MGIRI's ANNUAL REPORT

(April 2007 Mar 2008)

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ANNUAL REPORT

(April 2007- March 2008)

1. Foreword

Self-reliant villages constitute the basic building blocks of sustainable economy and a humane civilization in the Gandhian vision of "Gram Swaraj". Decentralized industrialization is expected to be the main engine of economic development of the villages. In spite of sixty years of planned development and phenomenal growth in science and technology institutions and national research and development laboratories in the country, there is yet no effective mechanism available to support Rural Industrialization through appropriate inputs of Science, Technology and Management. The need for such a mechanism is being felt more acutely in view of the emerging process of globalization. Such a focus is imperative for realizing large-scale employment in rural sector for sustainable development through decentralized production systems. To make this possible, it is essential that quality inputs of science, technology and managerial skills be integrated with the traditional skills and knowledge base to develop efficient means of decentralized production of quality goods and services. The challenge of setting-up up such an institution was entrusted to I.I.T. Delhi by the K.V.I.C. in 2001. Creation of the National Institute named "Mahatma Gandhi Institute for Rural Industrialization" (MGIRI) at Wardha, together with a number of technical interfaces in the major S & T institutions in different regions of the country was a significant step in the direction of realizing such a mechanism. Through this network, it is expected to harness the available R & D expertise as well as S&T facilities of the country in favor of micro, small and medium enterprises with a focus on the rural industries related KVI and related sectors.

The initial project period was from April 2001 to March 2004. During this period most of the building construction work was completed, laboratories of different sections were equipped and R&D works in identified areas were initiated.

These activities continue till 23rd June 2006 when agreement was made between KVIC and IITD to keep the institute functional under the technical guidance and supervision of IITD for a period of one year i.e. upto 31st March 2007. As a result of this, R&D activities in the campus were revived during the period Oct. 2006 to March 2007. Further extensions were made, each time for a period of three months till 30th September, 2008 when the project phase of the MGIRI under IITD came to a formal conclusion.

In the month of July 2008, the first Director of MGIRI was appointed and he assumed charge on 15 July 2008. Advertisements for the 35 technical posts have been made and the process of recruitment is expected to be completed by Nov-Dec 2008. The period of 15.07.08 to 31.09.08 is unique in the sense that the Autonomous functioning of the MGIRI and the project activities of IIT Delhi had a period of overlap - so as to ensure a smooth transition.

2. Highlights of the year 2007 - 2008

2.1. 3rd General Council meeting

The 3rd meeting of the General Council of MGIRI took place on December 18th, 2007 at MGIRI, Wardha. Shri Mahabir Prasad, Hon'ble Minister of MSME chaired the meeting.

The Hon'ble Minister visited the laboratories of various sections and expressed happiness over the progress made by MGIRI and the development of many technologies.

2.2. Interface Institutions' Meet

A review meeting was held at MGIRI Wardha on 14-15th Dec, 2007 in which 14 of the Interface Institutions participated. A set of 87 technologies/ products were presented among which a number of technologies were found to be ready for entrepreneurisation.

2.3. Participation at India International Trade Fair 2007

MGIRI participated in the India International Trade Fair 2007 at Pragati Maidan, New Delhi during Nov. 14-27th, 2007. MGIRI exhibited decorative pottery products as part of the KVIC pavilion.

Shri Mahabir Prasad, Hon'ble Minister, MSME visited the stall and was accompanied by Sushri Kumud Joshi, Chairperson of KVIC. Prof P L.Dhar, Expert Member (S&T), KVIC, Dr. Syeda Hameed, Member Planning Commission, Shri Seshkumar Pulipaka, Joint Secretary MSME & Shri J.S.Mishra, CEO KVIC also visited the stall.

2.4 Participation in India Organic Trade Fair

MGIRI Participated in India Organic Trade Fair held at Indian Agricultural Research Institute, New Delhi From Nov. $29-2^{nd}$, Dec 2007.

2.5 Participation in National Level Exhibitions

MGIRI participated in the following national level exhibitions organized by KVIC

- Khadi Fest Exhibition at KVIC Mumbai from Oct 2-31st, 2007
- ➤ Khadi Utsav at Bengaluru from Jan 10 to 2nd Feb, 2008.

During these exhibitions the technologies developed at MGIRI were exhibited and demonstrated.

3. Important visitors

Following were the important visitors to MGIRI, Wardha during 2007 - 2008

- Shri Balvijayji, Chairman Khadi Mission
- ➤ Representatives of Sustainability Institute, Stanendois, South Africa.
- > Shri A. Narayanan, Advisor Ministry of Panchayati Raj, Govt of India.
- Ms. Smita Chug, Joint Secretary, Rural Development Ministry, Govt of India.

4. Interaction with Other Institutions

Prof T Karunakaran, Project Consultant, participated in the Consultation Meeting on 'National Innovation Projects(NIP)' organized by the TIFAC (Ministry of Science & Technology, GOI) at IIT Mumbai on March 20, 2008. This meeting was to discuss the final form of the World Bank supported projects addressing the MSME Sector. It was seen that there is a need for institutions to handle this project and MGIRI was potentially situated in respect of a significant segment of the sector under consideration. In a subsequent meeting with Prof. Anand Patwardhan, Director of TIFAC he encouraged MGIRI to stake a claim for a such role in the NIP and requested that appropriate document about MGIRI be submitted to the TIFAC (Ministry of Science and Technology).

5. Major Achievements

- ➤ KVIC has notified that MGIRI will serve as a resource center for the SFURTI Programme of the Ministry of MSME.
- ➤ MGIRI has started IGNOU's study center for Certificate Programme on Craft and Design (Pottery)
- > KVIC has approved Rs 15 lakhs each for setting up quality assurance laboratories at Central Sliver Plant at Etah, Raibarelli (UP), Sehore (MP), Chitrasurga (Karnattaka) and Trissur (Kerala) on the basis of quality assurance norms developed at MGIRI, Wardha.
- ➤ Eight production units of panchagavya products have been established at Junagad and Vadodara Dist. of Gujarat and at Shimoga (Karnataka) with the facilitation help of the Bioprocessing & Herbal section of MGIRI.

