

DOST-ITDI Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Abaca-Reinforced Composite Production Technology	Abaca fibers combined with resin to form composites take advantage of abaca's low density and insulating properties to create a material that is lightweight and environment-friendly which can be used as an eco-friendly, lightweight material for roofs and even vehicles.	Dr. Blessie A. Basilia Dr. Marissa Paglicawan Materials Science Division (02) 837 2071 to 82 loc. 2201 msc@itdi.gov.ph	IP Protected (Utility Model)	Nelia Elisa C. Florendo Technological Services Division (02) 837 2071 to 82 loc. 2265/2228 tsd@itdi.gov.ph, nel58ph@yahoo.com
2	Biomass-Fired Steam Kettle	The ITDI-developed design is a simple open-type biomass evaporator pan or steam kettle suitable for concentrating coconut water for small farmers.	Maria Elsa Falco Food Processing Division (02) 837 2071 to 82 loc. 2186 mariaelsafalco@gmail.com	No File/ Documentation	
3	Bioreactor	The ITDI-developed bioreactor, designed with a capacity of 500kg or 1,000kg can transform biodegradable household wastes into soil-enriching compost.	Engr. Reynaldo L. Esguerra Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2239 edb@itdi.gov.ph	No File/ Documentation	
4	Bubod for Tapuy Production	Bubod or binukbok is the local name for the starter culture used in the preparation of tapuy or rice wine. Its production was improved by using a mixture of NFA rice and cassava flours with pure culture suspensions of mold (<i>Rhizopus oryzae</i>) and yeast (<i>Saccharomyces cerevisiae</i>) instead of the traditional rice flour with mixed culture of yeast, bacteria, and fungi.	Michelle Evaristo Food Processing Division (02) 837 2071 to 82 loc. 2186 michelleevaristo@gmail.com	No File/ Documentation	
5	Cacao Roasting Equipment	A locally-designed cacao bean roaster that is LPG-fueled, easy-to-operate with temperature control feature and is made of food-grade stainless steel.	Rufino Barcala, Jr. Food Processing Division (02) 837 2071 to 82 loc. 2186 jhuncarcala@yahoo.com	UM Filed for: Cacao Roaster, Tempering Machine, Grinder, Desheller	
6	Candle Type Ceramic Water Filter	A simple and inexpensive water filtration system made out of local red clay and nano anti-microbial agent for household use.	Dr. Blessie Basilia Materials Science Division (02) 837 2071 to 82 loc. 2201 basiliablessie@gmail.com	No File/ Documentation	
7	Charcoal Briquette from Fruit and Root Crop Peels	A method of production of charcoal briquettes made from select fruit and root crop peels of high quality to traditional charcoal commonly sold in the market. These can be used as alternative fuel for heating and cooking purposes in homes and even in production facilities.	Dr. Emelda A. Ongo Engr. Apollo Victor O. Bawagan Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2239 edb@itdi.gov.ph	No IP	

8	Chitosan CaCO ₃ Composite (4C) Technology for Oil Spill Remediation	The production of adsorbent material made of chitosan and calcium carbonate composite from waste materials like shrimp skins and eggshells for oil spill clean-up.	Engr. Reynaldo L. Esguerra Dr. Emelda A. Ongo Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2239 edb@itdi.gov.ph	IP Protected (Utility Model)	
9	Coconut Sap Sugar Production	Innovation in the coconut sap sugar production include the collection system for the sap and standardization of the processing procedure thereby minimizing the rejects and sustaining the quality of the finished product. For sap collection, sanitized flexible pouches were used thus minimizing the exposure of sap to air contaminants. The use of ITDI-designed double jacketed kettle for cooking and processing into sugar.	Michelle Evaristo Food Processing Division (02) 837 2071 to 82 loc. 2186 michelleevaristo@gmail.com	No File/ Documentation	
10	Compact Waste Water Treatment System	A low-cost, sustainable, compact wastewater treatment system that can be used to treat food, oil, grease wastewater coming from standalone quick service restaurants (QSR).	Engr. Reynaldo L. Esguerra Engr. Rochelle L. Retamar Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2239 edb@itdi.gov.ph	No IP	
11	Dietary Fiber Powder from Calamansi Wastes	Production of dietary fiber from calamansi waste that can be used as functional ingredient for food and supplement production for digestion and weight management.	Dr. Anabelle V. Briones DOST-ITDI Office of the Director (02) 837 3167 avbriones2003@yahoo.com	Expired (Utility Model)	
12	DOST Tablea (Chocolate Liquor in a Bar)	A chocolate liquor bar made from local fermented cocoa beans roasted to achieve the best quality chocolate beverage. The product is compliant to the Philippine National Standard quality specifications for Philippine tablea.	Maria Dolor Villaseñor Food Processing Division (02) 837 2071 to 82 loc. 2186 mdvillasenor@gmail.com / mariadolor@gmail.com	UM Filed for: Tablea	
13	Drum-dried Fruit Flakes	Allows liquid with low viscosities like fruit purees such as mango, banana, and <i>makapuno</i> to dry out at relative low temperatures over rotating drums producing drum-dried crunchy sheets of flakes with less chances of contamination and reduced loss of nutrient content. Drum-dried fruit flakes may be marketed as ready-to-eat snacks or intermediate materials for other products such as ice cream and pastries.	Maria Elsa Falco Food Processing Division (02) 837 2071 to 82 loc. 2186 mariaelsafalco@gmail.com	UM Filed for: Drum-dried Mango, Drum- dried Banana, Drum-dried Makapuno	
14	Dual Drum Composter	A small-scale (100kg capacity) motorized dual-drum composter developed for the management of biodegradable solid wastes following a standardized process with compost as end-product.	Engr. Reynaldo L. Esguerra Dr. Myra L. Tansengco Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2239 edb@itdi.gov.ph	No IP	

