CHAPTER XIII

TEXTILE RESEARCH ASSOCIATIONS

1. COTTON TEXTILE RESEARCH ASSOCIATIONS:

Following four Textile Research Associations (TRAs) are registered under the Societies Registration Act, 1860 (XXI of 1860), which come under the umbrella of Cotton Textile Research Association:

(i) Ahmedabad Textile Industry's Research Association (ATIRA),

(ii) Bombay Textile Research Association (BTRA),

(iii) South India Textile Research Association (SITRA),

(iv) Northern India Textile Research Association (NITRA).

The main objective of these institutions is to carry out research and render consultancy services to the textile industry on various aspects of textile technology with a view to reducing the cost and improving the quality and durability of fabrics, reducing pollution, conserving energy and utilising waste, adopting new technology and improving the technology in the decentralised handloom sector. A large number of projects of considerable importance was undertaken and the studies made by these Associations have helped to improve the efficiency and productivity of the textile Industry.

The Research Associations have carried out original and innovative work in several fields of Textiles. In addition to result oriented, short-term projects in the field of management in the Textile Industry, the Research Associations are also currently engaged in other specific projects such as (i) Increasing elongation of yarns spun from Indian Cottons (ii) Development of Synthetic thickener for printing textile with reactive dyes (iii) Development of Auto bale plucker (iv) Improving of existing hank sizing process at decentralised powerloom sector to upgrade quality and fabric realization of value added yarn dyed sorts (v) Development of energy efficient twisting system of two-for-one-twisters.

Dr. M.M. Gharia, Director, ATIRA, Ms. Indra Doraiswamy, Director, SITRA, Shri Arvind Narottam Lalbhai, Chairman, Council of Administration, Shri Kashiram Rana, Minister for Textiles, Govt. of India, Shri B.C. Khatua, Textile Commissioner, Govt. of India, Dr. A.N. Desai, Director, BTRA and Dr. J.V. Rao, Director, NITRA at 42nd Joint Technical Conference.
(vi) Disposal or processing of textile sludge
(vii) Integrating organisational information to meet out international business environment for the textile mills in next millenium (viii) Development of UV resistant fabrics etc. Besides, useful R&D work is also being done on jute diversified products with Government of India-UNDP Funds.

2. SYNTHETIC & ART SILK MILLS’ RESEARCH ASSOCIATION:

The Synthetic & Art Silk Mills’ Research Association (SASMIRA), Mumbai is a Textile Research Association located at Mumbai. SASMIRA’s principle activities include research and development, provision of technical services, testing and training facilities in the field of art and art silk.

During the current year SASMIRA has completed 5 projects out of 14 projects sponsored by the Ministry of Textiles. Besides this, SASMIRA has also been engaged in the projects sponsored by Department of Science & Technology and of Ministry of Defence. Some of the Projects sponsored by Ministry of Textiles are given below:

(i) Development of software to evaluate output form the yarn evenness tester for assessing the magnitude of evenness fault analysis and for pinpointing specific areas for corrective action.
(ii) Indigenisation of woven geogrid manufacturing technology.
(iii) Development of an indigenous airbag for automotive safety.
(iv) Developing scientific database and recipe prediction software for computer colour matching on polyester, viscose and the blend for proves houses in the decentralised sector.
(v) Producing dope-dyes polyester from recycled PET waste for use in automotive interior textiles.
(vi) Development of blue wool standard and grey scale standard for evaluation of fastness properties of Textiles.
(vii) Print paste re-utilisation scheme for the decentralised sector.
(viii) Development of technique for dyeing cum sizing in package form to facilitate production of stripped shirting in decentralised textile sector.
(ix) Designing high performance into polyester/viscose blended fibre fabrics.
(x) To develop standard depth and whiteness scales on textile substrates.