6. Detailed section wise activities

6.1 Khadi and Textile Section

6.1.1 R & D activities

The R & D activities, which were undertaken during the period September 2006- March 2007, were continued during the period of April 2007-March 2008.

The new activities initiated during the present period of the project were

- 1. Strengthening of weaving laboratory by introduction of Dobby and Jacquard weaving for the production of woven design fabrics with a view to achieve value addition
- 2. Evolving new khadi fabric design with a view to attract the younger generation towards khadi.
- 3. Dyeing of organic khadi with natural dyes.

It is envisaged that the above activities will give value addition to Khadi Products to enhance its marketability.

6.1.2 Ongoing of R & D activities

(1) Development of a technology for spinning of Desi wool from Himachal Pradesh

(To provide suitable machines and technical back up for spinning of Desi wool from Himachal Pradesh on NMC charkha)

Need

The sheep breeders of Himachal Pradesh, though scattered geographically, produce a very large quantity of wool. Unfortunately these sheep breeders are not organized. Therefore the small sheep breeders do not have a mechanism for collection of wool for sale in the market. Therefore local raw wool is sold in the local markets at throwaway prices of Rs. 25-50 depending on the season of clipping and the part of the sheep body from where wool is obtained. Presently sheep is valued more for its dung than for its wool. Therefore there is a need to provide technical back up to rural sheep breeders in Himachal Pradesh for the conversion of locally available wool into yarn thus effecting value addition to desi wool. In doing so, there will be employment generation in remote sheep breeding areas of Himachal Pradesh.

Technology developed

In remote areas of Himachal Pradesh such as Chamba, Kangra, Kinnaur a large quantity of local wool is wasted for want of facilities for opening, carding, sliver-making and spinning. It was decided to modify the existing cotton spinning NMC charkha to become suitable for the spinning of desi wool. Two-spindle cotton spinning NMC charkha is modified in terms of draft and twist to make it suitable for spinning of desi wool. The use of NMC charkha for the spinning of desi wool will obviously be more productive and will produce better yarn quality compared to traditional wool charkha

Technology dissemination

A technology dissemination workshop was conducted during March 18-20th, 2008 at Mahauri in Chhaila Tehsil of Himachal Pradesh.

Social impact

The technology will provide value addition to locally available wool which is presently 'thrown away' because of non-availability of technology for conversion into yarn. The modified NMC charkha has the potential to generate considerable employment particularly for aged people. KVIC can play a major role in the dissemination of technology in wool spinning regions.

(2) Woven fabric design development

(To produce khadi fabric with new design inputs according to the market trends)

Product development

After the shifting of old looms from Trimbak Vidya Mandir, Nashik, a systematic work was initiated for the production of khadi fabric with new design inputs. Some of the designs of "woven fabrics" are given below:



Impact

During the first phase the emphasis is on design development for shirting. Large varieties of shirting fabric will be made available for 'designer's shirts'. This will enhance the marketability of khadi among younger generation. The products are also expected to fetch better prices – thus contributing to the viability of khadi.

The technical details of such designs will be made available to the khadi institutions. If suitable mechanism is found for the delivery of the innovations to the spinners and weavers attached to the khadi institutions it would be possible to pay them better wages thus preventing their exodus to non-skilled jobs. This activity can be introduced in the Khadi sector to KVIC PRODIP Scheme.

(3) Introduction of natural dyes into 'organic khadi sector'

In order to enhance the environment friendly nature of khadi it is proposed to introduce natural dyes into organic khadi sector. If this concept is systematically popularized, the marketability of khadi will be enhanced considerably both in domestic as well as export markets. In view of this the khadi fabric produced by organic cotton growers was procured and dyed with a variety of shades of natural dyes.

The dyed khadi fabrics as well as garments were exhibited in the Organic Farm Products' Exhibition at Delhi during November 29th to December 2nd, 2007. The natural-dye based

khadi fabric and garments evoked excellent response from the visitors. There were also a few trade inquiries. Encouraged by this feedback it was decided to pursue this activity more vigorously.

Project proposal have been prepared by the Khadi development Directorate of KVIC for setting up facilities in selected Khadi institutions for dyeing khadi with natural dyes.



(4) Introduction of Dobby and jacquard system for weaving

Dobby and Jacquard are well established techniques used in handloom and organized mill sector for the production of designed woven fabric. Dobby is used only to a limited extent in khadi sector mainly for the production of Saris. The Jacquard weaving is not practiced in khadi sector. It is therefore essential to introduce these two important techniques of design fabric weaving for value addition to khadi.

A weaving lab has been created in the Khadi Section of MGIRI with Dobby and Jacquard looms for R & D in the above direction. Use of these two weaving techniques will be valuable for enhancing design potentials of khadi fabric.

6.1.3 Cluster activity

Efforts were made to initiate cluster based khadi activities in following villages using the concept of value addition to cotton; nicknamed "Kapas se Kapade tak".

- 1. Ner (near Yeotmal) in collaboration with Shendriya Sheti Sansthan, Ner
- 2. Anjangaon Surji (near Amravati) in collaboration with "Organic farms"

The objective was to give value addition to cotton cultivated by farmers.

6.1.4 Documentation

Engineering drawings of prototype machines

Engineering drawings using CAD and Solid Works software's have been prepared for following machines

- 1. Mini sliver plant machines
- 2. Laboratory Hank dyeing machine
- 3. Laboratory Mercerization machine

The Engg. drawings of hank dyeing and mercerization machine have been provided to MDTC, Dahanu for fabrication of machines.