15	Food Colorant from <i>Monascus purpureus</i> 5001	A process of fermenting improved strains of <i>Monascus purpureus</i> (a species of mold) to produce food-grade red pigments applicable to food, beverage, and cosmetics industries.	Ursula Bigol Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2234/2235 upgbigol@gmail.com	No IP	
16	Freeze Drying Technology	Freeze drying is a method to dehydrate heat-sensitive materials through sublimation. It preserves nutrients, color, aroma, and flavor of the commodity. ITDI's freeze-dried products, such as avocado, carrot, corn, cabbage, mango, are shelf-stable, light in weight, with good rehydration characteristics, and may be used as ready-to-eat snacks and ingredient in various food products.	Maria Dolor Villaseñor Food Processing Division (02) 837 2071 to 82 loc. 2186 mdvillasenor@gmail.com / mariadolor@gmail.com	UM Filed for: Freeze-dried avocado	
17	Hard Carrageenan Capsules Production Technology	Production of hard capsules made from carrageenan, a natural gum extracted from locally abundant seaweeds, that can be used as substitute for imported animal-based gelatin capsules.	Dr. Anabelle V. Briones DOST-ITDI Office of the Director (02) 837 3167 avbriones2003@yahoo.com	IP Protected (Utility Model)	
18	Herbal Supplement from Guyabano Fruit in Capsule and Teabag	Highly nutritious guyabano leaves and fruit, well-known for its many health benefits, packed into 250mg and 350mg capsules or in 2g teabags.	Dr. Rosalinda C. Torres Standards and Testing Division (02) 837 2071 to 82 loc. 2198 lindactorres@yahoo.com	No File/ Documentation	
19	MOSYMU Health Supplement	MOSYMU is an encapsulated health supplement containing dried concentrated extracts from <i>Moringa oleifera</i> (malunggay), <i>Syzgium cumini</i> (duhat), and unripe fruit extracts of <i>Musa sapientum</i> (saba) that exhibited blood sugar lowering effect at 400 mg/kg body weight.	Dr. Rosalinda C. Torres Standards and Testing Division (02) 837 2071 to 82 loc. 2198 lindactorres@yahoo.com	Expired (Utility Model)	
20	Nanoclay Production Technology from Local Bentonite Ore (as an additive in polymer clay nanocomposite system)	Method of manufacturing nanocomposites with several property enhancements for use in various industrial applications, such as in automotive, construction, electronics, and packaging.	Dr. Blessie Basilia Materials Science Division (02) 837 2071 to 82 loc. 2201 basiliablessie@gmail.com	IP Protected (Utility Model)	
21	Nano-Precipitated Calcium Carbonate	A method of production of nano precipitated calcium carbonate from local limestone deposits having an average particle size ranging from 35-45 nm and whiteness value of more than 95% for various (food, industrial, and pharmaceutical grade) applications, such as in the manufacture of paper, rubber, plastics, plants, medicines, and food.	Josefina Celorico Materials Science Division (02) 837 2071 to 82 loc. 2201 jrcelorico@gmail.com	No IP	
22	Natural Analgesic Balm	Natura-based analgesic balm containing pain-relieving effects of phytobioactives intended for external application to skin.	Dr. Rosalinda C. Torres Standards and Testing Division (02) 837 2071 to 82 loc. 2198 lindactorres@yahoo.com	IP Protected (Utility Model)	

23	Nipa Sap Sugar	A healthy organic substitute for synthetic sugar which contains minerals and has the medium glycemic index, thus making it ideal for diabetics, overweight, and health conscious individuals. Nipa sugar can be used as sweetener and ingredient in several foods and confectionary products like pastries and native delicacies.	Charito Villaluz Food Processing Division (02) 837 2071 to 82 loc. 2186 cmvillaluz_16@yahoo.com	No IP	
24	OL Trap (ovicidal/Larvicidal Trap System)	A device used to control the <i>Aedes</i> mosquito population, the dengue-carrying species. The OL Trap's ovicidal and larvicidal effect prevents the next generation of <i>Aedes</i> mosquitoes from reaching adulthood, thus curbing their population.	Dr. Blessie Basilia Materials Science Division (02) 837 2071 to 82 loc. 2201 basiliablessie@gmail.com	No File/ Documentation	
25	Packaging for Frozen Durian	A food packaging method that uses multiple high-barrier packaging materials and vacuum packaging technique to retain the strong flavor and aroma of frozen durian for at least one year.	Daisy E. Tañafranca Floridel V. Loberiano Packaging Technology Division (02) 837 2071 to 82 loc. 2271 packaging@itdi.gov.ph	IP Protected (Utility Model)	
26	Plastic Densifier	An ITDI-developed equipment for plastic recycling that converts waste styropor/plastics, especially foamed Polystyrene and plastic sando bags and laminates into useful products such as tables, chairs, plastic planters, pails, boards, bricks, and synthetic timber plank.	Engr. Reynaldo L. Esguerra Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2239 edb@itdi.gov.ph	No IP	
27	Portable Biogas Digester	The ITDI Portable Biogas Digester is an air-tight, oxygen free vessel, fed with organic material where the microbial digestion takes place to produce biogas. The Portable Biogas Digester converts the wastes into two useful products: gas for cooking and sludge as soil conditioner.	Engr. Reynaldo L. Esguerra Environment and Biotechnology Division (02) 837 2071 to 82 loc. 2239 edb@itdi.gov.ph	IP Protected (Utility Model)	
28	Production of Rice Wine using ITDI Bubod	The process of rice wine production was standardized using the newly improved "bubod". This innovation has also solved a lot of problems encountered by tapuy producers, such as short shelf-life, low yield, higher production cost, adulteration, inconsistency in the quality of bubod, and packaging-related problems.	Michelle Evaristo Food Processing Division (02) 837 2071 to 82 loc. 2186 michelleevaristo@gmail.com	IP Protected	
29	Ready-to-Eat Chicken Arroz Caldo	The retort pouch packaging technology was applied to Chicken Arroz Caldo to make it shelf stable for at least one (1) year. The product was developed as a disaster mitigation / relief food to address immediate hunger of disaster victims. Arroz Caldo is categorized as ready-to-eat disaster food without preparation and without drinkables. The packaging structure is lightweight and very handy.	Daisy E. Tañafranca Floridel V. Loberiano Packaging Technology Division (02) 837 2071 to 82 loc. 2271 packaging@itdi.gov.ph	No IP	

