they believe in science and proving science. It is difficult to explain the efficacy of Ayurveda & Siddha that is based on knowledge and recorded knowledge in ancient text. The comparative understanding between Ayurveda and modern medicines has not progressed sufficiently to correlate diagnosis of the two systems of medicines or translate Ayurvedic pharmacology in terms of modern pharmacological parameters or reduce Ayurvedic lines of treatment to satisfy Allopathic therapeutic logic

Difficult protocols on registration of drug imports prevail in certain cosmetics. Also registration fee is very high in other countries.

In many countries Ayurveda and Siddha is not recognised system of medicines. The rules and regulation to register them as medicines is stringent.

While there is extensive literature going back 2500 years to Charaka Samhita (Al-Qanoon for unani) mentioning practices and cures, a deficiency of the ISM is that objective data through clinical trials and laboratory work has not been generated to prove the extent of efficacy of individual prescriptions and cures. As a result, the practitioners leading to varying results prescribe a large variety of cures and practices. It will be beneficial if the cures mentioned in the texts are systematically taken up and subjected to laboratory investigation and clinical trials so that their efficacy is established or disproved. This will allow the most effective cures out of the many recommended for a particular condition to be identified, which then can be propagated for extensive use for the benefit of patients.

There is one more problem that is faced by the industry. With increase in use of machines in preparing the medicines and other formulations the residue of these machines in form of iron powder is left behind which leads to problem as the desired result could not be achieved.

There are no certifying agencies for these products. Till now only two foreign agencies are taking up this job, one is Swiss based and the other is Holland based agency. This creates problem in the export of these products and there is need for the certifying agency at central level.

Strategies Adopted:

In view of the point one and point two in the bottlenecks, the Department of ISM&H has undertaken the scheme for development of Agro based Techniques and cultivation of Medicinal plants used in Ayurveda, Siddha, Unani and Homeopathy. Under this scheme central assistance is provided to specialized scientific institution (government/ semi-government) on project basis (3 years) for development of agro

techniques of identified medicinal plants. In the year 1997-98 total 26 such projects were sanctioned which costed around 124.866 lakhs for the first year of projects.

The department proposes to undertake a study at National level covering the manufacturing units and marketing outlets etc. in an effort to have this information. Professional consultant organisations are being hired for the purpose of organising such studies.

The department of ISM&H has also set up an expert group to consider and formulate the proposal for setting up of "Medicinal Plants Board Act" under the act Medicinal Plant Board Act 1999.

The Secretary (ISM&H) has signed a Memorandum of Understanding in June 1999 with the Govt. of Russian Federation in Moscow on Co-operation and collaboration in the field of Indian Traditional Systems of Medicine & Homeopathy. Both parties agreed to conduct joint clinical and para-clinical schemes of preparations and methods used in Indian Traditional Systems of Medicine, primarily in Ayurveda as well as Homeopathy with the view of establishing criteria for evaluation of their efficacy and their proper registration in the Russian Federation. A Russian delegation has visited India as a follow up of MOU entered into with the Government of Russian Federation.

In yet another significant move to give impetus to the Ayurveda in US, the Indian government announced that it would soon set up Ayurveda Development Board in the US.

Annexure 1 (i)

