

**Cultivation of medicinal plants**

†\*408. SHRI TARUN VIJAY: Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) the schemes being run for farmers in order to encourage them for the cultivation of medicinal plants and herbs;

(b) the funds being spent on these schemes, State-wise;

(c) the cultivation of which medicinal plants and herbs is being promoted more and the details thereof; and

(d) the area-wise total agricultural production in India in the field of cultivation of medicinal plants and herbs and how it compares with that of the major producing countries of the world including China?

THE MINISTER OF HEALTH AND FAMILY WELFARE (SHRI GHULAM NABI AZAD): (a) and (b) The National Medicinal Plants Board (NMPB) under the Department of AYUSH, Ministry of Health & Family Welfare, is implementing Centrally Sponsored Scheme "National Mission on Medicinal Plants" *w.e.f.* 2008-09. The Scheme aims at supporting cultivation of various medicinal plants and is being implemented for supporting cultivation of identified medicinal plants through Growers, Growers Associations etc. in various States. Under the above Centrally Sponsored Scheme, financial assistance amounting to Rs. 134.4186 crores was released during the last three years to various State implementation agencies by the National Medicinal Plants Board for supporting activities like setting up of nurseries, and cultivation of identified species of herbal and other medicinal plants under the Scheme etc. State-wise details of support rendered is given in Statement-I (*See* below).

(c) Financial assistance in the form of subsidy is being provided under the above scheme largely for cultivation of prioritized 50 species of herbs and medicinal plants. The rates of subsidy stipulated for various species are 75%, 50% and 20% of the cost of cultivation of medicinal plants. List of these prioritized species, alongwith cost of cultivation and subsidy provided (percentage of cost) is given in Statement-II (*See* below).

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†Original notice of the question was received in Hindi.

(d) Information regarding area-wise agricultural production of medicinal plants and herbs is not centrally maintained. However, State-wise information regarding area supported for cultivation of identified medicinal plants under Centrally Sponsored Scheme of "National Mission on Medicinal Plants" of National Medicinal Plants Board (NMPB) is given in Statement-III (*See below*).

Medicinal Plants and herbs in the country are being procured largely from forests and cultivated sources. According to a study got conducted by the National Medicinal Plants Board (NMPB) of Department of AYUSH, Ministry of Health & Family Welfare through the Foundation for Revitalization of Local Health Traditions (FRLHT), Bangalore, the annual demand of medicinal plants was estimated to be 3,19,500 Metric Tonnes (MTs). This study was published in year 2008 and is available on the website of the NMPB i.e. [www.nmpb.nic.in](http://www.nmpb.nic.in) under title "*Demand and Supply Study - NMPB & FRLHT (2008)*". The species-wise utilization of medicinal plants including medicinal herbs as per this report in respect of highly traded 30 medicinal plant species (above 2000 metric tonnes of annual consumption) is given in the Statement-IV (*See below*). Authentic comparative figure about the quantum of production of medicinal plants and herbs *viz-a-viz* other major producing countries including China is not available. Ministry of External Affairs have furnished "nil" information in this regard.

A good reflection, however, is available from data in respect of overall global trade of medicinal plants and herbs compiled by Pharmexcil (Pharmaceuticals Export Promotion Council of India) set up by Ministry of Commerce. Based on UN Comtrade (the official agency for such data), the export of Medicinal Plants, Herbs and the value added products like extracts including Essential Oils, Gums & Resins (excluding finished dosage forms) for the top 10 countries in the world as compiled by Pharmexcil is as follows:

*Exports of top 10 countries for herbal and medicinal plants and their extracts*

*(Values in US\$ million)*

Rank	Reporter	2005	2006	2007	2008	2009	2010	2011
1	2	3	4	5	6	7	8	9
1	India	480.460	485.720	501.589	612.586	467.388	790.564	2437.377
2	China	437.409	522.436	675.503	944.644	1042.077	1329.723	1787.128
3	USA	483.846	522.943	587.500	639.779	705.618	787.245	853.015

