

**Preliminary list of Innovations for Saakar 2007-08**

1	Gas Operated Iron (Press): It consists of an iron box that can be operated through cooking gas. There is an inbuilt automatic lighter for ignition of the filament in the iron. The box has a capacity of holding/filling 1kg of gas. The gas flows through a small copper pipe. The size of the pipe is such that 1kg of the gas can be used continuously for 24 hours. The flow of the gas can be regulated by a knob regulator. The manufacturing cost of the equipment in mass production is Rs. 2000/- only. It gets hot within 2-3 minutes up to 45° C. The cost for operating the iron box for an hour is Rs. 1.8/- only.
2	Mini Cooler: It is a turbo air cooler with size of 205 X 126 X 126 mm (HxWxB). It works with 12 V and 6 V (2 no's) DC motors. It spreads 1.5 m distance at 6 degree Centigrade. It works continuously for 10 hours and consumes roughly 125 ml water per an hour. The inner air and the outer air get cooled with lesser time whereas the ordinary coolers with cooling pad are improperly ventilated. Its weight is 500 gms only, and it gives turbo cooling effect.
3	Amphibious Rickshaw and cycle: This is an amphibious rickshaw/cycle which can run on land as well as on water. The simple rickshaw/cycle has been integrated with four floats, impeller as additional components to run it over water.
4	Mechanised Broom: It contains two powerful motors with a chargeable battery. Thin sticks of plastic like Zharu or Broom can be replaced if damaged. There will be a handle and a battery with two powerful motors on the side. And to these a three plated broom will be attached. After the battery is switched on the broom-stick will and clean the floor.
5	Cobweb Cleaner: It consists of a small motor, a small rod, a light emitting diode (LED) and a long plastic pipe. The machine has a switch on one end and a motor at the other. The motor can be rotated up to 90 degrees in three different directions and the wire is expandable. Speed is slow but effective. It can be run with a DC plug. Even on the top of the rod there is a bulb holder for searching the cobweb.
6	Pocket Police: It is being built by making some alterations in a regular alarm clock. It is a pocket with alarm, which would inform the owner by light/buzzing when somebody touches or tries to push it out. For this a plastic plate is inserted in-between the circuit. From that plate a thread comes out which is then connected to another plate. This plate is then attached to the purse inside the pocket. As soon as someone will try to steal the purse the plate will be disordered and it will raise an alarm with LED on its goggles. The machine also has a provision for switching off the alarm after 1 or 2 minutes. If we switch off the alarm the LED will glow. If you want to remove the purse than you have the first switch off the circuit and do the work. If plate is out than remove the cover and

	put in the same place again. This machine works with power of 1.5 volts battery.
7	<p>Auto Stop Cooker and Gas:</p> <p>It is an electrically operated stopper for LPG gas stove with digital display system for rice cookers to count the number of whistles. It consists of two DC motor powered by a 12 Volt Battery with an analog clock. The preset cooking time for different varieties of rice or different dishes can be preset with the clock and this system will automatically switch off the gas once the cooking is over. This system will release an alarm when the gas stove requires to be switch. The cost of the unit is Rs. 600/-only.</p>
8	<p>Dried Areca nut Peeler:</p> <p>The dried areca nut peeler consists of a feed hopper with a screw conveyor coupled through rubber layered MS flange disc covered with suitable MS sheet work. The flange is connected with a 2 hp (3 phase) electrical motor through a shaft to rotate at a high speed. A single hp motor is connected with blower at the bottom to separate the husk after getting peeled. A suitable framework with MS pipe sections supported the whole set up. It consists of feed hopper, two stainless steel discs rotating opposite to each other and a blower at the bottom. The peeler is powered by a 2 hp electric motor, the areca nut get husked in between the high speed rotating disc. The husks will be thrown out through a blower in the exhaust and the nuts will be collected at the bottom. The capacity of the machine is 40 kg/h and the cost of the machine is Rs.36,000/-only.</p>
9	<p>Household device to kill spider and cobweb:</p> <p>Innovator is a small farmer. Two years back he has developed a household device and tested it in his house. He has supplied 50 devices and got positive response from users. Now he is trying to popularize it by developing more units. The device is used to kill a spider and to destroy cobwebs in the household. It works on 250 volts A/C supply. Power consumption is 750 W, it weighs around 2 kg and costs around Rs. 400/- only.</p>