30	Restructured Ham	This technology is to produce value-added meat products from low quality cuts. The mechanical treatments used were control (no mechanical treatment), slicing and chunking. It was achieved using sliced meat pieces and salt and phosphate as binder.	Rosela Gomez Food Processing Division (02) 837 2071 to 82 loc. 2186 roselamgomez@gmail.com	No File/ Documentation	
31	Sagip NutriPowder Emergency Food Reserve (EFR)	Emergency Food Reserve (EFR) is an energy food in powder form, made from cassava, malunggay, camote, and monggo. It tastes bland but is nutritious and filling.	Lourdes Montevirgen Food Processing Division (02) 837 2071 to 82 loc. 2186 lourdesmontevirgen@yahoo.com	No File/ Documentation	
32	Salt Iodizing Machine	A continuous screw-type iodizing machine that can be used by small salt processors and help them comply with ASIN LAW or RA 1872.	No info provided yet	IP Protected (Utility Model)	
33	Slimming Cream	A slimming agent containing phytoactives of grapefruit oil and caffeine for production of fat-burning creams. As safe and cost-effective alternative to more expensive formulations in the market, the product has significantly reduced weight, waist and hip measurements during an eight-week clinical trial.	Dr. Rosalinda C. Torres Standards and Testing Division (02) 837 2071 to 82 loc. 2198 lindactorres@yahoo.com	IP Protected (Utility Model)	
34	Spray Drying Technology	Spray drying is the process of converting liquid into powdered products that is shelf-stable, easier to handle, store, and transport due to reduced volume and weight. ITDI's spray-dried products are cucumber, egg white, pork-based blood stew mix, bile juice, <i>pinakurat</i> , bagoong <i>balayan</i> , and calamansi.	Rufino Barcala, Jr. Food Processing Division (02) 837 2071 to 82 loc. 2186 jhuncarcala@yahoo.com	UM Filed for: Spray-dried cucumber, spray- dried bile, spray- dried pig's blood	
35	Thermal Processing Technology Using Water Retort	Thermal processing through the use of a water retort is a method for the preservation of food packed in retort pouches, cans, or bottles. ITDI employed this technology to produce shelf-stable food products that require no preservatives such as CRM drink, chili in oil, and <i>bangus/tuyo</i> in oil.	Rommel Belandres Food Processing Division (02) 837 2071 to 82 loc. 2186 mdvillasenor@gmail.com / mariador@gmail.com	UM Filed for: production of edible oil infused with siling labuyo	
36	Vacuum Frying Technology	Vacuum frying is a method of deep frying under reduced pressure in a closed system that results in crunchier fried food with less oil content compared to traditional frying. ITDI's vacuum fried products are carrot, banana, jackfruit, squash, and sweet potato.	Maria Dolor Villaseñor Food Processing Division (02) 837 2071 to 82 loc. 2186 mdvillasenor@gmail.com / mariador@gmail.com	UM Filed for: Vacuum Fried Carrot	
37	Wine Processing Technology (Wine Fermentation Kit)	The ITDI Wine kit is intended to produce wine, specifically sugar cane wine and bignay wine, using standardized procedure that could increase their production capacity and assure consistent product quality. The wine kit package comes with an ebulliometer (alcohol meter), fermentation kit for 200L capacity (airlock spigot, stand), total acidity test to monitor the alcohol content and titrable acidity during fermentation, respectively.		No File/ Documentation	