1	2	3	4	5	6	7	8	9
4	Germany	495.091	529.113	617.261	860.249	720.160	756.733	846.604
5	Egypt	26.389	33.269	34.193	125.342	273.600	303.648	340.660
6	France	261.426	263.088	276.557	300.602	284.607	296.328	335.153
7	Spain	248.488	260.341	260.746	285.731	242.056	273.136	307.659
8	Brazil	109.574	116.019	131.618	154.432	126.675	159.706	222.253
9	Rep. of Korea	105.786	116.416	113.770	117.876	122.957	138.350	204.894
10	Italy	179.773	183.213	162.732	192.099	166.973	175.133	203.281

During 2011, India has emerged at first position among all important countries in value of export of medicinal plants, herbs and their extracts. China's position in the export value during 2011, as per information compiled by Pharmexcil, is US\$ 1787.128 million, which is next to India.

***Statement-I***

*Details of Centrally Sponsored Scheme of "National Mission on Medicinal Plants"*

*Year-wise/State-wise funds released (from 2010-11 to 2012-13)*

(Rs. in lakhs)

Sl. No.	State	2010-11	2011-12	2012-13	Total
1	2	3	4	5	6
1	Andhra Pradesh	700.00	518.43	834.32	2052.75
2	Arunachal Pradesh	58.85	285.14	0	343.99
3	Assam	332.80	114.52	162.81	610.13
4	Chhattisgarh	0	186.96	0	186.96
5	Gujarat	0	47.35	0	47.35

<i>Written Answers to</i>		[23 April, 2013]		<i>Starred Questions</i> 33	
1	2	3	4	5	6
6	Haryana	0	85.46	0	85.46
7	Himachal Pradesh	106.11	84.30	0	190.41
8	Jharkhand	165.18	257.61	0	422.79
9	Karnataka	372.22	0	0	372.22
10	Kerala	96.14	223.17	210.41	529.72
11	Madhya Pradesh	737.58	302.93	474.58	1515.09
12	Maharashtra	243.49	327.08	0	570.57
13	Manipur	0	138.54	57.6	196.14
14	Meghalaya	68.50	91.62	0	160.12
15	Mizoram	124.05	160.12	8.91	293.08
16	Nagaland	181.63	181.12	188.47	551.22
17	Odisha	166.69	475.58	111	753.27
18	Punjab	96.00	0	0	96.00
19	Rajasthan	100.00	0	0	100.00
20	Sikkim	4.17	91.10	161.94	257.21
21	Tamil Nadu	834.70	961.39	741.5	2537.59
22	Tripura	0.00	84.00	0	84.00
23	Uttar Pradesh	0.00	0	834.54	834.54
24	Uttarakhand	280.98	262.73	0	543.71
25	West Bengal	107.54	0.00	0	107.54
TOTAL		4776.63	4879.15	3786.08	13441.86

**Statement-II***Details of unit cost of medicinal plant species*

Sl. No.	Crop Name	Botanical Name	Cost per acre (Rs.)	Cost norms per hectare (Rs.)	Subsidy in %
1	2	3	4	5	6
1.	Amla	Emblica officinalis	26,000	65,000	20
2.	Anantmool	Hemidesmus indicus	14,000	35,000	20
3.	Archa	Rheum emodi	81,000	2,02,000	50
4.	Arjun	Terminalia arjuna	18,000	45,000	20
5.	Ashok	Saracaasoca	25,000	62,500	50
6.	Ashwagandha	Withaniasomnifera	10,000	25,000	20
7.	Atis	Aconitum heierophyllum	44,000	110,000	75
8.	Bach	Acoruscalamus	25,000	62,500	20
9.	Bael	Aeglemarmelos	16,000	40,000	50
10.	Bahera	Terminalia bellirica	16,000	40,000	20
11.	Bankakri	Podophyllum hexandrum	40,000	100,000	75
12.	Beledona	Atropabelladona	25,000	62,500	50
13.	Bhumlamalak	Phyllanthusamarus	11,000	27,500	20
14.	Brahmi	Bacopamonniери	16,000	40,000	20
15.	Chirata	Swertiachirata	33,000	82,500	75
16.	Cinnamon	Cinnamomumzeylanicum	31,000	77,500	20
17.	Coleus	Coleus forskholii	17,200	43,000	20