10	<p>Solar Mosquito Destroyer:</p> <p>It consists of an inlet pipe attached to a specially make plastic mould. This is inserted into the septic tank. The smell from the septic tank attracts the mosquitoes. Once the mosquitoes get trapped it cannot get out and the direct sunlight exposure will destroy the mosquitoes through the solar furnace.</p>
11	<p>Automatic Locking System for Rolling Shutter:</p> <p>This is a lock system for rolling shutters. Here the shutter will automatically lock while closing the shutter. Hence a key is not required for locking. It saves time and is very easy to operate. There are three parts for this lock. At the centre of lock, a push pin is attached and two movable locking levers are attached to the central part. When the push pin of the lock presses on the stopper plate which is attached to the bottom of the shutter, the movable locking lever will enter into the bottom box and it gets automatically locked. Since there are two levers, it gives double strength for opening the shutter. We need to unlock at both the sides by a key. The innovator has received a patent for this product. A push pin is provided in the lock press and a stopper is attached to the bottom of the shutter; the movable lock will enter into the bottom of the box and it then gets locked automatically. There are two levers provided inside the bottom and it facilitates double strength.</p>

12	<p>Locking System for Bikes:</p> <p>This instrument is made up of quartz clock, elements and safety guard. This draws away crows from a prawn rearing ponds. Crows eats away prawns from the ponds and this causes loss of profit for farmers. The latter usually use fire cracker to drive away the crows but this is a time consuming process. In this case the efficiency is also less. The equipment helps in the automatic explosion of fire cracker at an interval of 1 hr to repel the crows which eat the prawns and spoil the pond.</p>
14	<p>Ointment Saver:</p> <p>It works by tightening a clip around the end portion of the ointment or a toothpaste tube for effective drawing of the ointment/paste. This is a simple technique which helps in the complete utilization of ointments and pastes.</p>
15	<p>Improved Variety of Cardamom:</p> <p>The cardamom variety developed by Baby, belongs to Vazhuka type cardamom cultivars bearing purely white flowers, has high productivity than other cardamom plants and can be grown in waterlogged areas as well. The variety has wider adaptability to different shade conditions apart from having high production with good quality that is even higher than other Mysore and Vazhukka cultivars viz., Njallani, Green-bold, Palakkudi and Veeraputhara varieties, which are locally popular. It has sturdy plants, robust tillers and deeper root system, which makes it resistant to various biotic and abiotic stresses.</p>
16	<p>Wonder Cardamom A New Variety of Cardamom:</p> <p>Branched panicles. Recovery percentage is high (3.8 kg green cardamom after drying gives one kg) whereas in other varieties 5 kg or more gives 1 kg. Yield per plant is 3.0 to 4.0 kg of dry cardamom compared to 2.5-3.0 kg in Njallanithe most popular variety of the region. Length of the spike and branches are more than other varieties. More tillers per clump (30-50) compared to 25-40 in Njallani. Seeds are long and extra bold in size.</p>
17	<p>An improved disease resistant variety of Pepper - Kumpukkal:</p> <p>Farmer observed a single plant in his farm in 1986, which had the superior characteristics than two locally known varieties of Karimunda and Perunkudi (higher yields and quicker growth rate respectively). Based on these selection criteria, he propagated the cuttings of the particular selected plant. The farmer is using this variety for the past twelve years and the performance is found stable. He is getting 10 % higher price for his variety as compared to other varieties. He cultivates the variety organically. One kg of green pepper on drying yields 300 grams of dried pepper. The variety has a highly developed root system.</p>
18	<p>Manually operated water pump:</p> <p>This hand operated pump works on simple principle by rotating the wheel. Then the air inside the washer pipe will rise upwards and the water will be pulled up with that force. We will repeat this process to make the pressure leveled to that of land and water. By this process the water will come out of the pipe. It works at 170 rpm. With</p>

	<p>the help of a boring we can get 600 rpm. By this way we can lift water from about 30 feet depth and which can obtain water from a 1.5 inch pipe.</p>