Fig.1. Ayurveda & Siddha sector

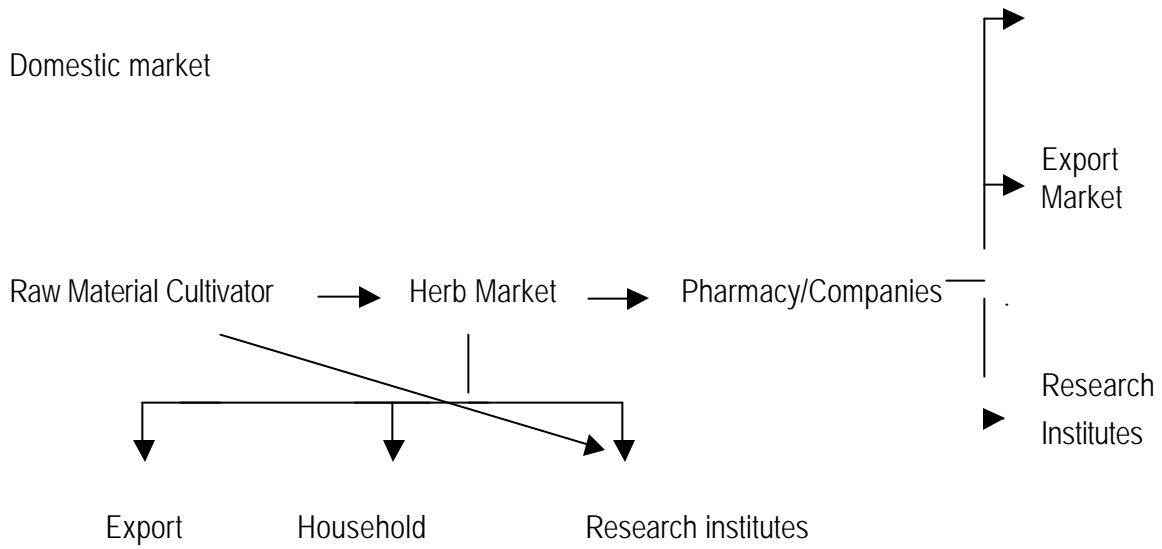
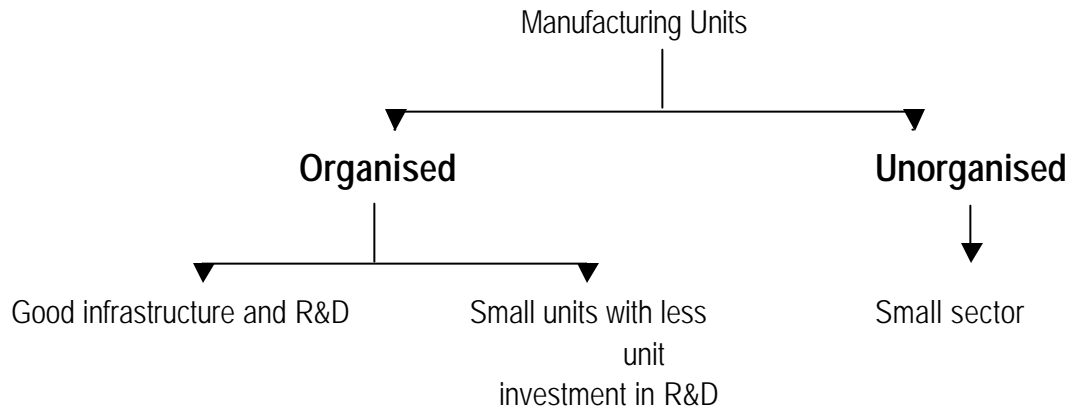
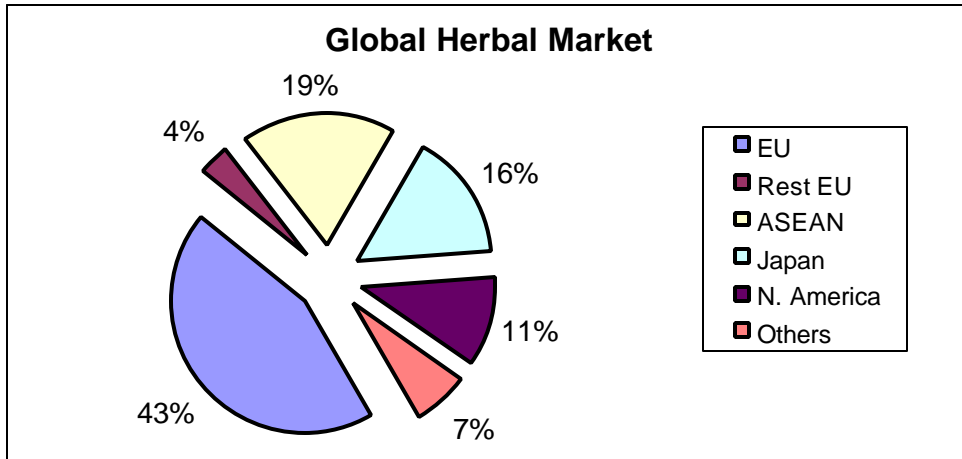