6.1.5 Workshops/Training programmes.

(1) Workshop on "Dobby and Jacquard weaving"

A 10-day Workshop on "Dobby and Jacquard weaving" was conducted during February 11-20th, 2008. Nine participants from different states and Khadi Vidyalyas participated in the workshop. The participants were weavers from the khadi institutions. All the participants were new to these two weaving techniques. They were exposed to both theory and practice of Jacquard weaving. The proportion of practical vs theory was kept 80:20. The participants were also introduced to 'woven designs' using normal handloom. The two techniques were received enthusiastically by the participants who advocated for the replication of such training with a longer period of at least of one month.

One month training programme is essential for imparting for training on Dobby and Jacquard weaving.

(2) Workshop on "Spinning of Desi wool"

This workshop on "**Spinning of Desi wool on NMC charkha"** was conducted during March 18-19th, 2008 at Mahauri village in Chhaila Tehsil of Himachal Pradesh. The workshop was organized in collaboration with the NGO Anhad Sewa. Training in spinning of desi wool of Himachal Pradesh on NMC charkha developed by MGIRI was imparted to the participants. The participants were women from remote areas of Himachal Pradesh. A few traditional weavers also participated in the workshop.

There were 20 participants. The NGO 'Anhad Sewa' is doing the follow up.



Prof Chavan explaining the operation of NMC charkha



Local weaver at work on sample loom

(3) Lectures /Articles by Prof. Chavan for popularizing new developed models

- (i) Participation in Kisan mela on and addressing the gathering on the concept of Kapas to cotton garments value addition at Majalgaon on January 12th, 2008.
- (ii) Why organic cotton? Presentation to participants of the workshop on Entrepreneurial possibilities in organic products, MGIRI, Wardha, June 28th, 2007
- (iii) The article "kapas se kapade tak" was published in Agro Wan (Dainik Sakal: 12.1.08)

6.1.6 Summary of workshops organised and exhibitions participated

(a) Consolidated details of workshops conducted during 2007 - 08

Date	Workshop title	No. of participants	States represented
Sept 19- 20, 2007	Dissemination of khadi technologies	15	Andhra Pradesh, Kerala, Karnataka, Madhya Pradesh, Maharashtra,
20, 2007	Kildul teeliilologies		Rajastan, U P, Gujarat
Feb.11-20, 2008	Dobby and Jaquard weaving of khadi	09	Weavers from maharashtra, Rajasthan, U P and Madhya Pradesh.
March 18- 20, 2008	Spinning of Desi wool on NMC charkha	30	Mahauri and neighboring Villages in Himachal Pradesh

KVIC has identified few khadi institutions for establishing finishing and natural dyeing units

(b) Participation in national level exhibitions

S.No	Event	Venue	Period
1.	Khadi Fest Exhibition	KVIC Mumbai	Oct. 2 – 31, 2007
2.	International Trade Fair	Pragati Maidan, Delhi	Nov. 14 – 27, 2007
3.	Organic Trade Fair	Pusa Inst. Delhi	Nov.29-Dec.2, 2007
4	Khadi Utsav	Govt. Boys College, Bengaluru	Jan.10-Feb.11,2008

6.2 Bio-Processing and Herbal Industries

6.2.1 R & D activities

(1) Development of Panchgavya based products

Panchgavya is a potential resource for rural industrialization and employment generation. Out of Panchgavya, milk and its products have been widely used in dairy industries. However, Gomutra (cow urine) and Gomay (cow dung) are going waste, whereas, according to Ayurveda as well as modern sciences, they have high medicinal and other properties. Use of these byproducts in medicines, domestic application, cosmetics and agriculture can help open up a new category of small scale industries. in tune with the modern trends of 'green products'

Keeping the above in mind, a national workshop on "Entrepreneurship Possibilities Using Panchgavya" was conducted at MGIRI, Wardha during May 26 - 28, 2007. During this workshop the concept of 'integrated rural development and employment generation using Panchgavya' was evolved. The workshop also highlighted the need for R & D work on the following products:

- o phenyle
- o mosquito repellent coil
- washing powder for utensils
- o aftershave

- o hair oil
- o face pack
- dantmanjan (red/black)
- o keshnikhar
- o dhoopbatti
- o tikiya
- o kit-niyantrak
- o amritpani

A comprehensive technical manual on these products was also prepared.

(2) R & D work on Gomutra in progress

- Study on germicidal property of Gomutra based phenyl.
- Study on antiseptic property of Gomutra based After shave.

During different tests as per recommendations of BIS and GULF standards, the Gomutra based formulations gave promising results. The research work is in progress.

6.2.2 Cluster development activities related to panchagavya

Cluster development activities have been initiated in various clusters of **Gujrat, Maharastra and Karnataka**. The focus is on employment generation in remote villages through panchagavya based products.

Enthusiastic young trainees have started production units in groups of ten, five or two. Some typical production units are:

- 1. Kamdhenu Production Unit-Timbawadi,- Junagardh Dist._Gujarat. (phenyle, hair oil, dantmanjan, tikiya dhoopbatti)
- 2. Girdhenu Production Unit, Gunardardh, Gujarat. (phenyle, dhapbatti, hair oil, danta manjan, tikiya, face pack.)
- 3. Brajdhenu Production Unit, Vaghodiya, Vadodara, Gujarat. (phenyle, dhoopbatti, hair oil, dantamanjan, tikiya, face pack.)
- 4. Santa Kabir Production Unit, Amalpur Dist., Vadodara, Gujarat. (phenyle, dhoopbatti)
- 5. Panchgavya Production Unit, Chakranagar Dist., Shimoga, Karnataka. (phenyle, dhoopbatti, hair oil, dantamanjan)
- 6. Go-amrut Production Unit, Kanchivani Dist., Akola, Maharashtra. (phenyle, dhoopbatti, hair oil, dantamanjan,)
- 7. Panchgavya Production Unit, Khamgaon, Maharastra (phenyle)
- 8 Panchgavya Production Unit, Kirnapur, Dist, Nagpur. (phenyle, mosquito coil)
- 9. Keshav Gorakshan Production Unit, Mangarulnath Dist. Washim, Maharastra. (mosqitoe coil, phenyle, keshnikhar, dhoopbatti, face -pack)
- 10. Panchgavya Production Unit, Fattehpur-Shekhawati, Rajasthan. (phenyle, dhoopbatti)

