

VILLGRO INNOVATIONS FOUNDATION

Licensing of Agricultural Technologies in India

January 2011

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ABOUT VILLGRO

Villgro Innovations Foundation began operations in 2001 with the dreams of creating a prosperous rural India. Villgro is a not for profit company empowering rural development by identifying and incubating innovative products and service ideas that can be translated into market based social enterprise models that benefit the rural poor and contribute to sustainable wealth creation. In efforts to impact rural life, Villgro actively promotes social entrepreneurship and works with different stakeholders to create and support an eco-system that empowers social entrepreneurship.

Once a model is established a virtuous cycle sets in naturally, encouraging further innovation and wealth creation in rural areas. As a social business incubator, Villgro impacts all aspects of this cycle – innovation, rural enterprise, rural users and wealth creation - by means of seed funding, mentoring, providing talent, recognition among others.

Since inception in 2001, Villgro has impacted 3.6 lakh rural lives and has identified more than 2000 innovators.

FOREWORD

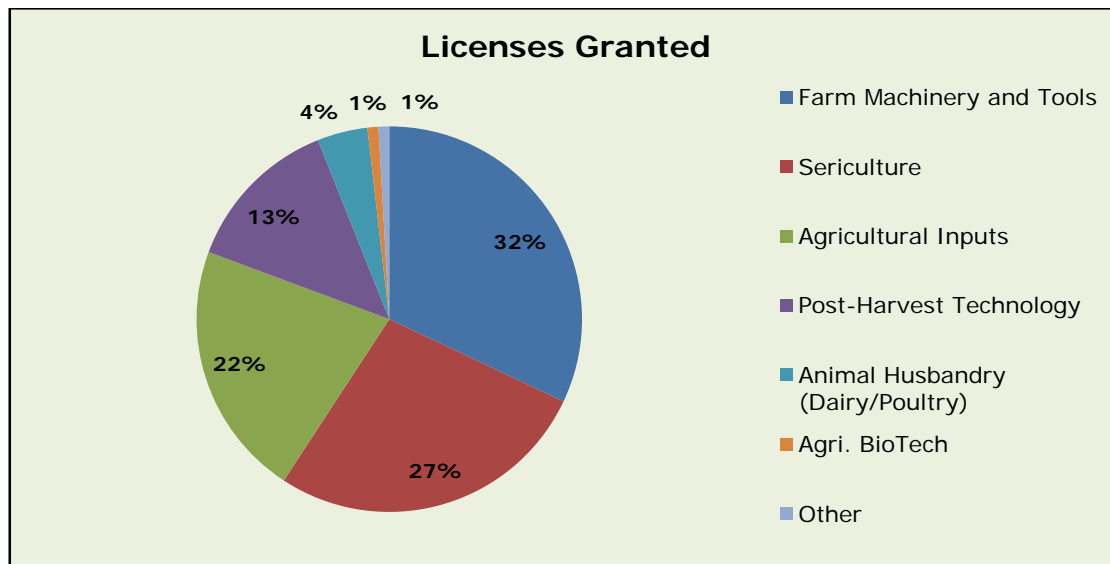
Villgro Innovations Foundation has recognized that gaining access to comprehensive data on technology transfer and licensing deals in the Indian agriculture sector remains a challenge.

In the summer of 2010, we contacted agricultural research institutes across India in a bid to gather information about licensing deals transacted over the past ten years. After a dialogue had been established via phone, e-mail and personal meetings, respondents were provided with an Excel questionnaire. 19 institutes participated and provided valuable data on technologies licensed out over the past five to ten years.

Villgro would like to thank all the participants for their willingness to share information and make this sector more transparent. We hope that by publishing this report we aid in the facilitation of future technology transfers and licensing deals and consequently a greater proliferation of agricultural technologies across India.

Sector Overview: Technologies Licensed Out and Licenses Granted

Technology Sector	Licenses	Technologies	Licenses/ Technology
Farm Machinery and Tools	106	67	1.6
Sericulture	90	42	2.1
Agricultural Inputs	71	24	3.0
Post-Harvest Technology	44	35	1.3
Animal Husbandry (Dairy/Poultry)	14	12	1.2
Agri. BioTech	3	3	1.0
Other	3	3	1.0
Total	331	186	1.8



