IMPORTANT RUNNING R & D PROJECT

SR NO	TITLE	SPONSOR	PROJECT COST (Rs. in lacs)	YEAR	STATUS	ACHIEVEMENTS IN BRIEF
1	To develop ecological friendly moth repellent and moth proofing agents for woollen textiles for easy care	CWDB	24.20	2008-09	Running	Synthesis of intermediates and toxic components have been synthesized. Effictiveness is under assessment.

IMPORTANT R & D PROJECTS COMPLETED DURING LAST 10 YEARS

SR NO	TITLE	SPONSOR	PROJECT COST (Rs. in lacs)	YEAR	STATUS	ACHIEVEMENTS IN BRIEF
1	To improve processing performance of finer Indian wools and their product range with incorporation of Enzyme technology for better value addition	MOT	20.64	2007-2009	Completed	Enzyme oriented scouring of raw wool, carbonisation bleaching & dyeing & finishing trials have been done sucessfully at shop floor level. The report is under preparation.
2	To synthesise wool dyes with moth proofing properties	MOT	29.50	2007-2009	Completed	Dyes have been synthesised for assessing moth proof acitvity The report is under preparation.
3	Setting up of process line for decentralised sector for wool/erisilk blend	MOT	57.81	2006-2008	Completed	For the first time, spinning of eri silk/ wool blended yarn and various value added products were developed in the country. A range of spinning machineries were developed, designed, fabricated and installed at WRA. A new avenue for utilisation of indigenous wild eri silk was opened. The silk producers to make high priced products like suitings, knitted garments, etc Negotiation for commercialisation is in progress with woollen suiting manufacturers
4	Optimisation of process parameters for wool /silk blends spinning	MOT	29.38	2006-2008	Completed	
5	Setting up of dyeing and finishing centre for shawls at Bhuttico in Kullu	CWDB	-	2004-2006	Dropped by CWDB	R & D inputs for Dyeing and finishing for shawls at Kullu was worked out for the benefit of the weaker section of local population. However, the project was dropped by CWDB
6	Indian cross breed fine wool from J&K for manufactuing shawls and lohies.	KVIC	2.50	2004-2006	Completed	Spinning of yearn for 100% J&K fine wool and blends with merino wool (24u & 64 AFW and fine cross breed wool of J & K (23.8u & 43 AFL) in the composition of 65:35 to make yarn count of 1/27 and 2/27 for shawls and blends with good

						feel and lusture was achieved.

SR NO	TITLE	SPONSOR	PROJECT COST (Rs. in lacs)	YEAR	STATUS	ACHIEVEMENTS IN BRIEF
7	Enrichment of woollen fabrics with printing for economic benefit	MOT	14.58	2002-2004	Completed	Improvement of fastness properties and development of new printing methods could be achieved. Technology transferred to small units using vegetable dyes.
8	Quantative and qualitative estimation of speciality fibres with wool	MOT	7.80	2002-2005	Completed	Blends with wool, pashmina, cashmere, etc were difficult to determine. Methods have been stipulated as a result of this project.
9	Enrichment of fabric by using tie & dye techniques	MOT	8.13	2002-2005	Completed	R&D work led to new significance to shawls, scarves, dress materials, home furnishings, etc in national and international market.
10	Investigation of herbs, belladona, need and custard apple seeds as effective moth proofing	MOT	29.00	2001-2003	Completed	Extracts from neem, Belladona & Custard applie was applied on woollen fabric with various proportion and evaluated against moth attack. However, the efficacy was poor and impregnation was temporary.
11	Derivation, seperation of banned amines isomers and their qualification using internal standard.	MOT	14.70	2001-2003	Completed	Developed chromatographic separation of a aromatic amine isomers prohibited under German Ban on carcogenic dyes. The R&D findings helped the laboratories for objective estimation.
12	To develop woollen carding machine of 40" width to process coarser Indian wool for cottage industry.	MOT	26.71	2001-2003	Completed	New types of shorter width woollen card for smaller spinners having limited requirements of production was specifically designed, fabricated and installed, integrated with hand spinners.
13	Dyeing of wool, Angora and Pashmina at low temperature	MOT	21.47	2001-2003	Completed	R&D findings helped dyeing of wool, Angora and Pashmina by after chrome method eco-friendly and at sub-boil temperature without increasing the dyeing duration and cost.