SASMIRA is giving excellent testing services to textile manufacturers, traders, exporters, Govt. Agencies, R&D institutes etc. in the field of man-made textiles, synthetic textiles and allied fields. Its reports are widely accepted and recognized in the industry. SASMIRA has been designated as a Nodal Agency for development of Technical Textiles. International Seminar of Technical Textiles was organised by SASMIRA, which was inaugurated be Secretary (Textiles). This seminar was the concluding event of the
celebration of Golden Jubilee of SASMIRA, which started last year. The prospect of technical textiles market in India is very significant because it may help the ailing textile industry in the country not only to survive, but also to revive and thrive.

SASMIRA has developed an instrument called Light Fastness Tester indigenously under a project sponsored by Department of Science & Technology. This instrument was imported so far. The indigenous version of the instrument is expected to be cost effective. SAMIRA has also developed various value-added products e.g. Fibre fills, Nonwoven blankets, Insulation batting for protective suits, Auto interior carpets, Floor carpets and Non woven Geotextiles from recycled PET (Poly Ethylene Terephthalate) Bottles under a project sponsored by Ministry of Textiles.

SASMIRA has been actively involved in Technology Upgradation Fund Scheme (TUFS). SASMIRA is helping powerlooms units to prepare bankable project proposals for modernisation under TUFS.

3. MAN-MADE TEXTILES RESEARCH ASSOCIATION:

The Man-Made Textile Research Association (MANTRA), Surat is a Textile Research Association registered under the Societies Act of Gujarat. MANTRA is one of the Textile Research Associations catering to multifarious needs of the textile and allied industry at large. The activities of MANTRA are primarily aimed at planned and healthy growth of the decentralised textile industry.

MANTRA has been undertaking the R&D assignments as per the needs of local synthetic textile industry and the stress is, particularly, more on the application and transfer of available research results to the local decentralised textile industry, which badly needs such inputs to withstand the global competition round the corner. Looking into the needs of industry, MANTRA has undertaken research projects on such areas as pollution control (including noise pollution) and on mechanical and wet processing. Some of the on-going projects are:

(i) Development of network synthetic filament yarns on false twist texturiser for value added fabrics.

(ii) To study the toxicity of various chemicals, finishing agents and auxillaries used in textile processing and bioassay study of different anti-bacterial finished fabrics.

(iii) Boi-technological applications in textiles for quality improvement and value addition.

(iv) Characterization of amine based and other acid and disperse dye intermediates by creating an impurity profile using GC/MS, AAS and HPTLC systems

(v) Development of economical thickener for printing synthetic fibre fabrics by replacing guar gum fully or partially with other alternatives.

(vi) Development of continuous synthetic
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sewing thread by air-jet texturing for domestic as well as export segment sector.

(vii) A study of the comfort properties of the woven fabrics produced in different weave constructions using yarns of different structural characteristics.

(viii) To develop eco-friendly substitute products for the dyeing and printing of synthetics fabrics and to reduce the pollution load of the effluent.

MANTRA has a Computer Aided Design Centre and three Powerlooms Service Centres at Dhokla, Sachin and Pandesra. The present activities of these units include training of weavers for quality fabric production, design development on loom, testing and technical service support for loom modernization activity etc. for local Weavers’ Co-operative

4. INDIAN JUTE INDUSTRIES RESEARCH ASSOCIATION (IJIRA), KOLKATA:

Indian Jute Industries Research Association (IJIRA), Kolkata, registered under West Bengal Societies Registration Act, 1961, is an autonomous Cooperative Research Organisation mainly funded by the Ministry of Textiles, Government of India. IJIRA is governed by a Council, headed by the Chairman, assisted by the Vice Chairman and consisting of 24 members in all, drawn from the Industry, Government, Eminent Professionals and others. The Director is appointed by the Council and is the Principal Executive Officer of the Association exercising general power of supervision and coordination over all activities of the Association and is assisted by the Secretary cum Financial Controller, Deputy Directors. There are nine technical divisions and each division is supervised by and held in charge of a head In charge/Group Leader.

The objectives of IJIRA are:

(i) To promote Research and other scientific work connected with the jute trade and industries allied with or accessory thereto;

(ii) To establish and maintain laboratories and foster education of persons engaged in or likely to be engaged in the said trade and industry.