Research Institutes: No. of Technologies Held and Licenses Granted

Licensor Institute	Licenses	Tech's	Primary Technology Sector
CIAE, BHOPAL	62	42	Farm Machinery & Tools (40)
CSTRI, BANGALORE	41	6	Sericulture (41)
CRIDA, HYDERABAD	38	13	Farm Machinery & Tools (32)
IARI, NEW DELHI	31	11	Agricultural Inputs (28)
IICT, HYDERABAD	31	6	Agricultural Inputs (31)
CSRTI, MYSORE	23	19	Sericulture (23)
UAS, BANGALORE	22	22	Farm Machinery & Tools (22)
CIPHET, LUDHIANA	16	15	Post-Harvest Technology (11)
NDRI, KARNAL	14	12	Animal Husbandry (Dairy/Poultry) (14)
KSSRDI, BANGALORE	11	11	Sericulture (11)
CSRTI, BERHAMPORE	9	2	Sericulture (9)
ICRISAT, HYDERABAD	8	8	Agricultural Inputs (6)
NCIPM, NEW DELHI	5	5	Farm Machinery & Tools (4)
APSSRDI, HINDIPUR	4	2	Sericulture (4)
FITT, NEW DELHI	4	4	Other (3), Farm Machinery & Tools (1)
IIHR, BANGALORE	4	2	Farm Machinery & Tools (3)
NLC, NEYVELI	3	1	Agricultural Inputs (3)
TNAU, COIMBATORE	3	3	Post-Harvest Technology (3)
SSTL, KODATHI	2	2	Sericulture (2)
Total	331	186	

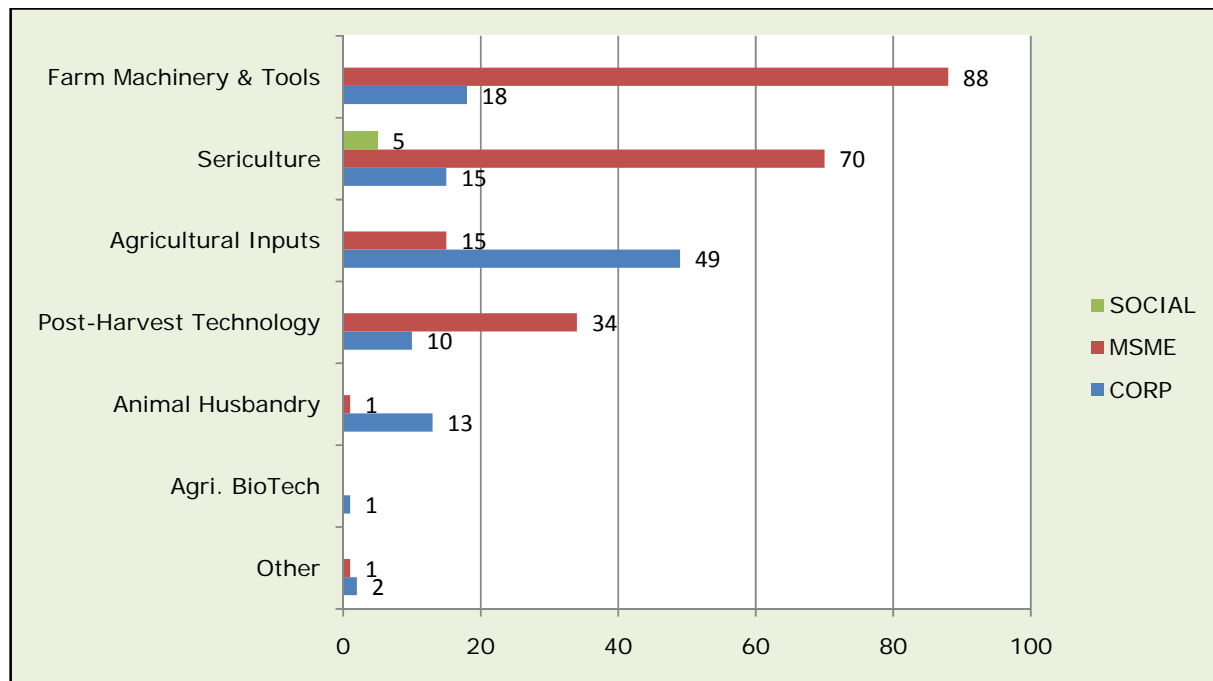
Top 10 Technologies by Number of Licenses Granted

	Technology	Sector	Licensing Institute	First Licensed	No. of Licenses
1	PUSA RH-10(RICE VARIETY)	Agricultural Inputs	IARI, NEW DELHI	2008	18
2	MOTORIZED PEDAL OP. SPINNING MACHINE	Sericulture	CSTRI, BANGALORE	2004	16
3	REELING CUM TWISTING MACHINE	Sericulture	CSTRI, BANGALORE	2004	15
4	MONOCROTOPHOS	Agricultural Inputs	IICT, HYDERABAD	1992	11
5	CHLORPHYRIPHOS	Agricultural Inputs	IICT, HYDERABAD	1996	9
7	4 ROW PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2002	8
7	6 ROW PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2002	8
9	9 ROW PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2003	7
9	IMPROVED HANDLOOM	Sericulture	CSTRI, BANGALORE	2003	7
10	LABEX	Sericulture	CSRTI, BERHAMPORE	2005	5
10	SICKLE MANUFACTURING TECHNOLOGY	Farm Machinery & Tools	CIAE, BHOPAL	2008	5