6.2.3 Training programmes / Workshops / Consultations

(a.) Training Programmes

S. No	Date	Title	Venue	Partici- pants	Collaboration
1	Aug.1-3, 2007	Gomutra based phenyle	MGIRI, Wardha	24	Mahila Arthik Vikas Mahamandal
2	Oct 14- 15, 2007	ICS training programme on organic food	MGIRI, Wardha	20	Sadbhavana Gramin Vikas Sanstha, Wardha
3	Oct.25- 31, 2007	Training programme on production of Panchgavya based domestic products & agricultural inputs	Dewalapar	30	Go-Vigyan Anusandhan Kendra, Nagpur.
4	Oct.29- Nov.4, 2007	Same as above	Wadala, Junagarh	30	Shri Vallabha- charyaji Govigyan Anusandhan Trust, Junagarh.
5	Nov.17- 23, 2007	Same as above	Vaghodiya, Vadodara	30	Shriram Govigyan Samvardhan Sewa Trust., Vadodara.
9.	Nov.28- Dec1, 2007	Preparation and Quality Control of Value Added Food & Herbal Products	MGIRI, Wardha	37	
6	Dec.5 – 11, 2007	Same as above	Chakranag arHosnagar	30	Shri Ramchandra- purmatha, Shimoga
7	Jan 16- 17, 2008	Dissemination of Biomanure testing Kit technology	Jamnagar	25	National Academy of Rural developmnt Jamnagar
8	March 11- 17,2008	Panchagavya products training programme	MGIRI Wardha	40	
14.	Mar.7-8 2008	Preparation and Quality Control of Value Added Food & Herbal Products	MGIRI, Wardha	20	

(b) Consultation workshops

Month	Venue	Title	
May 26 to	MGIRI	Consultation workshop on entrepreneurship development	
28, 2007		possibilities using panchagauvya	

June 28 to	MGIRI	Consultation workshop on entrepreneurship possibilities in
30, 2007		Organic food: Production, Quality assurance and Marketing
Sep 20- 21.2007	MGIRI	"Entrepreneurship Possibilities in Neutraceuticals Food & Herbal Products: "Production, Quality Control and Marketing"

(c) Follow-up workshop for Cluster Development activity

Month	Duration	Title		
July 13 to	2 day	Cluster development activity and planning at Gujarat for		
14, 2007		Panchagauvya products and Organic Food		
July 17	1 days	Cluster development activity and planning at Yavatmal for		
2007		Panchagauvya products and Organic Food		

6.2.4 Participation in exhibitions

Sr. No.	Place	Exhibition	Date	Remark
1	Shimoga ,	Vishwa Go	April 21 to 29,	Presented Gomutra
	Karnataka	Sammelan	2007	standardization work,
				Dissemination of Biomanure
				Diagnostic Kit.
2	IVRI,	National	May 6 to 7,	Presented Gomutra
	Izzatnagar	workshop on	2007	standardization work,
		Panchagauvya		Dissemination of Biomanure
				Diagnostic Kit.
3	Pusa Inst.	India Organic	Nov.29-Dec 2,	Exhibited organic food products of
	Delhi	Trade fair	2007	farmers from Vidarbha region

6.2.5 Participation in Conferences

Paper presentation at a National Conference on Glory of Gomatha at Tirupati (Dec. 1 - 3, 2007)

6.2.6 Documentation

Training Manual on 'Production of Panchgavya based domestic products and agricultural inputs' is prepared in five languages i.e. Hindi, English, Guajarati, Kannada and Marathi and are ready for printing.

6.3 Rural Craft & Engg Section

6.3.1 R & D activities

(1) Potter's Wheel

- Design, fabrication and performance evaluation of the following potter's wheels:
 - Tyre type
 - Iron rim type
- With a view to field test the design the KVIC GNMDTC, Dahanu has been requested to fabricate MGIRI design of potter's wheel based on the design supplied by MGIRI.

(2) Design & development of utility items for terracotta:

MGIRI has introduced new designs of about fifteen utility items (like candle stand, soap case, pen stand, paper weight, bangle box, etc) of pottery products to enhance the market potential of pottery products.



(3) Design & development of khadi and textile based craft products:

MGIRI introduced new design of khadi and textile based craft products as a new avenue of employment for women SHGs. In the first phase MGIRI has evolved the design of about 25 models of caps and hats implementable by use of khadi or other fabric.

(4) Design & development of utility items using cotton & Jute:

Plastic bag is an established part of Indian shopping. However, the perceived environmental hazards associated with plastic shopping bags have raised grave concerns.

MGIRI decided to introduce new designs of jute and cotton based groceries-shopping bags and vegetable-shopping bags through SHGs. MGIRI has so far evolved more than 30 such designs.

Some of the cotton bag designs are given below:





6.3.2 Workshops/Training programme conducted for technology disseminations

S No	Date	Title	Venue	Particip	Collaborators
				ants	
1.	May 3 – 9,	Decorative	MGIRI,	36	Magan
	2007	Pottery	Wardha		Sangrahalaya
					Wardha
2.	July 4-10,	Decorative	Thalakulam,	41	CSD
	2007	Pottery	Kanyakumari		Kaynakumari
			Dist.		
3.	Jan 16 -26,	Decoration and	MGIRI	12	DRDA Wardha
	2008 & Feb.	Value addition	Wardha		

	4-8, 2008	in Pottery Products			
4.	March 4-17, 2008	Decoration and Value addition in Pottery Products	MGIRI Wardha	10	Mahila Arthik Vikas Mahamandal
5.	January to June 2008	Certificate course in Craft & Design (Pottery)	MGIRI Wardha	19	IGNOU

6.3.3 Participation at India International Trade Fair 2007:



Shri Mahabir Prasad, Hon'ble Minister, MSME visiting the stall of the Craft & Engg Section of MGIRI at the IITF 2007. Sushri Kumud Joshi Chairperson KVIC and Prof P L Dhar Expert Member of KVIC are also seen in the picture.