DOST-FNRI Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Brown Rice Bar	Ready-to-Eat Brown Rice Bar is shelf-stable for six (6) months. It was developed as a potential functional food product utilizing brown rice as the main ingredient. It is ready to eat without preparation. Two (2) packs of 25 grams each provide 220 calories, 20g sugar, and 34 gram carbohydrates. It provides minerals and vitamins such as phosphorus, iron, zinc, manganese, vitamin B1, and vitamin B2. It is lightweight and handy.	Rosemarie G. Garcia Dahlia A. Diaz Alex M. Palomo Razoland B. Navarro Mary Rose Ladia	IP Protected (Utility Model / Trademark)	Business Development Unit DOST-FNRI 837-8113/14 loc. 322 bdutechnologytransfer@gmail .com
2	Iodine-Rich Drinking Water (Tubig Talino)	Iodine Rich Drinking Water is made from a blend of purified or ordinary potable water and Water Plus I ₂ , which helps prevent iodine deficiency disorders (IDD). A 5ml of Water Plus I ₂ can make 20 liters of iodine-rich drinking water (meet 33% of Iodine requirement of the body).	Marcela C. Saises Trinidad II T. Arcangel	IP Protected (Trademark)	
3	Iron Fortified Rice	Iron Fortified Rice (IFR) is enriched rice made by blending IRP with ordinary rice at a ratio of 1:200 (premix to ordinary rice) using an efficient blending machine. IFR can be washed and cooked like ordinary rice. A day's intake of 4 to 6 cups of cooked IFR will meet more than 500% of the iron requirement of the body.	Marcela C. Saises Trinidad II T. Arcangel	IP Protected (Trademark)	
4	Iron Rice Premix	Iron Rice Premix (IRP) is a grain-line structure or kernel made from a blend of rice flour and iron, produced or manufactured by hot extrusion technology added to ordinary rice to increase its iron content. IRP contains a minimum of 400 mg iron per 100 grams of premix.	Marcela C. Saises Trinidad II T. Arcangel	IP Protected (Trademark)	
5	Low-Fat, Low-Sugar Ice Cream	A healthy option for weight watchers and diabetics. It contains 3.55 protein and energy of 139 kcal per 100-gram sample. The fat content is less (1.7%) compared with regular ice cream which may contain 5 to 20% fat with a shelf-life of one year. The low-fat, low-sugar ice cream can be in the form of a premix powder consisting of dry ingredients and can be processed into ready-to-eat ice cream by adding water and passing or dispensing from soft served ice cream maker or packing in ice cream cups or gallons. The fat replacer and sugar substitute used in the product are both natural components of the food and do not contribute to calorie content.	Ma. Elena G. Fernandez Wenefrida N. Lainez Dahlia A. Diaz Charlie E. Adona Benjamin T. Molano	IP Protected (Utility Model / Know-How)	

6	Micronutrient Growth Mix (MGM)	<p>Micronutrient Growth Mix (MGM) is a multi-nutrient powder enriched with vitamins A, C, B1, B9, and B12, zinc, iron, iodine, and calcium. It is packed in small sachets (2g) containing a blend of micronutrients in powder form, which can easily be added or sprinkled to a wide range of complementary foods or home recipes to address vitamins and mineral deficiencies.</p> <p>The product is specially formulated for children ages 6 months to 5 years old. It is at this stage where supplementary feeding is essential to attain needed amounts of nutrients for proper nourishment.</p>	<p>Marcela C. Saises Trinidad II T. Arcangel Abbie L. Padrones Charlie E. Adona</p>	IP Protected (Utility Model / Trademark)	
7	Putsero Vegetable Mixed	<p>It is a canned ready-to-eat combination of potato, cabbage, saba, Baguio beans, and spices.</p> <p>The consumption of vegetables helps increase intake of vitamins, minerals, and fiber.</p>	<p>Joyce R. Tobias Wenefrida N. Lainez Rex B. Castante</p>	IP Protected (Trade Secret)	
8	Ready-to-Drink Green Mango Juice with Nata	<p>Green Mango-Nata Ready-to-Drink is a mixture of sweetened nata de coco, natural fruit juice from green mango-carabao variety, sugar, vitamin A, and vitamin C. One serving of 200ml green mango-nata juice provides 100% vitamin C, 33% vitamin A, and 5% energy from the Recommended Energy Nutrient Intake (RENI) of adult reference man. Tropical fruits with fiber have great demand in both local and international trade due to increasing trends in ethnic and healthy foods. It is attractive to people of all age levels. As a convenience product, it can fit the lifestyle of busy individuals.</p>	<p>Marcela C. Saises Joyce R. Tobias</p>	IP Protected (Utility Model)	
9	Ready-to-Drink Ripe Mango Juice with Nata	<p>Ripe Mango-Nata Fruit Drink is a mixture of sweetened nata de coco, natural fruit juice from the ripe mango - carabao variety, sugar, and vitamin C. The product contains dietary fiber from nata de coco, cellulosic biomass developed from aerobic fermentation of coconut milk/water. Fiber is recommended for the prevention of management of constipation, obesity, diabetes, hypertension, and other conditions.</p>	<p>Marcela C. Saises Joyce R. Tobias</p>	IP Protected (Trade Secret)	
10	Ready-to-Eat Complementary Food (Paste) for Infants and Young Children	<p>It is a ready-to-eat complementary food specially designed to meet the nutritional requirements of children ages 6 months to 3 years old. It is high in energy with a rich, nutty chocolate flavor that children will definitely love. One pack of 25 grams provides 578 calories, 40g fat, and 12g protein. It provides minerals and vitamins such as folate, iron, calcium, zinc, vitamin A, and vitamin C.</p>	<p>Joyce R. Tobias Trinidad II T. Arcangel Charlie E. Adona Abbie L. Padrones Hannah E. Edangan</p>	IP Protected (Utility Model / Trademark)	