Top 10 Licensee Enterprises by Number of Licenses

	Licensee Organization	Type	Primary Technology Sector	Licenses
1	M/s DOLAR ENGG., INDUSTRIES PVT LTD	MSME	Farm Machinery & Tools (22)	22
2	VENKATESHWARA AGRO INDUSTRIES	MSME	Post-Harvest Technology (13)	14
3	M/s AJAY INDUSTRIES, AMARAVATI	MSME	Farm Machinery & Tools (8)	10
5	M/s SAPTHAGIRI ENTERPRISES	MSME	Farm Machinery & Tools (8)	8
5	RAJ ENTERPRISES	MSME	Sericulture (8)	8
6	M/s DK AGRICULTURAL INDUSTRY	MSME	Farm Machinery & Tools (5)	7
8	M/s SURAKSHA BIO-CHEM	SOCIAL	Sericulture (5)	5
8	RESCHOLAR EQUIPMENTS	CORP	Farm Machinery & Tools (4)	5
10	BECTORS FOOD SPECIALITIES LTD	CORP	Post-Harvest Technology (4)	4
10	M/s PARU ENGG. INDUSTRIES	CORP	Farm Machinery & Tools (3)	4
10	M/s ROHIT STEEL WORKS	MSME	Farm Machinery & Tools (3)	4
10	RATNA INDUSTRIAL WORKS	MSME	Sericulture (4)	4

Sector Overview by Licensee Classification and Number of Licenses



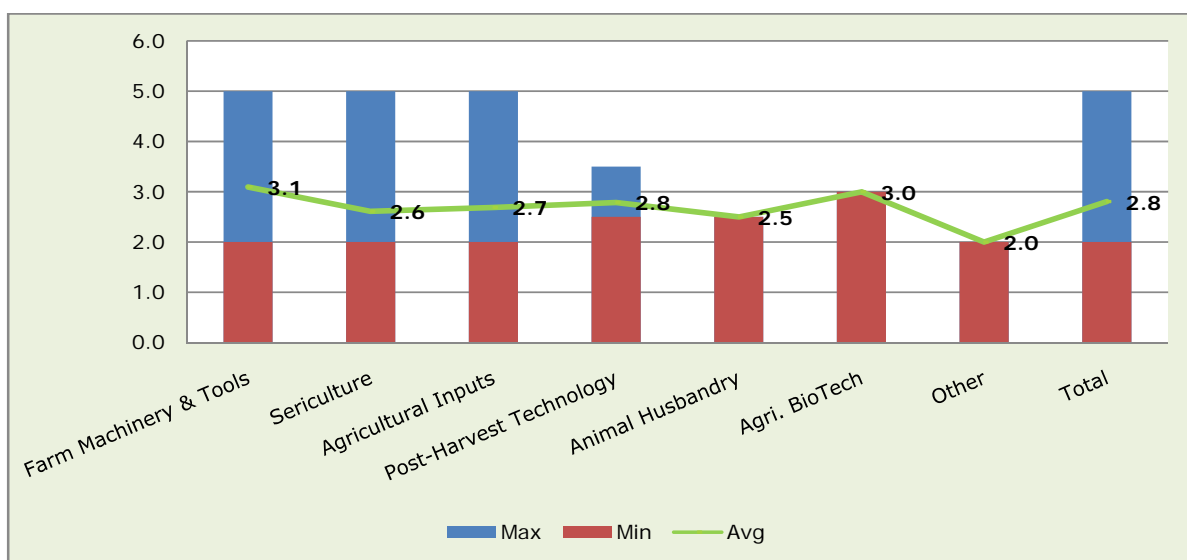
Intellectual Property Status of Licenses Granted

Technology Sector	No IPR	Patent Applied	Patent Granted	Know-How & Other	Total
Farm Machinery & Tools	69%	9%	1%	21%	100%
Sericulture	30%	57%	13%	--	100%
Agricultural Inputs	25%	41%	27%	7%	100%
Post-Harvest Technology	68%	25%	7%	--	100%
Animal Husbandry	--	100%	--	--	100%
Agri. BioTech	--	67%	33%	--	100%
Other	--	33%	67%	--	100%
Total	45%	36%	11%	8%	100%

Valuation Method Used by Licensor Institute

Technology Sector	Cost based	Cost & Market	Fixed amt.	Income based	Market based	Total
Farm Machinery & Tools	9%	21%	38%	30%	2%	100%
Sericulture	50%	50%	--	--	--	100%
Agricultural Inputs	48%	44%	--	--	8%	100%
Post-Harvest Technology	27%	--	57%	14%	2%	100%
Animal Husbandry	100%	--	--	--	--	100%
Agri. BioTech	100%	--	--	--	--	100%
Other	--	--	--	--	100%	100%
Total	36%	30%	20%	11%	4%	100%