19	<p>An Improved Variety of Arhar (Pigeon pea) – Richa 2000:</p> <p>Farmer observed a different plant in his field of ICPL-87 during the year 1997. This plant possessed the characteristics that used to catch the farmers attention whenever he used to move around in the field. The plant had bigger flowers which had two colours, leaves were long and the plant remained green for a longer duration. Further the bearing of the pod was at the top and in bunches. Farmer on seeing this feature thought of taking it forward and yield can be drastically improved he could increase the pod bearing and number of branches in the plant further. Based on this thought he harvested the plant separately for sowing it in the next season.</p>
20	<p>Acruval – A closure cap with pre-measured liquid dispenser:</p> <p>Acruval is an innovative closure cap with a pre-measured liquid dispenser that helps to accurately measure liquids of any type. It allows the consumer to use the liquid or take it orally, whichever the case might be, without any difficulty. It provides a closure cap integral with a dispenser to be provided over the open end of the bottle or a like container. The cap facilitates releasing a measured quantity of the liquid from the bottle into the dispensing device which can then be used by consumers. It is a compact bottle cap made up of poly propylene material and stainless steel spring. It can be used to measure any liquid, particularly liquid oral medicines, accurately and easily. It enables patients to take the right amount of medicines.</p>
21	<p>An improved paddy variety:</p> <p>Dadaji Ramaji selected and bred the HMT rice variety from the conventional 'Patel 3', a popular variety of that time developed by Dr. J. P. Patel, JNKV Agriculture University, Jabalpur. He succeeded after five years of continuous study and research on a small farm owned by him without any support from the scientific community. It has an average yield of 40 – 45 quintals per hectare with short grains, high rice recovery (80 %), better smell and better cooking quality in comparison with the parent ones.</p>
22	<p>Two-wheeler based mobile spray painting device:</p> <p>The spraying unit consists of a one hp air compressor head and a cylindrical air tank to store the pressurized air. The scooter engine power is taken to the compressor head through a belt drive. In the present system, the crankshaft of scooter engine is extended and a pulley is mounted on it, deriving the power from it to run the compressor.</p>
23	<p>Herbal Bulletproof Jacket:</p> <p>The story of the generation of the idea to develop a bulletproof jacket evolved is as interesting as the product itself. Once, while chewing wheat grains, he felt some sweet taste. He did that several times, each time experiencing the same sweetness. He then took the masticated wheat out, which felt like gum and pasted it on a wall. After two or three days, he tried to hit it with a hammer. But to his surprise, he was not able to crush the dried paste though the plaster of the wall got damaged a bit. He tried several times but failed to damage the dried paste stuck on the wall.</p>
24	<p>New Gram Variety:</p>

	<p>The variety has resulted out of farmer's eye for selecting plants having features, viz., dual pods/axil, bushy growth and dual seeds/pod obtained in the field of cross between Annegari and Phule G 12 and then practicing rigorous selection for period of eight years for stabilizing the characters.</p>
25	<p>Bamboo stripping machine:</p> <p>It consists of a planer assembly, for smoothening of the outer surface; feeder assembly; gripper assembly, for keeping the bamboo in position and also anti rolling; inner side planer, for curving the inside of bamboo for making pet bottles; outer lid rim carver and lid rim carver for curving inner side of bamboo.</p>
26	<p>Low capacity hydro generator:</p> <p>A low capacity generator (1KVA-2KVA) for hilly regions. It is low cost, portable and ideal for low capacity utilization. The contraction material is bamboo composite.</p>
27	<p>Low Cost Dryer:</p> <p>Outer body is made up of tin sheets of 24 gauge thickness. It is made in the shape of a cylinder, with an airtight lid. Inner perforated aluminum body is cylindrical which is perforated to allow heat flows throughout the cylinder. Exhaust valve is spring fitted and adjusted to maintain the pressure inside the chamber, when the pressure is high the valve will automatically release the extra pressure and maintain constant heat and pressure. Electric oven is the main source of heat. Thermostat regulates the amount of heat inside the chamber in an electric form.</p>