11	Stabilized Brown Rice	<p>The Stabilized Brown Rice has an extended shelf life of 4 to 9 months by applying an optimum combined treatment of moist and dry heat to inactivate the inherent enzymes present in the bran layer of brown rice/unpolished rice. These enzymes are the primary reason for its short shelf-life (1-3 months), converting the oil/fat which is also present in the bran into free fatty acids.</p> <p>Due to stabilization technology, the product has retained its high-fiber content, B-vitamins, and minerals that help address lifestyle-related diseases and mineral deficiencies. Also, its improved textural property makes it more acceptable to consumers.</p>	<p>Rosemarie G. Garcia Dahlia A. Diaz Alex M. Palomo Razoland B. Navarro Mary Rose Ladia</p>	IP Protected (Patent / Trademark)	
12	Thermally-Processed Instant Laing	<p>It is a canned ready-to-eat combination of taro (gabi) stalks, coconut milk, and spices</p> <p>The consumption of vegetables helps increase intake of vitamins, minerals, and fiber.</p>	<p>Joyce R. Tobias Wenefrida N. Lainez Rex B. Castante</p>	IP Protected (Utility Model)	

DOST-ASTI Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Advanced Remote Data-acquisition Data logger (arQ)	arQ is the heart of all ASTI-designed weather stations. It can store, record and acquire data via integrated weather sensors that can read air pressure, temperature and humidity; wind speed and direction; and rainfall amount, duration and intensity. Data is transmitted via GSM/GPRS and/or satellite and can be viewed on the internet.	Gerwin P. Guba Harold Bryan S. Paler Glenn Vincent C. Lopez Jericho C. Capito George A. Mesina	IP Protected	Maria Irene S. Amatorio DOST-ASTI (02) 249-8500 local 1608 ryne@asti.dost.gov.ph
2	Automated Rain Gauge Station	The Automated Rain Gauge Station is a stand-alone system able to gather and record amount of rainfall and automatically send data via text message to a central database server on a predetermined interval. The collected rainfall data may be seen through a visualization portal or retrieved through manual means such as USB retrieval.	Gerwin P. Guba Harold Bryan S. Paler Glenn Vincent C. Lopez Jericho C. Capito Jasmin Jane M. Yabut Ian C. Mosquera	IP Protected (Industrial Design Copyrighted Manual, Copyrighted Illustration, Copyrighted Ornamental, Copyrighted Firmware, Trademark)	
3	Automated Weather Station	The Automated Weather Station uses data logger to store, record and acquire weather data through a multi-parameter sensor and a tipping bucket. Generated data can be used for weather forecasting and modelling. The collected data may be seen through a visualization portal or retrieved through manual means such as USB retrieval.	Gerwin P. Guba Harold Bryan S. Paler Glenn Vincent C. Lopez Jericho C. Capito Jasmin Jane M. Yabut Ian C. Mosquera	IP Protected (Copyrighted Firmware, Trademark)	
4	Flood Alerting Station	The Flood Alerting Station uses a web and manually-trigger siren to notify residents in flood-prone area for an impending hazard especially flood.	Gerwin P. Guba Harold Bryan S. Paler Glenn Vincent C. Lopez Jericho C. Capito Jasmin Jane M. Yabut Ian C. Mosquera	IP Protected (Copyrighted Firmware, Trademark)	
5	Tandem Station (Water Level with Rain Gauge)	The Tandem Station is composed of both mechanical tipping bucket and an ultrasonic sensor that measure rainfall parameters and water level. The collected data may be seen through a visualization portal or retrieved through manual means such as USB retrieval.	Gerwin P. Guba Harold Bryan S. Paler Glenn Vincent C. Lopez Jericho C. Capito Jasmin Jane M. Yabut Ian C. Mosquera	IP Protected (Copyrighted Manual, Copyrighted Illustration, Copyrighted Ornamental, Copyrighted Firmware, Trademark)	
6	TEWS Alerting Station	The TEWS Alerting Station which is composed of a siren and beacon, is used to notify communities for incoming Tsunamis.	Gerwin P. Guba Harold Bryan S. Paler Glenn Vincent C. Lopez Jericho C. Capito Jasmin Jane M. Yabut Ian C. Mosquera George A. Mesina	IP Protected (Copyrighted Firmware, Copyrighted Lecture Presentation, Trademark)	

7	Water Level Monitoring Station	The Water Level Monitoring Station monitors critical flood prone areas through an ultrasonic sensor which measures water level and rate of change of water level. It can be used to signal potential danger and evacuation to communities. The collected data may be seen through a visualization portal or retrieved through manual means such as USB retrieval.	Gerwin P. Guba Harold Bryan S. Palar Glenn Vincent C. Lopez Jericho C. Capito Jasmin Jane M. Yabut Ian C. Mosquera	IP Protected (Industrial Design, Copyrighted Illustration, Copyrighted Ornamental, Trademark)	
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DOST-FPRDI Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Bamboo charcoaling kiln	Equipment for producing bamboo charcoal with pyroligneous liquor recovery from 500 kg of bamboo slats for industrial use	Engr. Amando Allan M. Bondad	IP Protected	Ms. Greelda A. Eusebio DOST-FPRDI DM Lantican Avenue College, Los Baños, Laguna (049) 536-2377; 2360; 2586 fprdi@dost.gov.ph
2	Bamboo dryer	Facility suitable for drying bamboo materials	Engr. Caesar A. Cuasmasa	No IP	
3	Bamboo flattening machine	Equipment used for mechanical flattening of bamboo culms	Engr. Dante S. Pulmano	IP Protected	
4	Bamboo veneer lathe	Equipment for producing bamboo veneers of varying thicknesses (0.5, 0.75, 1.0, 1.25, 1.5, 1.75 and 2.0 mm) used in making engineered bamboo products; can produce 93 sq. m veneer per day	Engr. Dante S. Pulmano	IP Protected	
5	Carbonizer	Machine for converting sawdust, rice hulls and other carbonaceous fine materials into smoke-free charcoal	Engr. Amando Allan M. Bondad	IP Protected	
6	Charcoaling drum	Equipment for converting materials into charcoal	Engr. Amando Allan M. Bondad	No IP	
7	Digital moisture meter	Portable device for measuring moisture content of wood and wooden products	Dr. Marina A. Alipon	IP Protected	
8	DIY bamboo shelter	<p>Semi-permanent shelter made of modular bamboo panels which can be assembled within 3-4 days by 4 workers. When assembled, it has a 24 sq. m floor area which can accommodate a living room, bedroom, toilet and bath sink. The pre-fabricated parts can fit in a 6wheeler truck. The roof and walls are made of bamboo and coco lumber and the flooring is made of concrete.</p> <ul style="list-style-type: none"> - Complete set 150,000.00 - Without toilet and bath 130,000.00 - Without toilet and finishing 120,000.00 - Shell with utilities 105,000.00 - Shell without utilities 90,000.00 - Shell without concrete slabs 75,000.00 	Dr. Rico J. Cabangon	No IP	
9	Drying chamber for finished products	Facility for drying finished products in an enclosed environment where temperature and air circulation are controlled (2.4m x 2.4m x 12.2m)	Engr. Caesar A. Cuasmasa	No IP	
10	Finishing drying tunnel	<p>Facility for drying finished furniture and handicraft products in an air-controlled environment</p> <ul style="list-style-type: none"> - 12m (length) - 16m (length) 	Engr. Edward Paul S. Marasigan	No IP	