Royalties (%) Charged by Technology Sector



Technology	Sector	Licensing Institute	First License	No. of Licenses	Total Upfront Payment	Max. Upfront Payment	License Period	Avg. Royalty (%)
CRY1FA1 GENE	Agri. BioTech	IARI, NEW DELHI	2007	1	2,00,000	2,00,000	5	3.0
NITRIFICATION INHIBITORS	Agri. BioTech	IARI, NEW DELHI	2007	1	2,50,000	2,50,000	5	3.0
TOMATO COAT PROTEIN GENE	Agri. BioTech	IARI, NEW DELHI	2007	1	6,00,000	6,00,000	5	3.0
BIO INSECTICIDES BASED ON MUSTARD EXTRACT	Agricultural Inputs	CIPHET, LUDHIANA	2005	1	85,000	85,000	5	3.0
CONSULTANCY ON OIL AND LECITHIN PRODUCTION	Agricultural Inputs	CIPHET, LUDHIANA	2006	1	3,50,000	3,50,000	5	3.0
RICE VARITIES(PUSA44,1121,PUSA BASMATI 1)	Agricultural Inputs	IARI, NEW DELHI	2005	3	7,50,000	2,50,000	5	3.0
AZADIRACTIN(EXTRACTION FROM NEEM SEED KERNEL)	Agricultural Inputs	IARI, NEW DELHI	2007	1	15,00,000	15,00,000	5	3.0
BIOPESTICIDE(NIMAGEL)	Agricultural Inputs	IARI, NEW DELHI	2007	1	2,00,000	2,00,000	5	3.0
BIOPESTICIDE(TRICHODERMA VIRESCENS)	Agricultural Inputs	IARI, NEW DELHI	2007	1	2,00,000	2,00,000	5	3.0
NOVEL HIGH ABSORBENT HYDROGEL	Agricultural Inputs	IARI, NEW DELHI	2007	1	2,50,000	2,50,000	5	3.0
PUSA RH-10(RICE VARIETY)	Agricultural Inputs	IARI, NEW DELHI	2008	18	54,00,000	3,00,000	5	3.0
WHEAT,MUSTARD,RICE VARIETIES	Agricultural Inputs	IARI, NEW DELHI	2008	2	5,00,000	2,50,000	5	3.0
PUSA 1460	Agricultural Inputs	IARI, NEW DELHI	2009	1	2,00,000	2,00,000	5	3.0
BIOFUEL FROM SWEAT SORGHUM	Agricultural Inputs	ICRISAT, HYDERABAD	2004	1	n/a	n/a	10	n/a
TRANSGENIC SEEDS	Agricultural Inputs	ICRISAT, HYDERABAD	2004	1	n/a	n/a	10	n/a
TRANSGENIC SEEDS THROUGH INTROGRESSION	Agricultural Inputs	ICRISAT, HYDERABAD	2004	1	n/a	n/a	10	n/a
COMMERCIALIZATION OF BIOPESTICIDES TECHNOLOGIES	Agricultural Inputs	ICRISAT, HYDERABAD	2005	1	n/a	n/a	10	n/a
COMMERCIALIZATION OF FERMENTOR TECHNOLOGY	Agricultural Inputs	ICRISAT, HYDERABAD	2005	1	n/a	n/a	10	n/a
MICRO NUTRIENS, BIOFERTILIZERS ETC.	Agricultural Inputs	ICRISAT, HYDERABAD	2008	1	n/a	n/a	10	n/a
MONOCROTOPHOS	Agricultural Inputs	IICT, HYDERABAD	1992	11	1,48,50,000	13,50,000	>10	2.0
CHLORPHYRIPHOS	Agricultural Inputs	IICT, HYDERABAD	1996	9	1,35,00,000	15,00,000	>10	2.0
ESFENVALERATE	Agricultural Inputs	IICT, HYDERABAD	2002	3	22,50,000	7,50,000	>10	2.0
BIO-PESTICIDE FORMUATION FROM NEEM	Agricultural Inputs	IICT, HYDERABAD	2005	4	16,00,000	4,00,000	>10	n/a
BIO-PESTICIDE FROM CUSTARD APPLE & PONGAMIA	Agricultural Inputs	IICT, HYDERABAD	2005	3	12,00,000	4,00,000	>10	n/a
LAMBDA CYHALOTHRIN	Agricultural Inputs	IICT, HYDERABAD	2005	1	25,00,000	25,00,000	>10	2.0
ARKA BANANA FOLIAR SPECIAL	Agricultural Inputs	IIHR, BANGALORE	2009	1	3,00,000	3,00,000	10	3.0
EXTRACTION OF POTASSIUM HUMATE FROM LIGNITE	Agricultural Inputs	NLC, NEYVELI	2008	3	15,00,000	5,00,000	10	5.0
LONG SHELF LIFE PANNER	Animal Husbandry	NDRI, KARNAL	2005	2	1,45,000	75,000	3	2.5
CALCIUM FORTIFICATION OF MILK	Animal Husbandry	NDRI, KARNAL	2006	1	25,000	25,000	3	2.5
HERBAL GHEE	Animal Husbandry	NDRI, KARNAL	2006	1	45,000	45,000	3	2.5
JALJIRA WHEY DRINK	Animal Husbandry	NDRI, KARNAL	2006	1	25,000	25,000	3	2.5
PANEER MAKING MACHINE	Animal Husbandry	NDRI, KARNAL	2006	1	75,000	75,000	3	2.5
RASGULL-BALL MAKING MACHINE	Animal Husbandry	NDRI, KARNAL	2006	1	75,000	75,000	3	2.5
WHEY TOMATO SOUP	Animal Husbandry	NDRI, KARNAL	2006	1	30,000	30,000	3	2.5