Fig. 2. Classification of the Sector



Annexure 1(ii)
Global Herbal Market

Market	Size (US \$ Bill.)	Percentage (%)
European Union	28	45
Rest EU	2.4	4
ASEAN	10.8	19
Japan	9.8	16
N. America	6.9	11
Others	4.1	7
Total	62	100



Annexure 1 (iii)
Ayurvedic and Unani medicines put up for retail sale (in Rs.)

Countries	92-93	95-95	96-97	97-98	98-99
Total exports	176292928	424214474	985250139	1187745520	988464125
USA	4766571	64606806	89087644	57041075	80938318
UK	561454	3888107	19230117	80074433	14138195
Germany	28346637	13290884	26861438	36783776	21337041
France	2952406	267946	4097484	9454601	10935001
Indonesia	3633328	490054	326231	343024	212122
Malaysia	2283376	14424140	4090953	16142395	26275355
Nepal	8914101	119651394	196148983	195891565	135830649
Afghanistan	269405	396296	10845568	1556984	37367553
Nigeria	17112390	33681914	21658317	33441277	42769017
Russia		56160925	283099310	321222322	91459600
UAE	3464164	7777763	15013379	6045456	24163108
Sri lanka	2799840	7397701	11421384	9066244	7200747

Source: Annual Report: Department of ISM & H 1999

Annexure 1(iv)

Ayurvedic and Unani medicines export not put up for retail sale (in Rs.)

Countries	92-93	95-95	96-97	97-98	98-99
Total	226545251	409870836	395000210	422417579	347602952
USA	18698384	142690866	110793211	23358520	65744508
UK	4214772	18571050	11419487	2966321	12024606
Germany	22475179	6801134	1500581	13901179	6175143
France	6249609	2924905	3508108	15186367	1274654
Canada	1146333	3810642	4690315	4058861	7900902
Indonesia	7079555		145610		
Malaysia	14284244	6191393	17852280	35424851	25809899
Sri Lanka	4711159	22037274	93080008	17819428	10375531
Singapore	1937263	11294013	37062055	29365457	11122398
Nepal	19093988	20484314	18958004	4335960	5643953
UAE		15581345	13522309	26030061	28206432
Russia		49576109	32883378	23097193	3025332

Source: Annual Report : Department of ISM & H 1999

Annexure 1 (va)

Relative position of the countries in Ayurvedic & Unani exports in different years

92-93	94-95	96-97	97-98	98-99
Germany	Nepal	Russia	Russia	Nepal
Nigeria	USA	Nepal	Nepal	Russia
Nepal	Russia	USA	UK	USA
USA	Nigeria	Germany	USA	Nigeria
Indonesia	Malaysia	Nigeria	Germany	Afghanistan
UAE	Germany	UK	Nigeria	Malaysia
France	UAE	UAE	Malaysia	UAE
Sri Lanka	Sri Lanka	Sri Lanka	France	Germany
Malaysia	UK	Afghanistan	Sri Lanka	UK
UK	Indonesia	France	UAE	France
Afghanistan	Afghanistan	Malaysia	Afghanistan	Sri Lanka
Russia	France	Indonesia	Indonesia	Indonesia

Source: Annual Report: Department of ISM & H 1999

Annexure 1 (vb)