Major feed-back from the exhibition were:

- artifacts in the price range of Rs10 to 250 has huge potential.
- large sized and expensive artifacts could also be marketed if they are enriched through innovation.
- paintings with colours free from lead has export potential.

6.3.4 Extension activities:

(a) Primary survey of pottery cluster Andhargaon, Bhandara Dist. (March 30, 2008)

It was observed that the potters are involved in business round the year. But their earning is very low because they are using traditional designs and technology. Their production cost is very high and profit margin is very low. It was decided to identify some local coordinating agency which could help in the transfer of technology.

(b) Extension of artistic pottery:

MGIRI took up the avenue of 'painted pottery' as an important area of training artisans. This led to participation of 23 artists of Wardha district in the IITF 2007. Around 300 painting on pots like Indiancontemporary, Indian abstract, realistic, folk, miniature, mugal miniature were painted for display.



(c) Certificate Programme on Craft & Design (Pottery)

From Jan 2008 MGIRI started IGNOU's study center for Certificate Programme on Craft & Design (Pottery). Total 19 participants were registered for present session.

- **(d) Two commercial manufacturers have been identified** for the fabrication of MGIRI's variable speed potter's wheel.
 - M/S Anand Engineering Works
 W-30, opposite to Endorma gate no-2
 MDTC Boti Bori, Nagpur.
 Phone No +919373222444
 - M/S. Wireless Amateurs,
 10/1099, Near Hulgeshwari Mill,
 Sambhaji Chowk,
 PO Ichalkaranji-416115,
 Kolhapur (Maharastra),
 Phone No. +91230 2432507, Mobile +919822044609

6.3.5 Documentation

The previous documents on the following topics were revised with the following titles:

- i) Repair & maintenance of potter's wheel
- ii) Fabrication manual for fabrication of low cost variable speed motorized potter's wheel.
- iii) Potter's wheel at a glance

6.4 Chemical Industries Section

6.4.1 R & D Activities:

(1) Comparison of nutritional values of organic and conventional food products.

A number of samples of organically and conventionally cultivated products were compared for their nutritional values using the advanced equipments of the laboratory. This will help to build the brand value of newly emerging organic food sector.

(2) Soap and detergent:

R & D activities on standardization of soap and detergent products as well as standardization of the testing kit initiated in the earlier period continued.

(3) Development of New Toiletry and cosmetics products

Formulations for the following products were standardized.

- i. Mulatani mitti soap
- ii. Goumutra based soap
- iii. Olive oil based soap
- iv. Vanishing creams
- v. Liquid hand wash
- vi. Liquid utensil cleaner
- vii. Eco- friendly detergent
- viii. Detergents
- ix. Mosquito repellent

The importance of these efforts could be illustrated through items (vii) and (i). While (vii) avoids the use of petroleum based raw material used in the detergents and (i) encourages use of low cost materials which are healthier from human and environmental point.

6.4.2 Training programmes / Workshops

S.No.	Date	Title	Venue	Part ici- pant
1.	May 24-28, 2007	Soap & Detergent Quality Assurance Testing Kit	MGIRI Wardha	6
2.	June 28-30 2007,	Production, Quality Control and Marketing of Organic Food	MGIRI Wardha	25
3.	July 21-25, 2007	Herbal, Food products, Soap and Detergents	Jai Jui, Solapur	85
4.	August 1-3, 2007	Soap and Detergents	MGIRI Wardha	23
5.	August 9-12, 2007	Soap & Detergent Quality Assurance Testing Kit	Hotel City Palace, Ranchi	15
6.	August 20-25, 2007	Soap & Detergent Quality Assurance Testing Kit	MGIRI Wardha	5
7.	15-19 Oct. 2007	Orientation Training Programme on Bee Keeping for officers and staffs of south & west zones of India under Directorate of FBI, KVIC, Mumbai	MGIRI, wardha	40
8.	Jan 7-1, 2008	Orientation Training Programme on Bee Keeping for officers and staffs of North, North Eastern, Central & Eastern Zones of India under Directorate of FBI, KVIC, Mumbai	MGIRI, Wardha	65

9.	Feb.3-5, 2008	Preparation and Quality Control of Value Added food & herbal Products	Rehki, (seloo) Wardha	21
		and Preparation of Soap & Detergent		
10.	Feb14-17,2008	Preparation and Quality Control of	MGIRI,	42
		Value Added food & herbal Products	Wardha	
		and Preparation of Soap & Detergent		
11.	Feb 26, 2008	Preparation techniques of Detergent	MGIRI,	16
			Wardha	
12.	Mar.14-	Preparation of Soap	MGIRI,	35
	15,2008		Wardha	
13.	Mar.18-	Preparation and Quality Control of	Mahauri,	30
	20,2008	Value Added food & herbal Products	Shimala	
		and Preparation of Soap & Detergent		

6.4.3 Extension and Services

(a) Testing

Regular testing of samples of organic Food grains, spices, honey, as per AGMARK/PFA and Toxicity in the form of pesticide residue and Heavy metal content. These samples were received from farmers groups who are engaged in organic farming and to whom the technical support is being provided by MGIRI.

For MGIRI to start the process of certification its labs need to be accredited. This is expected to happen soon after the completion of recruitment of technical staff of the section.

(b) Quality Assurance:

Quality assurance through the testing kit provided to SHGs

(c) Training of young scientist

The laboratory has established rapport with advanced S& T departments of academic institutions in Wardha and elsewhere. A large number of U G/ P G students linked themselves with the R & D works of MGIRI to carry out more meaningful thesis work for completion of their academic requirements.