28	<p>An effective sound system:</p> <p>It is a devise for a new and an effective sound speaker system. Most of the speaker boxes are made up of wood. This speaker system is constructed of a silver drum which gives one a desire to have a strong bass for that extra effect while listening to music or watching movies. Here the HF, LF, and Mid-Frequencies all in a single unit. Speakers are artfully presented in subtle curves and stunning finesse. With this speaker system one can experience the most dramatically surrounded sounds available for all movies and music.</p>
29	<p>Mini Sanitary Napkin Making Machine:</p> <p>The mini sanitary napkin machine consist of three individual units: one de-fibration unit (similar to a mixer) which is powered by an one hp single phase motor, foot pedal operated core forming unit and one hp motor powered electrical sealing units (for sealing in longitudinal and lateral directions of the pads. This machine facilitates to produce two pads per minute with three persons working on it. The rate of production would increase up to 900 pads per day with four persons. The production cost is about Rs. 1 per pad.</p>
30	<p>Double Sided high efficient fan:</p> <p>The product is a highly efficient, environment friendly, multi-bladed, double-layer fan to blow air for various applications. It has two sets of larger and smaller blades located</p>

	circumferentially in the same axial shaft
31	<p>Multi Purpose Cooking Vessel:</p> <p>The conventional vessel is provided with a groove or a cavity at the lower- most point of the vessel to keep the sieve plates. A drain pipe is provided at the bottom to drain out the water outside the vessel. The sieve at the bottom divides the boiled rice and the water and once the rice get boiled, the water will be drained by the force of gravity by opening the tape. Later, the innovator introduced yet another option to cook 'sambhar' in the same vessel by making a partition in the vessel. With this one can cook rice and sambhar at same time. It takes about 40 to 45 minutes to boil custom tasted potted rice and sambhar. Basically the rice cooked through pressure cooker is not advisable for the sugar patients as it consist of glucose in it.</p>
32	<p>A stove in which waste polythene can be used as a fuel:</p> <p>This stove works without kerosene. It uses 'Polythene' as a fuel in it, with some additional material like 'Wheat Bhoshi and Fitkiri'. It cooks food without emitting bad odour. The utensils can be cleaned without the use of water; a dry or a wet cloth because the carbon emitted is dry. The cost of a raw material is cheap in comparison to a kerosene stove. Operation: Take 100 gms of thin plastic and cut it into pieces. Remove the grill and put 2-2 tea-spoons of 'wheat bhoshi and 'fitikiri' in the fuel box. Then put the grill again on it. Put some of plastic pieces on the grill and burn it. Those burnt plastic pieces will melt and fall on the mixture inside the box. This will arouse the flames and occasionally blow air into it.</p>
33	<p>Stove working on water and gas:</p> <p>Stove has to be filled with water and it has to be tightening with a dot stopper. Regulator has to be closed because water has to be stoped to enter into the burner. Then the pump is filled with air. After filling the air press the knob connected to the stove. It has a water and a gas tank which has two inlets for both. Main parts of this stove are the regulator valve, water tank and the water burner.</p>
34	<p>Motek treadle printing kit:</p> <p>Motek India printing technology is a low cost, cutting-edge, up gradation tool for the obsolete treadle printing machines, spread across the length and breadth of the country, that are unable to deliver quality output vis-à-vis competition. The kit attachment is convenient, user-friendly, requires very little maintenance, and can be added to any working treadle-printing machine to get printing results comparable to desktop publishing, of upto 300 to 450 dpi at a much lower cost. The users and manufacturers feel that it has got good market potential and can replace traditional treadle printing press from the market.</p>
35	<p>Car for handicapped:</p> <p>The principle consists of modifying the driving actions so that the controls are transferred to hand by use of linkage and wire mechanism. Hand operated Habrake pedal is activated either by mechanical arrangement made of linkages or by using an additional hydraulic cylinder arrangement. Using the chock, installed on the dashboard, the accelerator gets activated through a wire, connecting it to the engine. The clutch</p>

	wire is connected to a semi circular hand element, which is connected through the steering assembly to the clutch plate to operate the clutch. Using the regular controls, the car be driven normally also.