SR NO	TITLE	SPONSOR	PROJECT COST (Rs. in lacs)	YEAR	STATUS	ACHIEVEMENTS IN BRIEF
14	To develop cotton core and wrapped woollen yarns on woollen spinning system and to study its suitability for products like dress material, furnishing and knitwear	MOT	18.16	2001-2003	Completed	It was possible to develop fine woollen yarns out of woollen noils, short fine wool and wool rich synthetic waste blends. Technology of combining cotton and woollen system was developed to produce strong and fine yarn from waste fibres Various products were also developed.
15	Development of innovative yarns and fabrics from elastomers (lycra, natural rubber, nylon) blended with wool, cotton, acrylic for designing comfortable & fashion oriented garments	MOT	26.94	2001-2003	Completed	Use of innovative process and new technologies in spinning, weaving, knitting were developed to design fashion oriented elastomeric comfortable garments. Unique combination of homo and hetero elastomeric yarn were developed for weaving and knitting.
16	Grading of Pashmina wool	MOT	10.00	2001-2003	Completed	The projects benefited the shepherd community of Ladakh region to uplift their earnings by having a better value added diversified product and quality yarn. Study of dehairing process for the maximum percentage of guard hairs removed from pashmina with minimum damage to individual fibres helped, as a precursor to UNDP main Project.
17	Study of scouring, adapting various methods, dehairing and carding till top conversion of pashmina wool	MOT		2001-2003	Completed	
18	Better waste utilisation of Pashmina wool guard hair fibres.	MOT		2001-2003	Completed	
19	To improve aesthetic value of worsted fabric by enzyme treatment.	MOT	15.25	2001-2003	Completed	The project involved study and optimisation of different types of enzymes to ensure desired properties like pilling, shrinkage, feel and handle. Besides treatment conditions like pH, temp., concentration, pre-treatment, etc were optimised predict performance of garments
20	Development of different types of knitwears, outerweards, pullovers, knitted shawls from Repco spun self twist yarn by using wool and other fibres in suitable blends.	MOT	25.19	2001-2003	Completed	Using a new yarn making technique, self twist yarn, high bulk acrylic yarn, self twist yarns with different types of continuous filaments, ST wrapped core spun yarn on Repco Spinning m/c by using different types of wooll and blended with synthetic fibres were developed. Member mills used the technology. Various products were developed.

SR NO	TITLE	SPONSOR	PROJECT COST (Rs. in lacs)	YEAR	STATUS	ACHIEVEMENTS IN BRIEF
21	To implement production of natural dyes at in the identified wool carpet belts and to train artisans on how to produce and use them in dyeing of woollens	MOT	39.40	2000-2002	Completed	R&D assignment led to develop modules for extraction of colouring material for dyeing of carpet wool with natural dyes at laboratory stage and then it was implemented through bulk trial and training programmes to shopfloor levels in different carpet belts of the country. 24 organi-sations at Jaipur, Khamaria, Bhadohi, etc were benefited by WRA's R&D findings on natural dyes. Extensive training was imparted to decentralised carpet units in the country.
22	Study of technical aspects of knitwears comprising of wool and acrylic and their blends	MOT	9.12	2000-2002	Completed	The project led to maintaing a data base of various knitting yarn comprising of wool, acrylic and blends for the benefit of knitwear manufacturers and also for knitwear yarn manufacturers as there was no such data bank was available earlier.
23	To develop software for prediction of worsted yarn characteristics	MOT	9.72	2000-2002	Completed	The R&D findings led to correlation between various stage of raw wool, sliver /top and yarn and formulation of emperical equations for worsted yarn. It also gave prediction software to predict cost at greasy wool input/ output stages.
24	Development of economic Friction Spun multi-component yarn for high tech (industrial fabric) textiles	MOT	5.86	2000-2002	Completed	Using friction spinning large number of technical textiles were developed and few were adopted by the industry.
25	Vegetable dyes development & application	UNDP		2000-2002	Completed	WRA had developed various vegetable dyes and had Extension Programme of UNDP 98 for carpet on natural dyes at Bhadohi and Jaipur.
26	Effective utilisation of Angora Rabbit wool in suitable blend composition with fine sheep wool, silk, acrylic, etc through appropriate spinning stages for various products	UNDP	18.65	1999-2001	Completed	WRA designed and developed a modified card suitable for Angora fibre which had helped mainly to the decentralised sector and hand spinners at Himachal Pradesh for better yield in terms of quality yarn. NID had adopted this card for increasing spinning efficiency of Angora fibre.

