

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH**

**LOK SABHA  
UNSTARRED QUESTION No. 2524  
(TO BE ANSWERED ON 01.08.2018)**

**CSIR 800 SCHEME**

**2524. DR. HEENA VIJAYKUMAR GAVIT:**

**SHRI DHANANJAY MAHADIK:**

**SHRI SATAV RAJEEV:**

**SHRIMATI SUPRIYA SULE:**

**SHRI MOHITE PATIL VIJAYSINH SHANKARRAO:**

**DR. J. JAYAVARDHAN:**

**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

- (a) the salient features of CSIR 800 scheme and the funds sanctioned by the Government for implementing the same during each of the last three years, yearwise;**
- (b) the details regarding technologies that have been developed under the aegis of CSIR 800 since its inception, year-wise and theme-wise;**
- (c) the number of villages in the country particularly in Maharashtra and Tamil Nadu where CSIR 800 scheme is being implemented; and**
- (d) whether the scheme has been successful in terms of creating opportunities for women entrepreneurs in the rural areas including in the State of Maharashtra and if so, the details of men/ women entrepreneurs utilising the technologies, State/UT-wise?**

**ANSWER**

**MINISTER OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES  
(DR. HARSH VARDHAN)**

- (a) The Council of Scientific and Industrial Research (CSIR) operationalized 'CSIR 800' scheme focused at bringing in desired S&T interventions for improving the quality of life of people at the base of the economic pyramid and removing drudgery. The 'CSIR 800' scheme was approved in December 2014. The year wise amount allocated for CSIR 800 related activities during last three years is as follows:**

<b>Year</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>Total</b>
<b>Amount Rs in crores</b>	<b>22.48</b>	<b>19.48</b>	<b>8.86</b>	<b>50.82</b>

- (b) Over the years CSIR has developed technologies for CSIR 800 focus areas for: food and food processing; building and construction; water; environment and sanitation; rural roads, cultivation and processing of economic plants; farm machinery; leather; pottery, etc.**
- (c) The technologies developed have been gainfully utilized in more than 500 villages of several states across the country benefiting entrepreneurs. The beneficiary villages of Maharashtra among others include Shewti, Atkali, Anjangaon Surji, Hiwarkhed, Mohagoan, Gothagaon, Khapri, Mahalgaon, Parbhani, Partapur, Dongargaon, Lonare, Panchgaon, and nearby Villages of Nagpur, Wardha, Amravati, Akola, Latur, Pune, Thane etc. Similarly, the beneficiary village of Tamilnadu among others include Andakudi, Alanvayal, Kozhai, Sri Adhivaraganallur, Thethampattu, Melpuliyangudi, Thorankuppam, Pidanarendal, Selugai, Sethumadai, Tholar, Unjanai, Veppur, Vilankattur, and nearby villages of Chennai, Coimbatore, Cuddalore, Karaikudi, etc.**
- (d) The CSIR technologies have been able to create opportunities for men and women entrepreneurs across the country (including for the state of Maharashtra), the details are at Annexure-I.**

S.No	Lab	Interventions made	Benefits to Entrepreneurs/ Common People
1.	CSIR-CBRI	Advisory services for S&T interventions in the Traditional Architecture of Rural areas of Uttarakhand	S&T solutions for design and construction of hill houses maintaining traditional architecture duly strengthened using the innovative technologies, and also to reduce the use of the costly building materials.
2.	CSIR-CCMB	Improved Samba Mahsuri, a bacterial blight resistant rice cultivar	Enhanced incomes of rice farmers of several states. Beneficiaries are farmers who cultivate fine grained rice varieties in affected areas. This variety has been particularly helpful to farmers of Kurnool, East and West Godavari districts of Andhra Pradesh where there have been several recent epidemics of bacterial blight. For 2015-17 itself, the additional income added (Trait value) is ~ ₹ 101 crores. The area under ISM cultivation during the said period is 25,000 and 30,000 hectares respectively. The total estimated value of produce is approximately ₹ 528 crores.
3.	CSIR-CCMB	Popularization of Apple cultivation in Eastern ghats and Gondwana regions Telagana, Andhra Pradesh and Odisha	<ul style="list-style-type: none"> <li>• Alternate income generation in non-traditional apple growing parts of the country saving transport costs.</li> <li>• To enhance apple production in the country, both in season as well as off season and reduce the import</li> <li>• Apple is a long-duration horticultural TREE crop; and would require another 2-3 years, for fruition.</li> </ul>
4.	CSIR-CFTRI	Automated processing unit for sugar cane juice bottling in and around Mysore	<ul style="list-style-type: none"> <li>• Income enhancement by more than 50% as compared to traditional processing</li> <li>• Shelf-life of the product is 4 months</li> <li>• Color &amp; taste similar to that of fresh juice</li> </ul>
5.	CSIR-CGCRI	Demonstration of High capacity ceramic membrane modules (8m <sup>3</sup> /hr) for Arsenic and Iron removal at Ramchandrapur village, Dist Malda, West Bengal	One Plant installation complete, handed over to PHED, Govt. of West Bengal.  Yearly Benefit is ₹ 16.06 Lakhs for one unit catering to 500 people.
		Training and Skill Development Programme for the Rural Artisans Associated in Making terracotta pottery across various states	Training imparted to 127 artisans from various states across the country through five residential programs of 10 days duration each.