1	2	3	4	5	6
18.	Daruhaldi	Berberisaristata	25,000	62,500	75
19.	Gambari	Gmelinaarborea	18,000	45,000	50
20.	GhritKumari	Aloe vera	17,000	42,500	20
21.	Giloe	Tinosporacordifolia	11,000	27,500	20
22.	Gudmar	Gymnemasylvestre	10,000	25,000	20
23.	Guggal	Commiphorawightii	64,000	1,60,000	75
24.	Harar	Terminalia chebula	16,000	40,000	20
25.	Jatamansi	Nardostachysjatamansi	81,000	2,02,000	75
26.	Kalihari	Gloriosasuperba	55,000	137,500	50
27.	Kalmegh	Andrographispaniculata	10,000	25,000	20
28.	Kokkum	Garciniaindica	25,000	62,500	20
29.	Konch	Mucunaprurita	8,000	20,000	20
30.	Kuth	Saussureacostus	35,000	87,500	75
31.	Kutki	Picrorhizakurrooa	45,000	112,500	75
32.	Makoy	Solanumnigrum	10,000	25,000	20
33.	Mandukparni	Centellaasiatica	16,000	40,000	20
34.	Mulethi	Glycyrrhizaglabra	40,000	100,000	50
35.	Neem	Azadirachtaindica	15,000	37,500	20
36.	Pippali	Piper longum	25,000	62,500	20
37.	Punarnava	Boerhaaviadiffusa	12,000	30,000	20
38.	PushkarMool	Inularacemosa	15,120	37,800	50
39.	Ratalu	Dioscoreabulbifera	25,000	62,500	20
40.	Sadabahr	Catharanthusroseus	10,000	25,000	20

1	2	3	4	5	6
41.	SafedMusli	Chlorophytumborivillian	125,000	312,500	20
42.	Sarpgandha	Rauwolfiaserpentina	25,000	62,500	50
43.	Sea Buckthor	Hippophoerhamnoides	20,000	50,000	50
44.	Sena	Cassia angustifolia	10,000	25,000	20
45.	Shatavar	Asparagus racemosus	25,000	62,500	20
46.	Siris	Albizzialebeck	15,000	37,500	50
47.	Stevia	Stevia rebaudiana	1,25,000	3,12,500	20
48.	Tagar	Valenianawallichii	24,000	60,000	50
49.	Tulsi	Ocimumsanctium	12,000	30,000	20
50.	Viavidang	Embeliaribes	17,000	42,500	20

**Statement-III**

*State/Year-wise details on area supported for cultivation of identified medicinal plants under Centrally Sponsored Scheme of National Mission on Medicinal Plants of NMPB*

Sl. No.	Name of State	Year			2010-11 to 2012-13 Total Area achieved (in ha.)
		2010-11 Physical Achievement (Area in ha.)	2011-12 Physical Achievement (Area in ha.)	2012-13 Physical Achievement (Area in ha.)	
1	2	3	4	5	6
1	Andhra Pradesh	4702.00	2770.927	4664.250	12137.177
2	Arunachal Pradesh	210.2464	0.00	—	210.246
3	Assam	570.00	1775.00	1068.75	3413.750
4	Bihar	0.00	0.00	—	0.000
5	Chhattisgarh	0.00	101.06	—	101.060

1	2	3	4	5	6
6	Gujarat	0.00	0.00	–	0.000
7	Haryana	330.60	180.65	–	511.250
8	Himachal Pradesh	109.90	–	–	109.900
9	Jammu and Kashmir	80.00	–	–	80.000
10	Jharkhand	5535.00	1932.00	–	7467.000
11	Karnataka	775.40	735.70	–	1511.100
12	Kerala	208.00	1455.00	866.25	2529.250
13	Madhya Pradesh	10703.45	14312.950	8493.000	33509.400
14	Maharashtra	360.07	257.200	–	617.270
15	Manipur	0.00	462.50	165.00	627.500
16	Meghalaya	89.50	397	–	486.500
17	Mizoram	756.00	580.00	63.75	1399.750
18	Nagaland	645.00	1950.00	1700.00	4295.000
19	Odisha	528.40	1760.70	971.25	3260.350
20	Rajasthan	52.80	0.00	–	52.800
21	Sikkim	0.00	287.74	595.00	882.740
22	Tamil Nadu	4373.90	3774.00	4391.25	12539.150
23	Uttar Pradesh	202.50	1152.00	6809.25	8163.750
24	Uttarakhand	64.40	570.00	–	634.400
25	West Bengal	254.90	0.00	–	254.900
TOTAL		30552.0664	34454.427	29787.75	94794.243

Note: The above information is based on data received from Mission Directors in States.