(iii) To encourage discoveries and

(iv) To examine and publish information regarding the nature and merits of inventions, improvements, materials and designs connected with the said trades of industries.

At present IJIRA has 58 primary members and 39 associated members. It has acquired International reputation in the field of jute R&D and is making effective contributions for the benefit of jute industry. IJIRA has to its credit about 911 publications in national and International journals. IJIRA has made so far 105 Indian and 15 foreign patents. Four patents have been filed during 2000-01. IJIRA has earned 3 NRDC Awards so far.

Besides, various R&D projects approved by
Ministry of Textiles, Government of India, IJIRA has taken up projects recommended by IJMA and sponsored by different agencies like JMDC, UNDP-CCF I etc.

5. WOOL RESEARCH ASSOCIATION (WRA), THANES:

The Wool Research Association (WRA) was established and registered under the Societies Registration Act 1860 in October, 1963. A group of members representing various segments of the Woollen Industry came forward to establish the Research and Development Laboratory for the benefit of the Industry.

Wool Research Association at present is organised under the following five departments namely:

i) Quality Test House- ISO 9002 certified by BVQI and approved by UKAS Certification No. 81909 and well equipped with the equipments for testing of the physical properties from fibre to fabric

ii) Chemical Test House

iii) Textile Technology Department and Pilot Plant

iv) Computer Aided Textile Designing and Colour Research Laboratory

v) Eco-Testing Laboratory

It is engaged in various activities, necessary for the technological upgradation of the Indian Woollen Industry which includes research and development work, special training programme, educational activities, foreign delegations visits, workshops and paper presentation at international level.

**Sponsored Projects:**

**A. Schemes completed during 2000-01**

R&D work related to following project was completed before March, 2001:-

(i) Study of technical aspects of knitwears comprising wool, Acrylic and their blends.

(ii) Development of software for prediction of worsted yarn characteristics.

(iii) Development of Economic Friction Spun multi component yarn for high tech (Industrial Fabrics) Textiles.

(iv) Preparatory R&D work on Natural Dyes for implementation at the cottage level in the identified carpets belts of the country.

(v) Isolation & Identification of the most potent insecticides their from their group of isomers and use towards moth proofing.

(vi) Role of Enzymes in Wool Processing.

**B. Ongoing Schemes:-**

The following are the on-going projects under Wool Research Association:-

(i) Development of cotton core and wrapped woollen yarns on woollen spinning system and study its suitability for products like dress materials
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- furnishing and knitwears.
- Development of different types of knitwears, outwears, pullovers, knitted shaws from Repco Spun self twist yarn by using Wool and other fibres in suitable blends.
- Development of Innovative yarns and fabrics using elastomers (Lycra, Natural rubber, Nylon) blended with wool, cotton acrylic for designing comfortable and fashion oriented garments.
- Fabrication of the woollen carding machine of 40" width to process coarser Indian wool for cottage level.
- Improving aesthetic value of the worsted fabric by enzyme treatment.
- Derivatisation, Separation of banned amines isomers and their quantification using internal standard.
- Investigations of herbs belladonna, neem and custard apple seeds as an effective moth proofers.
- Quality management from raw material to yarn of wool and wool blends on worsted system.
- Implementing production of natural dyes at the cottage level in the identified wool carpet belts of the country and training artisans on how to produce and use them in dyeing of woollen yarn to desired properties.

C. Education and Training Activity:-

The transfer of R&D findings and the transfer of adopted technology to the various entrepreneurs and the related industry are covered under HRD programme/Training programme. The Association offers the training programme at WRA and its staff members/experts are normally deputed as visiting faculty in 'The Knitwear Design and Technology Programme' conducted by NIFT, Mumbai.

The WRA has started the special training courses as follows:-

1. Computer Aided Textile Designing (Part time/Full time)
2. Instrumental Chemical Analysis (Part time/Full time)
3. Textile Testing & Quality Control (Part time/Full time)