6.	CSIR-CIMAP	Improved agro and processing technologies of economically important medicinal and aromatic crops like Lemongrass, Palmarosa, Vetiver, Citronella, Menthol Mint, Ashwagandha, Lemongrass	Demonstration of lemongrass, vetiver, palmarosa, menthol mint and ashwagandha were made on farmer's field covering an area of 1140 acres in different part of country including Bundelkhand, Vidharabha and Kutch region. From these demonstrations crop produce worth ₹ 482.50 lakhs (essential and ashwagandha roots) was obtained. A total employment of 1,53,500 mandays was created from the cultivation of these plants.
7.	CSIR-CMERI	Semi-automated Ginger processing technology for producing ginger flakes in North East	Income generation ₹ 2580/ton per day, ₹ 7.74 lakhs/ton annum.
8.	CSIR-CMERI	Improved Iron Removal Plants in WB	Enables iron removal at half of the cost. The expenditure of commercial available domestic filters for 500 people is approx. ₹ 100,000/- and the cost of Improved Iron Removal Plant for 500 people is ₹ 50,000
9.	CSIR-CSMCRI	Improvement of quality of solar salt through scientific intervention in Gujarat	Beneficiaries additional profit : ₹ 100/MT of salt
10.	CSIR-CSMCRI	Seaweed cultivation for marginal societies in coastal regions	Additional income generation per season is ₹ 908/- (agarophytes farming) and ₹ 13,541/- ( <i>Kappaphycus</i> ). The average income per beneficiary is estimated as ₹ 9,643/-
11.	CSIR-CSMCRI	Agronomic practices of <i>Salicornia</i> in green house in coastal areas of Gujrat and Tamilnadu	295 farmers trained. Each farmer getting benefit of ₹ 5000/- from <i>Salicornia</i> cultivation. Total income generated: ₹ 14.75 lakhs
12.	CSIR-IHBT	Aromatic and Herbals: Production of characterized planting material of industrial and commercial plants for facilitating crop diversification in Himalayan region	An area of 285 acres brought under high demand industrial crops viz., stevia, wild marigold, damask rose and other herbals like cardamom, lavender, geranium etc. with a total revenue generation of Rs. 370 lakhs.
13.	CSIR-IHBT	Introduction of important cut flower crops for crop diversification	Income enhancement. Floriculture expanded in additional 45 acres of land, benefitting 265 growers with net return of Rs. 259.71 lakhs in HP and adjoining states UK, J&K, Punjab

14.	CSIR-IICT	Samadhan Kendra in Telangana and Andhra Pradesh	For exploiting benefits out of modern agriculture farming, pest control methods, soil testing, seed management etc. 50,000 vegetable farmers in Medak and 70,000 mango farmers in Chittoor district benefitted, each Kendra caters needs of 20 villages in and around covering approximately 1 lakh population.
15.	CSIR-IICT	Sustainable Tassar culture development by tribal tasar farmers in Telangana and Andhra Pradesh	Income generation of Rs 4,000 per farmer (Support is given the form of disease free laying (DFLs), small rearing equipment's, fertilizers and disinfectants)  400 tasar farmers benefitted. During 2015-16: Rs 16.55 lakhs and during 2016-17 Rs 24.67 lakhs have been realized by the farmers of Karimnagar and Adilabad district of Talengana respectively after selling their cocoons.
16.	CSIR-IICT	Popularization of Pheromone Application Technology (PAT) in Telangana and Andhra Pradesh	PAT farmers benefitted with an additional income of 20 % in comparison to non-PAT farmers, ease of application, up to 50 % reduction in pesticides, quality produce, health benefits and environmental safety etc. Returns ranged ₹ 2500-25000 per acre depending upon crop in 1735 acres.
17.	CSIR-IICT	Highly Compact Reverse Osmosis/Nanofiltration systems for ground water and surface water purification (50-1000 L/h) in Telangana and Andhra Pradesh	Successfully commissioned 15 compact plants of 50 - 250 L/h capacity in schools, hostels & villages and 12 pilot plants of 1000 L/h capacity. 5 lakhs population is getting benefitted and the Revenue generation is Rs 75 lakhs per annum.  Important Features: Water Recovery: 60-80 % Operating cost: 3-5 paise per liter Capital Cost: Rs 35,000 for 100 LPH, ₹ 3 lakhs for 500 LPH & Rs 6 lakhs for 1000 LPH
18.	CSIR-IICT	Biogas Plants Based on AGR for food waste treatment in Telangana and Andhra Pradesh	Utilizes 1000 kg of waste per day each at 3 plants Savings/ Income: LPG: ₹ 2579 – 2948/ day (₹ 9.41-10.76 lakhs/ annum) Biomanure: ₹ 300 – 400/ day (₹ 1.10– 1.46 lakhs/ annum) Total= ₹ 2879 - 3348/per day (₹ 10.50 -