**Statement-IV**

*List of highly traded utilized Medicinal Plants and Herbs  
(above 2000 Metric Tonnes per annum)*

Sl. No.	Name of the Species	Trade Name	API names	Major Supply Source	Estimated Annual Trade (MT)
1	Adhatoda zeylanica Medic.	Adusa	Vasa	C	2000 - 5000
2	Aegle marmelos (L.) Corr. ex Schultz	Bael	Bilva	TF	2000 - 5000
3	Andrographis paniculata (Burm.f.) Wall, ex Nees	Kalmegh		W	2000 - 5000
4	Asparagus racemosus Willd.	Shatavari	Satavari	TF	2000 - 5000
5	Aspidiracba indica A. Juss.	Neem	Nimba	C	2000 - 5000
6	Bacopa monnieri (L.) Pennell	Brahmi	Brahmi	W	2000 - 5000
7	Boerhavia diffusa L.	Punarnava	Punarnava rakta, Rakta-punarnava	W	2000 - 50000
8	Buchanania landau Spr.	Chironji	Priyala	TF	5000 - 10000
9	Cassia angustifolia Vahl	Sonamukhi	Svarnapatri	C	2000 - 5000
10	Cassia tora L.	Chakoda beeja	Prapunnada	W	5000 - 10000
11	Citrullus coccinoides (L.) Schrader	Indrayan	Indravaruni	W	2000 - 5000
12	Cyperus rotundus L.	Nagarmotha	Musta	W	2000 - 5000
13	Eclipta prostrata (L.) L.	Bhringraj	Bhrngaraja	W	2000 - 5000

14	<i>Eclipta officinalis</i> Gaertn.	Amla	Amalaki	TF	16000
15	<i>Madhuca indica</i> Gmel.	Madhuka	Madhuka	TF	>10000
16	<i>Ocimum tenuiflorum</i> L.	Tulasi	Tulasi	C	2000 - 5000
17	<i>Pbyllanlbus amanis</i> Schum. & Thenn. <sup>9</sup>	Bhumiamla	Tamalaki	W	2000 - 5000
18	<i>Plumbago Zeylanica</i> L.	Chitrak	Citraka	W	2000 - 5000
19	<i>Pongamia Pinnata</i> (L.) Pierre	Karanji,	Karanja	C	2000 - 5000
20	<i>Saraca asoca</i> (Roxb.) de Wilde	Ashoka chhal	Ashoka	TF	2000 - 5000
21	<i>Sidarhombifolia</i> L. <sup>13</sup>	Bala	Mahabala	W	5000- 10000
22	<i>Solanum nigrum</i> L.	Makoi	Kakamaci	W	2000 - 5000
23	<i>Strychnos nux-vomica</i> L.	Kuchla	Visamusti	TF	2000 - 5000
24	<i>Terminalia aijuna</i> (Roxb.) Wight & Arn.	Arjun	Arjuna	TF	2000 - 5000
25	<i>Terminalia bellirica</i> Roxb.	Behra	Bibhitaka	TF	2000 - 5000
26	<i>Terminalia chebula</i> Retz. & Willd.	Harda	Haritaki	TF	5000 - 10000
27	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thoms. <sup>17</sup>	Giloy	Guduci	W	2000 - 5000
28	<i>Tribulus terrestris</i> L. <sup>18</sup>	Gokhru	Goksura	W	2000 - 5000
29	<i>Withania somnifera</i> Dunal	Ashwagandha	Asvagandha	C	2000 - 5000
30	<i>Woodfordia fruticosa</i> (L.) Kurz	Dhai phool	Dhataki	W	2000 - 5000

TF = Tropical Forest; HF = Himalayan Forest; W = Wastelands; C = Largely Cultivated