36	<p>Boiled tea making machine for customized taste:</p> <p>It is a cost effective, fully automated and programmable to customized taste, tea-making machine. It makes tea hygienically as per the Indian method by boiling all ingredients together. In the process the flavour is preserved.</p>
37	<p>Kamaal - 505, and agricultural growth promoter:</p> <p>He started experimenting with Neem (Azadirachta indica). First he boiled neem leaves in water and sprayed this solution on crop. Result was optimistic and he proceeded further. In the second phase he mixed neem oil with the solution and got better result. He developed his technique and used Neem leaves, Neem oil, Chirayta, Kaner, Jaggery along with a couple of other herbs. All these herbs are mixed with urine of cow in a vessel and put in soil with the vessel. After fifteen days it gets decomposed. The solution is then filtered. If more effectiveness is required neem leaves decoction can be added to it.</p>
38	<p>Maruti Swing Chair:</p> <p>It serves the purpose of seating as well as exercising with a capacity to accommodate a person weighing 120 kg. This product is ideally situated for Indian urban middle class adult who seldom goes to a health club or outdoors for exercise and would prefer an easy chair, which he can use both for relaxation and exercise</p>
39	<p>Ribbed Teflon Coated Tawa:</p> <p>Traditional Iron Tawas are very poor in thermal efficiency and cause of LPG wastage, LPG prices increases day by day, it make our food more costly but we cannot live without food. To fight against LPG prices and find quality food, Mr. R. M. Savalia, Savalia Research Center, Ahmedabad gives a new way to Indian kitchen and introducing "Pan Tawa". Indian Institute of Petroleum; Dehradun (A supreme authority of Indian Petroleum Industry) has tested it's efficiency and design.</p>
40	<p>Suraksha and vatsal kitchen tongs:</p> <p>The innovation is a household utensil holding device that can be used as a replacement of conventional tong. The simple device comprises of one solid shaft that slides inside a pipe (hollow shaft). A handle (holding loop) is provided with each end of the shaft. There is provision to stop the sliding motion between the shafts by a set of screw. End of each shafts are connected with semi-circular arc type plate to hold edge of the utensil.</p> <p>Vatsal Tong consists of 210 mm and 400mm spring steel grade rod (3 mm diameter) which is bended in such a way that device can hold the edged utensils. Pair of tong is used to lift single vessel. Tongs are fixed at the two opposite edge of vessel.</p>
41	<p>Non Stick Earthen Tawa:</p> <p>Non Stick Tawas are essential part of kitchen to prepare south Indian and low oil food but main problem of this non-stick tawas are: it is costly and life of coating is about one</p>

	<p>year. Innovator came out with the solution and made a fusion of traditional and modern technology. He is master of making clay tawas because it is his family business and he learned the modern technology of Non stick coating. The combination takes shape of solution, in which he made a Non-stick coating on conventional clay tawa. He used black Non stick coating because black colour is a good heat absorber that is good for the cooking</p>
42	<p>High yielding groundnut variety :</p> <p>Thakarshibhai (70 years) had studied upto 4th standard, is passionate about agriculture and it is not surprising that he has developed a new variety of groundnut (<i>Arachis hypogaea</i>) named "Moralo". Moralo in Gujarati means "peacock" as the shape of the pod resembles the bird. However, the name has been changed to 'Thakarshi' by the villagers, but the variety is still popular in the Saurashtra region as Moralo.</p>
43	<p>Nutrient fortified biscuits:</p> <p>The major nutrition problem are India mainly protein, calcium and iron deficiency, especially in women and children population. Focusing this problem we developed our food products which are nutritionally rich with high minerals and proteins. As an attempt to minimize the nutritional gap, we started with types of products biscuits and health drinks. These food products are mainly based on the minor millets, cereals, pulses and some herbs which are found to be nutritionally rich.</p>