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ACIDO WHEY SOFT DRINK	Animal Husbandry	NDRI, KARNAL	2007	1	40,000	40,000	3	2.5
ANTIBIOTIC KIT	Animal Husbandry	NDRI, KARNAL	2008	1	40,000	40,000	3	2.5
KIT FOR DETECTION OF DETERGENT IN MILK	Animal Husbandry	NDRI, KARNAL	2008	1	30,000	30,000	3	2.5
LOW CHOLESTROL GHEE	Animal Husbandry	NDRI, KARNAL	2008	1	40,000	40,000	3	2.5
NESTICA PROBIOTIC DAHI	Animal Husbandry	NDRI, KARNAL	2009	2	90,000	45,000	3	2.5
ANIMAL DRAWN 3 ROW SEED CUM FERTILIZER DRILL	Farm Machinery & Tools	CIAE, BHOPAL	2008	2	40,000	20,000	3	2.5
CONO WEEDER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
INCLINED PLATE PLANTER	Farm Machinery & Tools	CIAE, BHOPAL	2008	2	40,000	20,000	3	2.5
INTEGRAL EXTRUSION EXPPELLING UNIT FOR SOYBEAN	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
LIGHT WEIGHT POWER WEEDER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
MANUAL 4 ROW RICE WEEDER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
PNEUMATIC COTTON PLANTER	Farm Machinery & Tools	CIAE, BHOPAL	2008	2	40,000	20,000	3	2.5
POWER OPERATED PADDY THRESHER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
POWER TILLER OPERATED AUGER DIGGER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
POWER TILLER OPERATED SEED CUM FERTILIZER DRILL	Farm Machinery & Tools	CIAE, BHOPAL	2008	3	60,000	20,000	3	2.5
POWER TILLER OPERATED SWEEP CULTIVATOR	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
POWER WEEDER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
SELF PROPELLED POWER WEEDER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
SICKLE MANUFACTURING TECHNOLOGY	Farm Machinery & Tools	CIAE, BHOPAL	2008	5	1,00,000	20,000	3	2.5
TRACTOR DRAWN SEED CUM FERTILIZER DRILL	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
TRACTOR OPERATED GROUNDNUT DIGGER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
TRACTOR OPERATED PEG TYPE PUDDLER	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
TRACTOR OPERATED TILL-PLANT MACHINE	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
TWIN WHEEL HOE	Farm Machinery & Tools	CIAE, BHOPAL	2008	1	20,000	20,000	3	2.5
ZERO TILL DRILL	Farm Machinery & Tools	CIAE, BHOPAL	2008	3	60,000	20,000	3	2.5
ANIMAL DRAWN PLANTER	Farm Machinery & Tools	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
CIAE 3 ROW SEED CUM FERTILIZER DRILL	Farm Machinery & Tools	CIAE, BHOPAL	2009	3	60,000	20,000	3	2.5
CIAE MANUAL FERTILIZER SPREADER	Farm Machinery & Tools	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
HIGH CAPACITY THRESHER	Farm Machinery & Tools	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
MULTI CROP THRESHER	Farm Machinery & Tools	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
TUBULAR MAIZESHELLER	Farm Machinery & Tools	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
VEGETABLE TRANSPLANTER	Farm Machinery & Tools	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
CIPHET EVAPORATIVE COOLED ROOM	Farm Machinery & Tools	CIPHET, LUDHIANA	2005	2	7,00,000	4,00,000	5	3.0
BANANA COMB CUTTER	Farm Machinery & Tools	CIPHET, LUDHIANA	2009	1	60,000	60,000	5	3.0