			12.22 lakhs/ annum)
19.	CSIR-IIIM	J&K Arogya Gram Yojana (JAAG)	<ul style="list-style-type: none"> <li>• More than 100 ha of Kandi land/Rainfed/Wasteland/Unutilized land/Snow bound areas of 10 Districts (Kathua, Udhampur, Reasi, Doda, Ramban, Kishtwar, Samba, Poonch, Jammu and Rajouri) benefitted from implementation of the project. 399 farmers were involved in cultivation of MAPs under this project</li> <li>• 99 kg seeds of <i>Tagetes minuta</i> alone were sold by farmers at the rate of Rs. 1000/kg. Already an income of ₹ 9.62 lakh has been realized, which would increase in forthcoming years, when all crops would be ready for market.</li> <li>• In addition an amount of ₹ 20 crore worth quality material has been generated, which is available with CSIR for distribution purposes.</li> <li>• 25,325 Employment/ mandays generated through this programme and 1745 human resources (farmers) trained.</li> </ul>
20.	CSIR-IIIM	Cultivation of <i>Monarda citriodora</i> in J&K and UP	<ul style="list-style-type: none"> <li>• Agro-technology of Jammu monarda transferred in 10 acres of land in Jammu, Srinagar and Hardoi.</li> <li>• Standardization done for thymol rich crystal development protocols from essential oil of Jammu Monarda (99% pure)</li> </ul>
21.		Production technology for value added "Kashmir Aroma Kit" in Jammu region	<ul style="list-style-type: none"> <li>• Total 2654 value added Aroma Kits prepared (3ml, 6ml capacity) from six types of essential oils produced in CSIR-IIIM farms</li> <li>• Ten value added products such as mosquito repellent liquid, mosquito repellent cream developed in collaboration with private companies such as M/s. Strategic India Bangalore</li> </ul>
22.	CSIR-IIP	Improved <i>Gur</i> making plant in Uttarakhand and Uttar Pradesh	Energy efficiency in <i>Gur</i> making process through CSIR-IIP improved technology has converted it from a part time business to a profitable full-time business for sugarcane farmers. Nearly 23% increased income in one season can be achieved with this improved

			technology that has been proved through the installation of 37 plants. The total savings figure for 37 units is Rs. 66 lakhs per annum. Moreover, for every 1 tonne of Gur produced from improved plant 271.5 kg. of CO <sub>2</sub> have been reduced.
23.	CSIR-NBRI	Bioinoculants for enhancing the performance of crops on sodic wastelands using the most potential salt and temperature tolerant strains of <i>Trichoderma</i> spp., <i>Bacillus</i> spp. and <i>Pseudomonas</i> spp.	17 Biofertilizer and 9 Biopesticide producing labs of Uttar Pradesh were provided high value, stress tolerant microbes (PSB, Rhizobium and Azotobacter) and hands on training. These labs produced 45 lakh packets, used all over the state. 100 farmers were trained for application of biofertilizers. An area of 2,62,800 ha covered leading to saving of 29,343 MT of fertilizer.
24.	CSIR-NCL	CSIR-NCL's UF-membrane based water purification units for Indian rural /tribal community near Pune	Normal Cost ₹ 2.5 lakhs CSIR-NCL cost ₹ 0.05 lakhs
25.	CSIR-NEERI	Clean water and sanitation in rural areas in Maharashtra	<ul style="list-style-type: none"> <li>• NEERDHUR technology has been successfully developed and demonstrated in 4 villages across 2 states namely Mohagaon, Gothangoan in Nagpur district, Savroli-Palghar, Mumbai and Chunakhali.</li> <li>• Rejuvenation of degraded lands using bamboo biomass through microbe assisted green technology (MAGT)</li> <li>• Demonstration of rapid composting technology in selected villages of Vidharbha, Maharashtra</li> <li>• Design and development of in-vessel solar composter for rural areas</li> </ul>
26.	CSIR-NEIST	Liquid deodorant cleaner production in North Eastern Region	₹ 6 lakh/ Entrepreneur /annum Liquid deodorant cleaner production (₹ 2000/- per day/beneficiary from one unit)
27.	CSIR-NEIST	Training on Weaving using Jacquard Looms and Product Development in North Eastern Region	Entrepreneur beneficiary income added @ ₹ 5000 per month= ₹ 60,000 / annum