Following students were involved during the year 2007-08 on the topics mentioned against their names.

Sr	Institutions	Number of	Degree	Research Topic
No.		students		
1	New Art College,	2	M. Sc., Bio	The estimation of nutrients in
	Wardha		Technology	food and herbal products
2	New Art College,	1	M. Sc., Bio	The fungus count and protein
	Wardha		Technology	estimation in Mushroom.
3	Agnihotry Science	3	M. Sc., Bio	The estimation of bio
	College, Wardha		Technology	remediation study of Heavy
				metals in Water hyacinth.

6.4.4 Documentation:

The documentation of soap and detergent testing kit was consolidated.

6.5 Rural Energy and Infrastructure (April 2007 – March 2008)

6.5.1 Research and Development

Note: The following significant technologies were developed (with the active involvement of scientist from IIT Delhi and Industrialist) in previous years and the phase of validation / perfection was seen during the current year.:

- Enrichment of biogas and bottling for rural applications.
- Conversion kit for 100% biogas engine.
- Micro hydel prime mover / generator

Further collaborative efforts of MGIRI staff and IIT scientists resulted in

• Energy efficient pottery kiln

In addition to the above MGIRI – IIT collaboration helped standardization/ extension of following two technologies:

- Biomass Briquetting
- Animal driven Prime mover

More details are given in the section dealing with extension

6.5.2 Field Extension of Technologies

- (1) Demonstrated Energy Efficient Potter's Kiln at Colachel, Kanyakumari Dist. (4-15 July 2007)
- (2) Demonstrated Energy Efficient Potter's kiln at Waigaon, Dist Wardha (25 Jul-2 Aug, 2008)
- (3) Conversion of the existing diesel engine into 100% biogas engine at Akola (March 2007)

6.5.2 Participation in exhibitions

- Participated in Agriculture Universities' Exhibition at Akola, Maharashtra to demonstrate the 100 % Bio gas Engine (14- 18 Oct 2007)
- Participated in the District Level Self Help Group Exhibition at Wardha to demonstrate Biomass Briquetting
- Participated in state level Self Help Group Exhibition at Yavatmal to demonstrate Biomass Briquetting
- Participated in Akshay Urja Din, at Gandhi Vichar Parishad, Gopuri, Wardha to demonstrate Biogas engine LED based lighting system and Biomass Briquetting (20th Aug. 2007)
- Participated in the "Workshop on Biogas for self- reliance in fuel and electricity., Magan Sangharlaya, Wardha - to demonstrate 100% Biogas engine and LED based lighting system (31 Aug-1 Sept,2008)

6.5.3 Three day exhibition organised at MGIRI on "Akshay Urja Din" 20-22 Aug-2007

This exhibition was visited by nearly five thousand persons including students from different colleges and schools. Demonstration of MGIRI technologies viz,

- (a)100% biogas engine,
- (b)charcoal gasifier for thermal application,
- (c) bio diesel,

- (d) biomass briquetting
- (e)saw dust combustor.

became the highlight of the exhibition in which 15 NGO's and a few business organizations participated.

6.5.4 Technology dissemination Workshops

Following workshops were conducted for the Technology Dissemination

S.No.	Date	Title	Venue	No. of
				participants
1	4 – 15	"An Improved	Thalakkulam,	30
	July	Potter's Kiln and	Kanyakumari	
	2007	Value addition in	Dist	
		pottery product"		
2	9 Jan	Training Programme	MGIRI	30
	2008	on Biomass		
		Briquetting		
3	21 Jan	Training Programme	MGIRI	20
	2008	on Biomass		
		Briquetting		
4	30 Jan	Training Programme	MGIRI	15
	2008	on Biomass		
		Briquetting		
5	28 Feb	Training Programme	MGIRI	20
	2008	on Biomass		
		Briquetting		

6.5.5 Documentation

Improved versions of the following technical booklets were prepared

- a. An Improved pottery Kiln (English, Hindi & Marathi)
- b. Low Cost Gasifier System (English, Hindi & Marathi)
- c. Saw Dust Combuster (English, Hindi & Marathi)

7 Authorities of MGIRI: Details of Members

7.1 Members of the General Council

As per the letter no.-14(7)99 – KVI dt 20-3-2008 from the Ministry of MSME, the following is the list of members of the General Council (as in Annexure 12.2) who were functioning during the financial year under consideration.

The first General Council of MGIRI consists of following members:

- a) The Minister in charge of the Union Ministry of Agro and Rural Industries now Ministry of Micro, Small & Medium Enterprises (MSME), who shall be president of the Institute.
- b) The Chairman of the Khadi & Village Industries Commission (KVIC), shall be the Vice-President of the Institute.
- c) The Secretary in the Ministry of Agro and Rural Industries shall be the Vice-President of the Institute
- d) The Member (VSI) Planning Commission shall be the member of the institute.
- e) Following officials/their representatives of GOI shall be Ex-officio members of the Institute:
 - 1. Secretary in the Ministry of Science & Technology
 - 2. Secretary in the Ministry of Rural Development.
 - 3. Director General of CSIR, New Delhi.
 - 4. Director-General CAPART, New Delhi
- f) Following Representatives of specialized institutions/agencies:-
 - 1. Director General of ICAR, New Delhi.
 - 2. Director, NID, Ahmedabad.
 - 3. Managing Director, NRDC, New Delhi
 - 4. Director of an Indian Institute of management Ahmedabad.
 - 5. Director of IIT Delhi
- g) Chief Executive officer of KVIC, Mumbai.
- h) Two Technical Members of KVIC, Mumbai
 - 1. Prof. P.L. Dhar Expert Member (S&T), KVIC
 - 2. Dr. Damodar Acharya Expert Member (Technical Education and Training), KVIC.
- i) Five prominent persons/Scientists/Rural Industrialization Experts
 - 1. Vice-Chancellor, Gandhigram Rural University, Gandhigram.
 - 2. Director, Central Food Technological Research institute, Mysore.
 - 3. Director, National Institute of Fashion Technology, Chennai.