44	<p>Health Drinks:</p> <p>Nutrient supplement / food supplement based on ragi (<i>Eleusine coracana</i>) and barley. The formulation of the nutrient supplement included ragi, maize (<i>Zea mays</i>), barley (<i>Hordeum vulgare</i>), wheat (<i>Triticum aestivum</i>) and channa (<i>Arachis hypogaea</i>) in appropriate proportions which are found to be a good source of minerals especially calcium and iron and proteins. The health drinks which we have formulated were of three flavors; elachi, vanilla and chocolate. These food products impart many health benefits such as improvement in general health and metabolic functions, repair the body tissues, as energy booster, good for diabetic, anemia, osteoporosis and also for kidney patients and were rich in calcium, iron, other minerals and antioxidants.</p>
45	<p>Walnut Cracker:</p> <p>After removing skin from the green walnut and drying it completely, the time consuming and boring task is breaking/cracking the walnuts. Conventionally, walnut is cracked by using stones. It is task associated with accidents; one may get his hands injured and consumes so much precious time during the walnut cracking. Moreover, while cracking the walnut; sometimes these walnuts get completely broken and lost quality. Mr. Mustaq came with solution of this problem. The machine just cracks the nut without affecting the fruit (inside). The machine can also be used for cracking Almond and skin removal/peeling of green walnuts.</p>
46	<p>Electric pole climber:</p> <p>The 'Pole & Tree Climber' is portable device to climb the tall trees & pole easily & safely without any risk and danger. The main advantage of this device is that it saves our time & energy in climbing the trees and we can carry the device even in bag.</p>

47	<p>Fused tubelight with wattage regulator:</p> <p>The system has a tube-light frame with out any choke normal or electronic and starter. The product is capable of using even 80% fused tubes which are considered as waste and are thrown away. The power consumption is low and the raw material required in manufacturing is less as no choke and starter is required hence the tube light frame is also cheaper the power intensity can be controlled.</p>
48	<p>Pedal operated manual washing machine:</p> <p>It consists of an aluminum cabin in which there is a horizontal cylinder made of iron net wire. The cylinder is connected to a pedaling system that consists of a cycle chain, pedals and a seat. In appearance it looks like an exercycle - usually seen in a gymnasium - which is connected to a cabin. Clothes are put in the cylinder, the cabin is filled with water to the level of the clothes, washing powder is added and left to soak for at least 10 minutes. Then pedal for three to four minutes. The cylinder rotates at a very high speed with the clothes inside, cleaning them thoroughly.</p>
49	<p>Toothbrush with incorporated toothpaste dispenser:</p> <p>The tooth brush contains with readymade toothpaste, accommodated as a single unit assembly.</p>
50	<p>Rider and terrain induced supplementary force for cycle with an electric bike variant:</p> <p>In this electric bicycle, rider induced and terrain induced forces are used for transmission. The system is activated by the action involved during a bumping operation caused while traveling on uneven surfaces. The energy tapped by this transmission mechanism can also be transferred to an attached battery charging system, which eventually provides energy for movement of vehicle.</p>
51	<p>Electronic talking poster:</p> <p>This is talking board. When someone stands against it starts talking the information encoded in it. It is sensor-based board.</p>
52	<p>Mobile phone operated switch:</p> <p>The mobile phone operated switch is an instrument with an attached mobile phone and modified circuit, which can toggle a device between switch-off and switch-on conditions and also be used as a conduit to know the status of a remote operating device. The scope of this mobile remote operated device is immense in areas ranging from home appliances (managing devices at home such as microwaves), security (controlling access to buildings) to transportation (controlling car door locks) to industrial applications (such as remotely monitoring equipment in chemical plants.), etc. This is a cost effective, reliable device, which can be used to make life easier as devices can be operated from distance. It is based on missed call system in mobile phones and thus does not induce high charges. It can be only be operated by authorized users.</p>
53	<p>Pomegranate deseeding machine:</p> <p>The machine is a small agro processing machinery that has the capability for deseeding</p>

	upto 7 kg of Pomegranate in 5 mins. The feeding can be done either by batch feeding of upto 7 kg of pomegranate fruit, or continous feeding of one fruit at a time. There is a high degree of separation of seeds from the peel and other fibrous part of the pomegranate fruit, as end product.