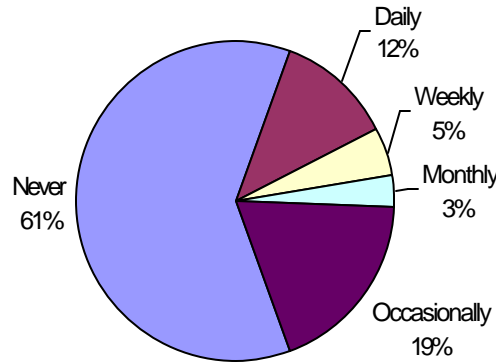
Relative position of countries in different years of exports of Ayurvedic & Unani medicines (not put up for retail sales)

92-93	94-95	96-97	97-98	98-99
Germany	USA	USA	Malaysia	USA
Nepal	Russia	Sri Lanka	Singapore	UAE
USA	Sri Lanka	Singapore	UAE	Malaysia
Malaysia	Nepal	Russia	USA	UK
Indonesia	UK	Nepal	Russia	Singapore
France	UAE	Malaysia	Sri Lanka	Sri Lanka
Sri Lanka	Singapore	UAE	France	Canada
UK	Germany	UK	Germany	Germany
Singapore	Malaysia	Canada	Nepal	Nepal
Canada	Canada	France	Canada	Russia
UAE	France	Germany	UK	France
Russia	Indonesia	Indonesia	Indonesia	Indonesia

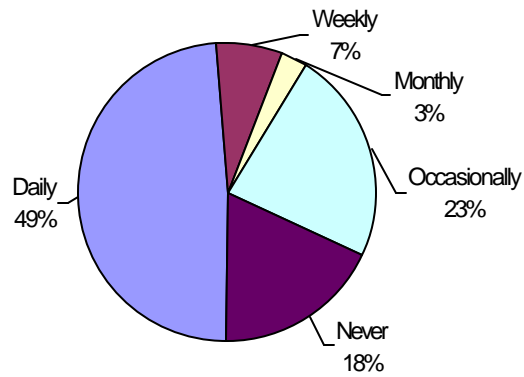
Source: Annual Report: Department of ISM & H 1999

Annexure 1 (vi)
American Market : Who is buying What?

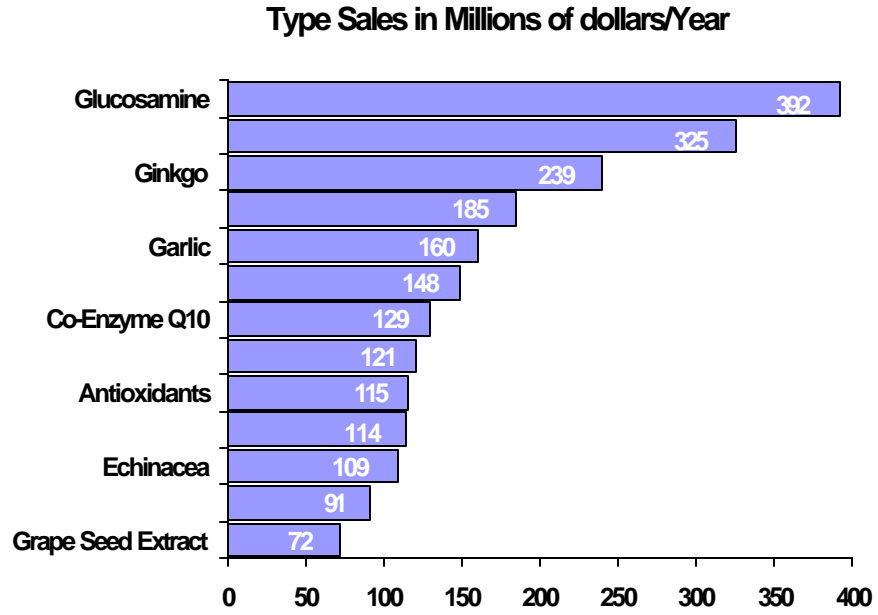
Use of Herbal Supplements



Use of Vitamin and Mineral Supplements:



Annexure 1 (vii)
Most sold products in US in the year 1998-99



Source: The Hartman Group's Natural Products Census Supplement Report.

Annexure 1 (viii)
Sales of Dietary supplements in US