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CRIDA ORCHARD SPRAYER	Farm Machinery & Tools	CRIDA, HYDERABAD	2002	1	50,000	50,000	7	3.5
CRIDA 4 ROW PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2002	8	4,00,000	50,000	7	3.5
CRIDA 6 ROW PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2002	8	4,00,000	50,000	7	3.5
CRIDA MANUAL WEEDER	Farm Machinery & Tools	CRIDA, HYDERABAD	2002	2	1,00,000	50,000	7	3.5
CRIDA 2 ROW PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2003	2	1,00,000	50,000	7	3.5
CRIDA 9 ROW PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2003	7	3,50,000	50,000	7	3.5
CRIDA PLOUGH PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2004	1	50,000	50,000	7	3.5
CRIDA 3 ROW BD PLANTER	Farm Machinery & Tools	CRIDA, HYDERABAD	2009	2	1,00,000	50,000	7	3.5
MICROPROPAGATION TECHNOLOGY FOR TEAK	Farm Machinery & Tools	CRIDA, HYDERABAD	2009	1	1,75,000	1,75,000	7	3.5
HAMMER WITH METER	Farm Machinery & Tools	FITT, NEW DELHI	2005	1	2,00,000	2,00,000	5	2.0
PROCESSING OF FOOD THROUGH RADIATION TECHNOLOGY	Farm Machinery & Tools	ICRISAT, HYDERABAD	2008	1	n/a	n/a	10	n/a
PARA-PHEROMONE TRAP FOR FRUIT FLY	Farm Machinery & Tools	IIHR, BANGALORE	2009	3	3,00,000	1,00,000	10	5.0
AERIAL INSECT TRAP	Farm Machinery & Tools	NCIPM, NEW DELHI	2004	1	65,000	65,000	3	2.5
FIELD KIT FOR MULTIPL. OF INSECT LARVAL PARASITOIDS	Farm Machinery & Tools	NCIPM, NEW DELHI	2004	1	40,000	40,000	3	2.5
APPARATUS FOR INSITU CULTURES	Farm Machinery & Tools	NCIPM, NEW DELHI	2008	1	60,000	60,000	3	2.5
UV CHAMBER FOR CORCYRA EGGS STERILIZATION	Farm Machinery & Tools	NCIPM, NEW DELHI	2008	1	55,000	55,000	3	2.5
2 IN 1 SUNFLOWER THESHER CUM MAIZE SHELLER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
4 IN 1 DEVICE GROUNDNUT/SUNFLOWER/MAIZE/JATROPA	Farm Machinery & Tools	UAS, BANGALORE	2009	1	10,000	10,000	10	3.5
ARECANUT DEHUSKER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	8,000	8,000	10	3.5
COCONUT DEHUSKER(PEDAL OPERATED)	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,000	2,000	10	3.5
DUCK FOOT HOE	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,000	2,000	10	3.5
GROUNDNUT DECORTICATOR	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,000	2,000	10	3.5
GROUNDNUT DIGGER(BULLOCK DRAWN)	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
GROUNDNUT SEED DRILL(BULLOCK DRAWN)	Farm Machinery & Tools	UAS, BANGALORE	2009	1	6,500	6,500	10	3.5
GROUNDNUT STRIPPER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,000	2,000	10	3.5
HAND WEEDER, RIDGER & FURROWER & OTHER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
MANGO HARVESTER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,000	2,000	10	3.5
MANUALLY OPERATED SEED DRILL	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,000	2,000	10	3.5
MINI GROUNDNUT DECORTICATOR	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,500	2,500	10	3.5
MODIFIED HAND OPERATED MAIZE SHELLER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
MULTI FURROW OPENER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
PADDY DRUM SEEDER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
PORTABLE WINNOWER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,500	2,500	10	3.5
RAGI SEED CUM FERTILIZER DRILL	Farm Machinery & Tools	UAS, BANGALORE	2009	1	6,500	6,500	10	3.5