CONSULTANCY GIVEN DURING LAST 10 YEARS

SR NO	TITLE	SPONSOR	YEAR	STATUS	ACHIEVEMENTS IN BRIEF
1	Technical Evaluation of BIC Mills i) Kanpur ii) Egerton Units		2009-10		Report submitted
2	Feasibility study of revival of woollen industry in J & K		2009-10		Feasibility findings submitted
3	Feasibility study for revival of carding process in the Hilly areas of Himachal Pradesh under KVIC		2009-10		Feasibility findings submitted
4	Creation of mechanised processing at Ranebennur for Decanni wool	KSWDC	2008-2010	Under implemen-tation	WRA provided the R&D support relating to making blends from Decanni wool to upgrade its utilisation into furnishing fabrics and better kambals and lohies. This exercise was meant to complement the establishment of KSWDC mechanical processing facilities at Rannebennur to convert Deccani wools into yarn. WRA also provided R&D inputs and consultancy to set up wool scouring facilities at Ranebennur for processing 1000 kgs raw wool per day. As a result utilisation of cheap Decanni wool for value added products could be possible.
5	R & D Consultancy for CFCs of CWDB	CWDB	till today 2009-10	Running	WRA provided technical and R&D support to set up the CFC's at follwowing centres :- 1. Shikhar KL & HC Weavers Welfare Soc., Kullu 2. H.P. State Coop Wool & Mktg. Fed., Shimla 3. Mahadev Woollen Mills, Mandi 4. Monika Handlook Workshop Coop Soc., Ludhiana 5. Bhawani Wool Tex Pvt. Ltd., Bikaner 6. Bikaner Vishudh Khadi G. Sangthan, Bikaner 7. Mahila Mandal Barmar Agora, Barmer.
6	To develop and set up scouring plant for Pashima at Leh.	UNDP	2003-2005	Completed	The scouring plant designed by WRA is running in full swing benefitting the local pashmina growers.
7	Dyeing of Nz wool yarn with Natural Dyes Grentex		2002-03		The required consultancy provided.
8	J & K Sheep and Wool Board To set up Mini scouring plant in		2002		Consultancy given

	Jammu				
SR NO	**TITLE**	**SPONSOR**	**YEAR**	**STATUS**	**ACHIEVEMENTS IN BRIEF**
9	Consultancy to Sidharth colourchem to improve Dyeing and Dyeing method for new series of creative Dyes		2003-04		Consultancy provided
10	Training consultancy to Artisans from Sikkim , Ladakh, Uttaranchal, Arunchal Pradesh, Kullu, Himachal Pradesh on Natural dyes at APCTT Head quarters, New Delhi		2003-04		Training on Natutal Dyeing is provided.
11	Advance Biochemicals Ltd. Consultancy on Enzymatic scouring and raw wool, deguming & cotton scouring		2004		Required consultancy provided.
12	Consultancy on techno-economic feasibility to set up facilities for carpet manufacturers from Gujarat Mills submitted to Gusheel Ahmedabad		2008-09		Report submitted
13	Concurrent evaluation of the on-going schemes of CWDB IWIDP programme and SWIS programme		2009-10		Detailed report is submitted.
14	Techno-economic feasibility report Jay-Sharda Badhoi on carpet yarn manufactuers		2007-08		Report submitted
15	J & K Sheep & Sheep Product development Board for establishment of Industrial service centre at Navshera, Srinagar (2006-07) Butty weaver co-op.Soc. , Kullu for setting up dyeing & finishing facility		2006-07		Feasibility Report was submitted
16	Feasibility consultancy to BIC, Kanpur for its two units 1) Kanpur 2) Egerton Woollen Mills, Dhariwal		2004-05		Report submitted
17	Sidharth colorchem for metal free reactive dyes on wool Mini scouring facilities for wool in different areas Rajasthan, Jaipur & H.P., J.K. Enzymatic Degumming of Natural Silk		2003-04 2003-04 2003-04		Required consultancy on improvement of shades for new series of Reactive Dyes. Consultancy provided for setting up Mini Scouring Facility.

SR NO	TITLE	SPONSOR	YEAR	STATUS	ACHIEVEMENTS IN BRIEF
18	Maharashtra Mendhi & Sheli Vikas Maha-Mandal for developing 4 -6 Nm count yarn for Deccani wool.		2002-03		Consultancy provided
19	Consultancy to Hindustan Composites. Karnavati Wire links Ltd., Ahmedabad & Jai Syntex Ltd. for technical textiles		2002-03		Required consultancy given
20	Consultancy to Rama Mahila Lokar Prakria Sangh for Techno Economic feasibility for worsted yarn manufacture		2000-01		Techno Economic feasibility report submitted.
21	consultancy to Modern Apparel , Mumbai for developing light weight & fire resistant fabric		2000-01		Required consultancy given
22	Consultancy to Britomatic& Zenith LTd. for developing cotton filter cartridges using Dref yarn				Required consultancy given