- 4. Dr. R.B.Chavan, Ex. Faculty, Indian Institute of Technology (IIT) New Delhi.
- 5. Dr. Deepak Tyagi, Part time Member, Central Zone, KVIC.
- j) Five representatives of voluntary organizations/ associations/ institutions
 - 1. Shri Devendrabhai Desai, Secretary, Saurashtra Rachnathmak Samiti, Rajkot.
 - 2. Director, Kumarappa National Handmade Paper Institute, Jaipur.
 - 3. Shri Hargovindbhai Patel, Secretary, Udyog Bharati, Gondal.
 - 4. Director, Central Bee Research and Training Institute, Pune.
 - 5. Dr. Vibha Gupta, Magan Sangrahalaya, Wardha.
- k) Five representatives of the State Government from the related departments/Boards on consideration of NER/Geographical representation.
 - 1. Chief Executive Officer, KVIB, J&K.
 - 2. Chief Executive Officer, KVIB, Lucknow (U.P.)
 - 3. Chief Executive Officer, KVIB, Tamil Nadu.
 - 4. Chief Executive Officer, KVIB, Gujrat
 - 5. Chief Executive Officer, KVIB, Assam

7.2 Members of the Executive Council

Resolution related to Agenda no. 5 of the 3rd meeting of the General Council on 18-12-2007 arrived at the following structure for the Executive Council:

1. Secretary, Ministry of MSME, Govt of India	Chairman
2. Jt. Secretary, Ministry of MSME	Member
3. Chief Executive Officer, KVIC	Member
4. One Expert member of KVIC to	
be nominated by the President	Member

5. Representative of MGIRI advisory Core

Group to be nominated by the President Member 6. Director (S&T) KVIC Member

7. Director MGIRI Member Secretary

It was further resolved to authorize the President of MGIRI to nominate additional members as per the by laws of MGIRI.

Note: Items 2, 5, 6 could become operative only when the MOA is amended to include them.

8. Details of technologies transferred to the Rural Industrial Sector and their impact

8. 1 Khadi and Textile Section

8.1.1 Soft & Stiff Finish Technology.

This technology was transferred to Shree Kshretriya Gandhi Ashram, Barabanki, U.P.

Impact: After setting up of this technology at Barabanki, It has become the Common Facility Centre for more than 20 Khadi Institutions that are in the neighbourhood. During the financial year 2007-08 this centre recorded an annual turnover of Rs. 12 lakhs.

8.1.2 Quality Assurance.

The book 'Quality Assurance Manual for Khadi' brought out by MGIRI has been accepted by the KVIC and copies of it made available in all the Khadi centres.

Impact: Selected Khadi Institutions (about 20 in number) are using these quality norms for their routine production.

8.1.3 Commercial Models of Mercerisation and Hank Dying Machines:

The idea of coming up with a scaled down version of the above machines was appreciated by the KVIC and their MDTC at Dahanu was given the responsibility of making commercial version of Mercerising and Hank Dyeing machines.

8.2 Bio-processing and Herbal Section

8.2. 1 Food & Herbal Products

Members of various SHGs of Wardha working under Magan Sangrahalaya Samiti, Wardha were provided training on preparation techniques of the products like Mehendi (hair dye), Massage oil for joint and muscular pains, hair oils and value added products of Tamarind for the dissemination and entrepreneurship development.

Impact:

The above Food and Herbal products are manufactured by the SHGs of Selu Taluk and these products are a commercial success.

Panchagavya Products and creation of entrepreneurship in four states.

The bio-processing unit has evolved the following items:

- Phenyle
- After shave lotion.
- Hair oil
- Red Danta Manjan
- Mosquito Repellent Coil
- Utensil cleaner powder

It has also improved items like Keshnikhar, Face Pack, Dhoop Bathi, Black Danta Manjan.

Out of 14 enterprise groups guided on the above six have attempted commercial production: 3 in Gujarat, 2 in Maharashtra and 1 in Rajasthan.

8.3 Chemical Industries Section

Soap & Detergent Testing Kit

For the dissemination of Quality Testing Kit four training programmes on Soap & Detergent Testing Kit were organised for MDTCs, KVIC registered soap manufacturers and Jharkhand Handmade Soap Manufacturers' Association, Ranchi.

Impact: The KVIC has identified the above kit as a vital input for enabling small industries to manage their quality. As a first phase action the KVIC has sanctioned funds for equipping 16 entrepreneurs with the kit along with training.

8.4. Rural Craft & Engineering. Section

8.4.1. Development of Variable speed potter's wheel

The above innovation which uses a tyre (used or new) and increases production 1.5 to 2 times.

The KVIC has identified this technology for intensive dissemination and has instructed its MDTC at Dahanu to manufacture it. It has also taken steps to train its officers in the use and maintenance of the above item.

The following private agencies have also been identified for manufacturing the item:

- GN Multi Disciplinary Training Center,
- M/S Anand Engineering Works
- M/S. Wireless Amateurs,

8.4.2 Contemporary designs of value-added terracotta Products

Village artisans have been trained under the above scheme to create products meeting the current needs of consumers while adding value to the product through artistic rendering. While doing so their traditional art forms are also improvised. This unit has also diversified into terracotta jewellery and this has been branded through the efforts of DRDA Wardha and has been identified by the DRDA as a potential employment generating activity. A GOI project of Rs 1 crore is ready for implementation in the campus of MGIRI through the collaboration of DRDA if proper permissions are granted by the Ministry of MSME/KVIC

8.5. Energy & Infrastructure Section

8.5.1. Energy Efficient pottery Kiln

The Energy efficient pottery kiln evolved at MGIRI has potential of saving fuel upto 30 %. Field trials in select NGOs have also confirmed this. The KVIC has identified this for intensive

dissemination and has already organised a few training workshops and MDTC based demonstrations.