11	Finishing spray booth	Facility for controlling the spread of excess paint or lacquer spray during finishing of furniture or handicrafts in an air-controlled environment - 2.1m x 2.4m x 2.4m - 2.1m x 2.4m x 3.6m - 2.1m x 2.4m x 4.8m	Engr. Edward Paul S. Marasigan	No IP	
12	Furnace type lumber dryer	Facility for drying wood and non-wood forest products used in furniture and handicraft manufacture to meet the importing countries' moisture level requirements; uses agro-forest wastes as fuel - 1,500 bd ft. capacity 872,000.00 - 3,000 bd ft. capacity 1,060,000.00 - 5,000 bd ft. capacity 1,320,000.00 - 10,000 bd ft. capacity 1,796,000.00	Engr. Caezar A. Cuaresma	No IP	

DOST-MIRDC Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Abaca Fiber Extractor	An abaca fiber extractor is an apparatus to extract abaca fiber from a strip of tuxy. The abaca fiber extractor comprises a body, a blade holder, a blade, a shaft housing, a pusher shaft, a spring, a lever, and a storage	Joelin L. Lucas Fred P. Liza Allan John S. Limson	IP Protected	Ma. Girlie M. Millo Supervising SRS TABDS/TDD, MIRDC (02) 8370431 to 38 local 230 tabds@mirdc.dost.gov.ph
2	Automated Guideway Transit (AGT) Systems	The Automated Guide-way Transit (AGT) system is an alternative mass transport solution for urban development. It uses rubber tires and runs on concrete guideway similar to a monorail. The slimmer elevated track system makes it less intrusive and allows an open-air atmosphere compared to other transit vehicle design. There is no gas emission as it powered by electricity. Driving can be done manually or fully-automated (driverless). The system comes in 120 passengers and 60 passengers per coach designs.	Mario G. Montejo Robert O. Dizon Manuel V. Hernandez Ernest E. Nañola Elljay P. Mutuc Jorge Arbie V. Garcia Ryan Alvin A. Roldan Brian U. Rasco Jesus A. Tanchuco III Franz Joseph D. Libao Arthur Lucas D. Cruz Jonathan Q. Puerto Pablo Acuin Joseph Alfred V. Vargas	IP Protected	
3	CNC Plasma Cutter (Plasmanoy)	Plasma cutting has advantages over traditional “metal against metal” cutting by giving accurate cuts and producing cleaner edge cut than oxy-fuel cutting. CNC technology gives plasma cutting machines greater flexibility to cut intricate and customized designs based on a set of instructions that are programmed into the computer. A CNC plasma cutter is a high pressure air driven cutting system synchronous to electric arc which produces high temperature plasma capable of boring and cutting ferrous and limited non-ferrous metal materials coordinated from a host such as computer or a standalone system like PLC, MCU driven modules etc. using strings of codes to follow set of instructions in an orderly manner to produce a tool path on the machine.	Cameron B. Yao	No IP	
4	CNC Router (Super Lilok)	The developed CNC Router (Super Lilok), like any CNC machines, is run by a software that not only allows creativity and complexity on woodworking and metal-cutting designs but also increases work efficiency. The machine can cut and engrave on woods, metals, and acrylics. The speed of the spindle and type of router bit can be adjusted on the software controller. Because of its ability to cut various materials, more intricate and sophisticated woodworking designs can be produced and reproduces in large quantity without fear of unwanted cutting quality every single time.	Jayson P. Rogelio	No IP	