54	Walking Stick With Light: A low cost, walking stick with simple and easy to operate features and a light to illuminate the area close to the feet of the used during night, thereby saving user to carry torch, stick and other accessories at the same time. The innovation uses 0.5 Volt pencil batteries discharged from routine consumer application product.
55	Tri - cycle based Mobile Sprayer This innovation is a low cost, energy efficient mobile sprayer unit that can be held by the handle bar and pushed forward on three wheels and the motion drives the piston which in turn powers the spray nozzles. Nozzle distance and the height of the spray boom can be adjusted as per the orientation of the crop
56	Treatment for Endoparasite Product with Scientific Validation. Product is having special features to cure roundworm in causing Endoparasite
57	Treatment for Anestrus/Silentestrus. Product with Scientific Validation. Product is having special features to cure hormonal impact both estrogen and progesterone.
58	Tapioca / Cassava Peeling Machine This is a highly efficient, low cost, machine used for peeling of cassava roots, which are further used for many applications in the food industry
59	Natural Water Cooler Low cost, energy efficient, environment friendly water cooler, which cools water naturally based on principle of heat exchange. The cooling process does not require external power source for operation. The technology has tremendous potential in dry and hot climatic conditions (i.e. tropical) where electricity is not available.
60	Motor Cycle Driven Ploughing Device A low cost, easy to assemble and sturdy farming machine, smaller than the tillers and tractors but stronger than the bullocks where a plough mounted on a motorcycle having 4.5 hp engine designed to replace animal driven farm implements for agricultural operations consisting of ploughing, sowing and inter culturing. It can also be used as a transportation device with small change-over time.
61	Incubator for Hatching Eggs A cost effective and sustainable poultry egg hatching technology for achieving 80 % hatchability efficiency, using a combination of bulb, fan and a thermostat cut off mechanism to maintain optimum temperature and humidity. The turning of egg is done manually or automatically in the semi-mechanical version of the machine
62	Hand Driven Sprayer It's a low cost, energy efficient, farmer friendly device. A non-body type sprayer using the rotational energy of its wheel for spraying wherein the rotation of the wheel provides reciprocating motion to the piston of the pump, which in turn, generates

	pressure and spray liquid through nozzles fitted on the spray boom
63	<p>Folding Bicycle</p> <p>A folding bicycle or folder is a type of bicycle that incorporates a number of hinges or joints, which may be lockable, that permit it to be folded into a more compact size. Typically this works by folding one or more of the bicycle's components, most often the frame.</p>
64	<p>Earthquake pre warning Alarm</p> <p>The system has an alarm (110 db), a sensor, a light & a separate LED. It can detect earthquake of 1db to 15 db intensity from miles away. The lower limit of the earthquake detection can be set manually depending upon the requirement. It detects earthquake by vibration & motion based sensing. Inbuilt battery consumption is nil in standby & the battery needs to be replaced once in 3 year only. It also has an added feature which is useful for flood alarm. For this application it has to be installed in the river banks. Water level can be set from ½ inch to any level in this device. Stainless steel thin strip is so used that the device will work years without any hazard</p>
65	<p>Coconut Defibring Machine</p> <p>This compact and portable machine is used for the defibring process. This machine defibres the coconut husk to fine coconut fibre. It can process about 3,200 of coconut husk per day for coir (coconut fibre) making and works on a 10 HP motor only.</p>
66	<p>Boiled Tea Making Machine for Customized Taste</p> <p>It is a cost effective, fully automated and programmable to customized taste, tea making machine, which makes tea hygienically as per the Indian method by boiling all ingredients together. In the process the flavour is preserved</p>
67	<p>Bicycle Sprayer</p> <p>A low cost, flexible, easy maneuverable and cost efficient sprayer mounted on any bicycle platform. Pressure is generated by the forward and backward movement of the bicycle and spraying is done through sprayer boon nozzles. This sprayer has an adjustable and foldable boom, which can be adjusted for height as well as spraying nozzles positions.</p>