8.5.2. 100% Biogas engine

The Duel fuel engine (Diesel & biogas) has been converted into 100% biogas based engine by use of a kit. This technology developed by IIT Delhi through the MGIRI project is being delivered to the needy groups by two technology groups engaged by the core group at IIT Delhi.

9. Members of Core Group and associated faculty from IITD

The following were the members of the MGIRI Core Group at IIT Delhi

1. Prof V Seshadri, Professor of Applied Mechanics	Chairman
2. Prof P L Dhar, Professor of Mechanical Engineering	Advisor
3. Prof R R Gaur, Professor of Mechanical Engineering	Member
4. Prof Rajendra Prasad, Professor of CRDT	Member
5. Professor L K Das, Professor of IDDC	Member
6. Dr V K Vijay, Associate Professor of CRDT	Coordinator

Other than the above, the following faculty members of IIT Delhi were interacting with various activities of MGIRI during the year 2007-08

- 1. Dr Satyawati Sharma, Associate Professor of CRDT
- 2. Dr Anushree Malik, Assistant Professor of CRDT
- 3. Dr S N Naik, Associate Professor of CRDT
- 4. Dr Sangeeta Kohli, Associate Professor of Mechanical Engineering
- 5. Dr M R Ravi, Associate Professor of Mechanical Engineering
- 6. Dr PM V Subbarao, Associate Professor of Mechanical Engineering
- 7. Dr Naresh Bhatnagar, Associate Professor of Mechanical Engineering
- 8. Dr R Chattopadhyaya, Professor of Textile Technology
- 9. Dr Apurba Das, Professor of Textile Technology

10. Financial Statements for the Year 2007-08

sudified under sub-section (2) of section 33 & 34 and rule 19 of the Sombay Public Trusts Act.

Registration No.: F-26353 [Mumbel]

Name of the Public Trust: MAHATMA GANDRI INSTITUTE FOR RURAL INDUSTRIALISATION: WARDRA.

For the year ending : 318T MARCH 2008.

000	Whether accounts are maintained orgalarly and in accordance with the provisions of the Act and the rules;	YES.
56	Whether receipts and disbursements are properly and correctly shown in the accreates:	YES.
RF.	Whether the cash balance and woochers in the custody of the manager or troatee on the date of social were in agreement with the accounts;	YES.
(4)	Whether all books, deeds, accounts, vouchers or other documents or records required by the auditor were produced before him;	YIES.
(r)	Whether a register of movable and immovable properties is properly maintained, the charges therein are communicated from time to time to the regional office, and the defects and inaccuraties mentioned in the previous audit report have been duly complied with;	NO SUCH ASSETS HENCE NO APPLICABLE.
n	Whether the manager or trustee or any other person required by the auditor to appear before him did so and furnished the necessary information required by him;	YES.
J.	Whether any property or funds of the Trust were applied for any object or purpose other than the object or purpose of the Trust;	NO.
eu.	The amounts of outstandings for more than one year and the amounts written off; if any,	POL
B	Whether tenders were invited for repairs or construction involving expenditure exceeding Rs. 5,000/-	NO SUCIA WORK RENCE NOT APPLICABLE.
60	Whether any money of the public trust has been invested contrary to the provisions of Section 35:	NO.
00	Alienations, if any, of the immovable property contrary to the provisions of Section 36 which have come to the notice of the auditor;	NIL
Ø)	All cases of irregular, illegal or improper expenditure, or failure or omission to recover monies or other property belonging to the public trust or of loss or wante of money or other property thereof, and whether such expenditure, failure, omission, loss or wante was caused in consequence of herach of trust or misapplication or any other misconduct on the part of the trustees or any other person while in the management of the trust;	NO SUCH EXPENDITURE
14	Whether the budget has been filed in the form provided by rule 16A;	NO.
-00	Whether the maximum and minimum number of the trustees is maintained;	YES.
646	Whether the meetings are held regularly as provided in such instrument;	YES, One Meeting held to Executive and General Council.
66	Whether the minute books of the proceedings of the meeting is maintained;	YES
600	Whether any of the trustees has any interest in the inventment of the trust;	NO.
60	Whether any of the trustees is a debtor or creditor of the trust;	50.
100	Whether the irregularities pointed out by the auditors in the accounts of the previous year have been duly complied with by the trustees during the period of audit:	NOT APPLICABLE.
80	Any special matter, which the auditor may think fit or necessary to bring to the notice of the Deputy or Assistant Charity Commissioner.	NIL.

March, 2009 (3 - 1)



PRAJENDRA BRUTADA - PROP.) Membership No.43283

Statement of income liable to contribution for the year ending 31ST MARCH, 2008.

Name of Public Trunt: MARATHA GARDER INSTITUTE FOR SURAL INDUSTRIALISATION: WARDER.

Registered No.: F-4230 [W].

	Ra. P.	Ra.	P.,
t. Income as shown in the Income and Expenditure Account		1137	730.00
It leaves not chargeable to contribution under section 58 and rule 32	100		
III Donations received from other Public Trusts and Dharmadas.			
(ii) Grants received from Government and Local authorities.	113,730.00		
500 Interest on Sinking or Depreciation Fund.	100		
(iv) Assessed speed for the purpose of socialer education.			
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Cartified that while claiming deductions admissiable under the above Schedule, the Trust has not claimed any amount twice, either wholly or partly, against any of the items mentioned in the Schedule which have the effect of double - deduction.

WARDMA

Trust Address :

MOJRI PREMISES RAMNAGAR ROAD WARDHA Dated: Wardha, the 26th day of March, 2009 (3 * 1)

Detect

FOR RAJENDRA BHUTADA & CO.
CHARTERED ACCOUNTANTS

[RAJENDRA BHUTADA - PROP.] Membership No. 43283

Anadittor

Trustee

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