REDGRAM THERSHER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
SAPOTA HARVESTER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	2,000	2,000	10	3.5
TAMARIND DEHULLER AND DESEEDER	Farm Machinery & Tools	UAS, BANGALORE	2009	1	5,000	5,000	10	3.5
WHITE PEPPER PROCESSING MACHINE	Farm Machinery & Tools	UAS, BANGALORE	2009	1	10,000	10,000	10	3.5
DECOTICATOR	Other	FITT, NEW DELHI	2006	1	1,50,000	1,50,000	3	2.0
ODOURLESS URINAL	Other	FITT, NEW DELHI	2006	1	1,00,000	1,00,000	3	2.0
SUPERCritical EXTRACTOR	Other	FITT, NEW DELHI	2006	1	2,50,000	2,50,000	5	2.0
MANUAL POTATO PEELER	Post-Harvest Technology	CIAE, BHOPAL	2008	2	40,000	20,000	3	2.5
MINI DAL MILL	Post-Harvest Technology	CIAE, BHOPAL	2008	3	60,000	20,000	3	2.5
PEDAL OPERATED POTATO SLICER	Post-Harvest Technology	CIAE, BHOPAL	2008	2	40,000	20,000	3	2.5
PEDAL/POWER OPERATED GRAIN CLEANER AND GRADER	Post-Harvest Technology	CIAE, BHOPAL	2008	3	60,000	20,000	3	2.5
COTTAGE SCALE SOY PANEER PLANT	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
GRAIN FLOUR SEPARATOR	Post-Harvest Technology	CIAE, BHOPAL	2009	2	40,000	20,000	3	2.5
GROUNDNUT CUM CASTOR DECORDICATOR	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
GROUNDNUT CUM SUNFLOWER DECORDICATOR	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
GROUNDNUT DECORDICATOR FOR WOMEN	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
MANUAL SOYBEAN DEHULLER	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
MOTORIZED SOYBEAN DEHULLER	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
PANEER PRESSING MACHINE	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
PEDAL OPERATED SEED CLEANER AND GRADER	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
POTATO DIGGER	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
SOY MILK FILTERATION UNIT	Post-Harvest Technology	CIAE, BHOPAL	2009	1	20,000	20,000	3	2.5
MUSTARD DEHULLING PILOT PLANT	Post-Harvest Technology	CIPHET, LUDHIANA	2005	1	70,000	70,000	5	3.0
PRE-GRINDER FOR SIZE REDUCTION OF MUSTARD SEED	Post-Harvest Technology	CIPHET, LUDHIANA	2005	1	6,00,000	6,00,000	5	3.0
MASTARD SAUCE	Post-Harvest Technology	CIPHET, LUDHIANA	2006	1	3,00,000	3,00,000	5	3.0
SOYMILK WHEY BASED FRUIT DRINK BEVERAGES	Post-Harvest Technology	CIPHET, LUDHIANA	2006	1	3,00,000	3,00,000	5	3.0
ALGORITHM OF MATURITY INDEX CALCULATOR & CHART	Post-Harvest Technology	CIPHET, LUDHIANA	2007	1	70,000	70,000	5	3.0
AUTOMATIC BLENDER CUM MIXER	Post-Harvest Technology	CIPHET, LUDHIANA	2007	1	85,000	85,000	5	3.0
GROUNDNUT POD DECORTICATOR	Post-Harvest Technology	CIPHET, LUDHIANA	2007	1	65,000	65,000	5	3.0
LOW ENERGY DE-HULLING OF MUSTARD SEED	Post-Harvest Technology	CIPHET, LUDHIANA	2007	1	70,000	70,000	5	3.0
PROCESS TECHNOLOGY FOR ANOLA BEVERAGE	Post-Harvest Technology	CIPHET, LUDHIANA	2007	1	45,000	45,000	5	3.0
CIPHET POMEGRANATE ARIL EXTRACTOR	Post-Harvest Technology	CIPHET, LUDHIANA	2008	1	3,00,000	3,00,000	5	3.0
POMEGRANATE ARIL EXTRACTOR (HAND TOOL)	Post-Harvest Technology	CIPHET, LUDHIANA	2008	1	75,000	75,000	5	3.0
CRIDA CASTOR SHELLER	Post-Harvest Technology	CRIDA, HYDERABAD	2002	2	1,00,000	50,000	7	3.5