<b>S. No.</b>	<b>Full name of the CSIR Lab/Institute and their location</b>
1	CSIR- AMPRI (CSIR-Advanced Materials and Processes Research Institute), Bhopal
2	CSIR -CBRI (CSIR-Central Building Research Institute), Roorkee
3	CSIR-CCMB (CSIR-Centre for Cellular and Molecular Biology), Hyderabad
4	CSIR-CDRI (CSIR-Central Drug Research Institute), Lucknow
5	CSIR-CECRI (CSIR-Central Electrochemical Research Institute), Karaikudi
6	CSIR-CEERI (CSIR-Central Electronics Engineering Research Institute), Pilani
7	CSIR-CFTRI (CSIR-Central Food Technological Research Institute), Mysore
8	CSIR-CGCRI (CSIR-Central Glass and Ceramic Research Institute), Kolkata
9	CSIR-CIMAP (CSIR-Central Institute of Medicinal & Aromatic Plants), Lucknow
10	CSIR-CIMFR (CSIR-Central Institute of Mining & Fuel Research), Dhanbad
11	CSIR-CLRI (CSIR-Central Leather Research Institute), Chennai
12	CSIR-CMERI (CSIR-Central Mechanical Engineering Research Institute), Durgapur
13	CSIR-CRRI (CSIR-Central Road Research Institute), New Delhi
14	CSIR-CSIO (CSIR-Central Scientific Instruments Organization), Chandigarh
15	CSIR-CSMCRI (CSIR-Central Salt & Marine Chemicals Research Institute), Bhavnagar
16	CSIR-IGIB (CSIR-Institute of Genomics & Integrative Biology), Delhi
17	CSIR-IHBT (CSIR-Institute of Himalayan Bioresource Technology), Palampur
18	CSIR-IICB (CSIR-Indian Institute of Chemical Biology), Kolkata
19	CSIR-IICT (CSIR-Indian Institute of Chemical Technology), Hyderabad
20	CSIR-IIIM (CSIR-Indian Institute of Integrative Medicine), Jammu
21	CSIR-IIP (CSIR-Indian Institute of Petroleum), Dehradun
22	CSIR-IITR (CSIR-Indian Institute of Toxicology Research), Lucknow
23	CSIR-IMMT (CSIR-Institute of Minerals and Materials Technology), Bhubaneswar
24	CSIR-IMTech (CSIR-Institute of Microbial Technology), Chandigarh
25	CSIR-NAL (CSIR-National Aerospace Laboratories), Bengaluru
26	CSIR-NBRI (CSIR-National Botanical Research Institute), Lucknow
27	CSIR-NCL (CSIR-National Chemical Laboratory), Pune
28	CSIR-NEERI (CSIR-National Environmental Engineering Research Institute), Nagpur
29	CSIR-NEIST (CSIR-North-East Institute of Science and Technology), Jorhat
30	CSIR-NGRI (CSIR-National Geophysical Research Institute), Hyderabad
31	CSIR-NIIST (CSIR-National Institute for Interdisciplinary Science and Technology), Thiruvananthapuram
32	CSIR-NIO (CSIR-National Institute of Oceanography), Goa
33	CSIR-NISCAIR (CSIR-National Institute of Science Communication and Information Resources), New Delhi
34	CSIR-NISTADS (CSIR-National Institute of Science, Technology and Development Studies), New Delhi
35	CSIR-NML ( CSIR-National Metallurgical Laboratory), Jamshedpur
36	CSIR-NPL (CSIR-National Physical Laboratory), New Delhi
37	CSIR-SERC (CSIR-Structural Engineering Research Centre), Chennai