5	Compact Rice Mill Diverting Chute	The conventional art of milling using compact rice mill is to remove hull and bran which also removes the nutritious components of rice. Nevertheless, with the current health concerns, innovation in the conventional milling process should be given prior attention to address such issues. The compact rice mill diverting chute allows rice processing to produce nutritious rice aside from the usual milled rice. It relates in general to a diverting chute with simple construction and easy maintenance. It provides capability to a compact rice mill to produce both brown rice and well-milled rice.	Nico Deus O. Villafranca Joein L. Luces Reynaldo P. Gregorio	IP Protected	
6	Electric Potter's Wheel	The potter's wheel is a variable frequency drive driven for forming manually by hand clay objects or shaped ceramic wares such as ceramic plates and ceramic cups. This is composed of independent part basin placed at the top of the working platform, an aluminum wheel mounted to a rotary chuck, a variable frequency drive provided to drive the speed of synchronous motor that is connected to a belt-driven shaft, and adjustable footings provided to adjust and stabilize the height of the working platform.	Ronie Alamon Allan John S. Limson Raymond De Ocampo Joein Luces	IP Protected	
7	Freeze Dryer	Equipment used to dry heat sensitive food by removing water. This preserves the food product and makes it lighter and easy to transport. Unlike other preservation process such as canning and freezing, freeze dried food retains flavors, aroma and nutritional content and is easily returned to its original state just by adding water. The vacuum chamber of the freeze dryer can accommodate 5 adjustable trays and has a condensing capacity of 3 to 4 kg of moisture in 24 hours. The equipment can also be used for pharmaceutical products.	Joseph Reymond A. Alvarez Robert O. Dizon Fred P. Liza Jose B. Ferrer Jorge Arbie V. Garcia Pamela S. Gonzales Brian U. Rasco Sharel Shyateza M. Abellar Oliver C. Evangelista Melchor C. Valdecañas	IP Protected	
8	Hybrid Electric Road Train	The Hybrid Electric Road Train (HeRT) is a multiple-coach urban mass transit vehicle powered by a diesel-electric generator set and battery power system which stores energy every time it stops or brakes and reuses the stored energy during acceleration, thus making it cleaner and environment-friendly. The 240-passenger and 160-passenger (light) models can help ease traffic and may provide shorter and more predictable travel time. Passenger safety and comfort are harmonized in its design.	Rio S. Pagtalunan Rommel N. Coroña Arlene G. Estacio Christian Glenn S. Ligon Christian M. Ibañez Franz Joseph D. Libao Alvin M. Buison Jorge Arbie V. Garcia Elljay P. Mutuc Godfreyson J. Nardo Alexander Argame Jr.	IP Protected	

9	Hybrid Electric Train	At present, the Philippines faces a crisis in the transportation sector made evident by congested traffic resulting to wasted time and energy that directly impacts the development of the country, and the welfare of the population. DOST-MIRDC embarked on a project that developed a five coach hybrid electric train set. The train set used diesel-electric power system comprises of generator set and battery. The system uses a regenerative braking system to harness energy during braking. This will help utilize and maximize the capabilities of local industries in the fields of metals and engineering enabling the country to generate its own technology to address its needs in the area of transportation.	Engr. Robert O. Dizon Engr. Pablo Q. Acuin Engr. Jonathan Q. Puerto Engr. Rodnel O. Tamayo Glen D. Espena Ulysses B. Ante Jorge Arbie V. Garcia Engr. Franz Joseph D. Libao Rolando F. Ibuig Engr. Carla C. Nocheseda Engr. Nelson L. Tumibay Geofrey L. Abulencia Engr. Florentino J. Lafuente	IP Protected	
10	Jigger and Jolly Machine	The clay molding equipment for jiggering and jollying methods in forming clay objects to mass-produce uniformly shape ceramic wares. This equipment is comprised of a working platform, a tool holder pivotably connected to an adjustable tool-stand, a rotary chuck attached to the said working platform, a belt-driven shaft connected to the rotary chuck, a VFD, to drive and control the speed of the synchronous motor, and adjustable footings provided to adjust and stabilize the height of the working platform.	Ronie Alamon Allan John S. Limson Raymond De Ocampo Joein Lucas	IP Protected	
11	LPG-fired Spray Dryer	Equipment used in efficient and rapid production of dry powder food from its liquid or slurry form. Water or moisture content of the food product is removed when it comes in contact or mixes with the hot gas inside the chamber. The LPG Fired Spray Dryer has the evaporation capacity of 2-3 kg of water, converting the 6.5-7.0 liters stream of atomized liquid per hour to dry powder through the 120-180°C high-volume airflow inside the 900 mm diameter x 1800 mm height drying chamber. It is best applied for drying of food products such as milk powder, starch, coffee, tea, spices, and flavorings and may be used for pharmaceutical and related industrial products.	Alvin M. Buison Jorge Arbie V. Garcia Pamela S. Gonzales Brian U. Rasco Fred P. Liza Jose B. Ferrer Oliver C. Evangelista Robert O. Dizon Melchor C. Valdecañas Jesus A. Tanchuco Iii Elmer C. Magora	Ongoing	
12	Meteorological Buoy	The Meteorological Buoy is a stable floating device that is designed to be equipped with sophisticated communication system and sensors to collect and measure real time ocean and weather data such as wind, relative humidity, air temperature, barometric pressure, rainfall, wave height and direction, and sea temperature. It has provisions to hold batteries and solar panels to power the various instruments.	Francisco C. Dime Gharry M. Bathan Isidro D. Millo Blesilda P. Cabaña	No IP	