VEGETABLE PRESERVATOR	Post-Harvest Technology	CRIDA, HYDERABAD	2002	1	50,000	50,000	7	3.5
CRIDA GROUNDNUT STRIPPER	Post-Harvest Technology	CRIDA, HYDERABAD	2003	2	1,00,000	50,000	7	3.5
CRIDA HERBAL DRYER	Post-Harvest Technology	CRIDA, HYDERABAD	2005	1	50,000	50,000	7	3.5
BIODEGRADABLE, ECO FRIENDLY AND EDIBLE CUTLERY	Post-Harvest Technology	ICRISAT, HYDERABAD	2008	1	n/a	n/a	10	n/a
EGG CLEANING DEVICE	Post-Harvest Technology	NCIPM, NEW DELHI	2005	1	75,000	75,000	3	2.5
INSECT PROBE TRAP	Post-Harvest Technology	TNAU, COIMBATORE	2002	1	25,000	25,000	>10	n/a
TNAU KIT BOX	Post-Harvest Technology	TNAU, COIMBATORE	2004	1	25,000	25,000	>10	n/a
PEARL MILLET BASED READY TO COOK FOOD	Post-Harvest Technology	TNAU, COIMBATORE	2005	1	5,000	5,000	>10	n/a
SHAKTHI	Sericulture	APSSRDI, HINDIPUR	2007	2	6,00,000	3,00,000	10	3.0
SERIGOLD	Sericulture	APSSRDI, HINDIPUR	2008	2	6,00,000	3,00,000	10	3.0
LABEX	Sericulture	CSRTI, BHERAMPURE	2005	5	2,50,000	50,000	10	3.0
MORIZYME - B	Sericulture	CSRTI, BHERAMPURE	2007	4	80,000	20,000	10	3.0
FLAME GUN	Sericulture	CSRTI, MYSORE	2002	1	10,000	10,000	5	3.0
LEAF CHOPPING MACHINE	Sericulture	CSRTI, MYSORE	2002	1	1,00,000	1,00,000	5	3.0
MOTORIZED COCOON DEFLOSSING MACHINE	Sericulture	CSRTI, MYSORE	2002	1	1,00,000	1,00,000	5	3.0
BATTERY OPERATED POWDER DUSTER	Sericulture	CSRTI, MYSORE	2005	1	5,000	5,000	5	3.0
CHAWKI LEAF CHOPPER	Sericulture	CSRTI, MYSORE	2005	1	25,000	25,000	5	3.0
ELECTRIC SPRAYER	Sericulture	CSRTI, MYSORE	2005	1	20,000	20,000	5	3.0
HAND OPERATED SILK COCOON CLEANING MACHINE	Sericulture	CSRTI, MYSORE	2005	1	5,000	5,000	5	3.0
MOTORIZED CUM HAND OPERATED DEFLOSSER	Sericulture	CSRTI, MYSORE	2005	1	5,000	5,000	5	3.0
VIJETHA-BED DISINFECTANT	Sericulture	CSRTI, MYSORE	2006	1	10,00,000	10,00,000	5	3.0
AZOTOBACTOR BIOFERTILIZER	Sericulture	CSRTI, MYSORE	2007	1	2,00,000	2,00,000	5	3.0
NUTRID	Sericulture	CSRTI, MYSORE	2007	1	6,00,000	6,00,000	5	3.0
PHYTO ECDYSONE(SAMPOORNA)	Sericulture	CSRTI, MYSORE	2007	1	3,00,000	3,00,000	5	3.0
ANKUSH(DISINFECTANT)	Sericulture	CSRTI, MYSORE	2008	2	10,00,000	5,00,000	5	3.0
HIGH PRESSURE SERI SPRAYER	Sericulture	CSRTI, MYSORE	2008	1	50,000	50,000	5	3.0
RESHAM KEET OUSHADH(BED DISINFECTANT)	Sericulture	CSRTI, MYSORE	2008	3	3,00,000	1,00,000	5	3.0
SERI HUMIDIFIER CUM HEATER	Sericulture	CSRTI, MYSORE	2008	1	50,000	50,000	5	3.0
Sericulture SPRAYER	Sericulture	CSRTI, MYSORE	2008	1	70,000	70,000	5	3.0
SPOORTHI-MULBERRY LEAF HEALTH DRINK	Sericulture	CSRTI, MYSORE	2008	1	15,00,000	15,00,000	5	3.0
UZITRAP	Sericulture	CSRTI, MYSORE	2008	2	3,00,000	1,50,000	5	3.0
CSTRI IMPROVED HANDLOOM	Sericulture	CSTRI, BANGALORE	2003	7	1,40,000	20,000	10	2.0
SECTIONAL WARPING MACHINE FOR SILK	Sericulture	CSTRI, BANGALORE	2003	1	50,000	50,000	10	2.0
CSTRI HAND TO PIRN WINDING MACHINE	Sericulture	CSTRI, BANGALORE	2004	1	10,000	10,000	10	2.0

CSTRI MOTORIZED PEDAL OPERATED SPINNING MACHINE	Sericulture	CSTRI, BANGALORE	2004	16	1,60,000	10,000	10	2.0
CSTRI REELING CUM TWISTING MACHINE	Sericulture	CSTRI, BANGALORE	2004	15	1,50,000	10,000	10	2.0
SILK STRETCH YARN MFG TECH	Sericulture	CSTRI, BANGALORE	2004	1	5,00,000	5,00,000	10	2.0
UZI POWDER	Sericulture	KSSRDI, BANGALORE	2005	1	3,50,000	3,50,000	5	3.0
SANJEEVINI	Sericulture	KSSRDI, BANGALORE	2006	1	2,25,000	2,25,000	5	3.0
SURAKSHA	Sericulture	KSSRDI, BANGALORE	2006	1	2,75,000	2,75,000	5	3.0
AKASH DUSTER	Sericulture	KSSRDI, BANGALORE	2007	1	n/a	n/a	5	3.0
CHETANA	Sericulture	KSSRDI, BANGALORE	2007	1	1,65,000	1,65,000	5	3.5
CHLOROFECT	Sericulture	KSSRDI, BANGALORE	2007	1	6,60,000	6,60,000	5	3.5
HARITH	Sericulture	KSSRDI, BANGALORE	2007	1	50,000	50,000	5	5.0
SUCHI	Sericulture	KSSRDI, BANGALORE	2007	1	1,00,000	1,00,000	5	3.0
SANITALLPLUS	Sericulture	KSSRDI, BANGALORE	2009	1	1,25,000	1,25,000	5	5.0
SERI PRAKRUTHI	Sericulture	KSSRDI, BANGALORE	2009	1	2,00,000	2,00,000	5	3.0
SERI-PHOS	Sericulture	KSSRDI, BANGALORE	2009	1	1,60,000	1,60,000	5	3.0
DECOL- DISINFECTANT	Sericulture	SSTL, KODATHI	2005	1	4,00,000	4,00,000	10	3.0
RESHAM JYOTHI	Sericulture	SSTL, KODATHI	2005	1	6,00,000	6,00,000	10	4.0
186 Technologies				331	6,77,90,000	2,10,528		2.8