13	Microcupola	The micro cupola is a 10-inch diameter vertical shaft for melting cast iron at the rate of 140 to 180 kgs per hour. The structure is modular and collapsible which makes it easy to fabricate, maintain and transport. The micro cupola is excellent for backyard foundry, for laboratory scale research and product development and for foundry technology course instructional material.	Florentino Lafuente Lemuel N. Apusaga	No IP	
14	Modular Water Retort	Equipment used for thermal processing of food in air-tight containers such as tin cans, glass jars and retort pouches which will result in the preservation of food and making it stable even under non-refrigerated conditions. The enclosed cooking chamber has a working volume of 100 liters and 120 to 140 degrees operating temperature.	Ulysses B. Ante Jorge Arbie V. Garcia Jose B. Ferrer Franz Joseph D. Libao Rommel M. Belandres Brian U. Rasco Robert O. Dizon Fred P. Liza Melchor C. Valdecañas Oscar T. Magora, Jr. Lorencito M. Pacatang	Ongoing	
15	Muscovado Sugarcane Crusher	An equipment designed to extract juice from sugarcane. It is powered by a two-cylinder engine connected to a transmission system to reduce the speed thereby producing the torque required to crush the cane entering from the loading area. The extracted juice is then collected in a pan underneath the rollers and bagasse is collected at the back of the roller assembly.	Francisco C. Dime	No IP	
16	Pandanus Leaves Slitter-Presser	This is a machine intended to press bariw (other name for pandan) leaves to flatten and cut them into several strips for handicraft products. Pressing the leaves improves the texture and unifies thickness generally from tip to tip, while slitting cuts the leaves into widths of 5, 10 or 15mm. The presser-slitter is manually operated within nine (9) major parts – (1) crank mechanism, (2) plunger, (3) roller presser, (4) inlet guide sheet, (5) slitter cover, (6) slitter assembly, (7) gear assembly & cover, (8) outlet guide sheet, and (9) base platform.	Allan John S. Limson Francisco C. Dime	IP Protected	
17	Rice Harvester Attachment (RHA) for Hand Tractors	An implement that is easily attached to and detached from common hand tractors thereby helps reduce cost and manpower requirement for harvesting and threshing compared to manual process. Unlike dedicated combined harvester, the RHA has simple mechanisms, considerably lighter and makes use of the already available hand tractors common to most farmers. With a working width of 0.8meters, the RHA can harvest and thresh up to 0.5 hectares per day. The RHA requires a 9 hp (minimum) diesel engine hand tractor.	Isidro D. Millo Ronie S. Alamon Emerito V. Banal Raymond S. De Ocampo Laureano L. Dalay	Ongoing	

18	Rice Transplanter Attachment (RTA) for Hand Tractors	An implement that is easily attached to and detached from common hand tractors which helps reduce cost and manpower requirement for transplanting rice seedlings compared to manual process. Unlike dedicated rice transplanters, the RTA has simple mechanisms, lighter and makes use of the already available hand tractors common to most farmers. The 4-row transplanter can be attached to hand tractors with 7 hp (minimum) diesel engine. It has the capacity to transplant rice seedlings up to 1.6 hectares/day at a planting distance of 30cm x 20cm. The planting depth can be adjusted to 3-5cm.	Isidro D. Millo Ronie S. Alamon Emerito V. Banal Raymond S. De Ocampo Laureano L. Dalay	Ongoing	
19	Shake Table / Earthquake Simulator	Shake Table is a vibrating platform machine which will provide the trembling earthquake sensation. It can be used as earthquake simulator to educate students and professional in responding during earthquakes. The machine can create horizontal and vertical movement, simulating the range of 3 to 8 magnitude and intensity earthquake.	Gharry M. Bathan Jose B. Ferrer Fred Liza Francisco C. Dime Allan John S. Limson Noel Datul Walter V. Bonggat	No IP	
20	Superheated Steam Treatment System for Stabilized Brown Rice	This equipment is used for steaming and drying of brown rice in order to prolong its shelf life from 1-2 months to 5-9 months and also improves its taste and texture. The conveyor and control system of the SSTS makes loading, spreading and discharging of brown rice easy. The treatment chamber can process up to 685 kgs per day at 5-7 minutes processing time per 10-15 kg batch of brown rice. SSTS is most recommended for rice mills and brown rice producers.	Dominic S. Guevarra Joein L. Lucas	Ongoing	
21	Sweet Sorghum Juicer	The dual-purpose machine is a machine which can both function as sweet sorghum juicer and sugarcane crusher. It has a capacity of 200-kilogram per day which is lightweight, portable, can be easily operated and requires low maintenance. It can be used as sweet sorghum juicer when the top roller rotates in the opposite direction as the bottom rollers during the extraction process. It is converted into a sugarcane crusher through modifying the gear to adjust the gaps between the feed and discharge rollers, extending the legs of the machine to allow the extracted juice to flow from the bottom of the pan and providing a way to nail the legs onto a wooden trunk.	Joey Ferrer	No info provided yet	
22	Tent System	Tent system, designed for the Philippine climate, is a suitable temporary shelter during humanitarian emergencies such as storms, earthquakes and fires. There are three sizes of 22, 32 and 50 square meter floor areas, suitable for 5, 7 and 11 occupants, respectively. It can be easily set-up within 1 hr. This technology comes with the manufacturing and pitching guide, allowing adoptors to fabricate easily from locally available materials.	Rodnel O. Tamayo	No IP	

23	Tikog Presser	This is a machine intended to press tikog leaves to flatten it for handicraft products. This eliminates the time-consuming and backbreaking pounding and repeated pulling of tikog strands. It makes the flattening process 16-18x faster than traditional operation. Using the machine improves strand size and quality and saves preparation time and labor cost by 83%.	Allan John S. Limson Francisco C. Dime	IP Protected	
24	Trash Rake	A waterway cleaning and control facility consisting of a stationary inclined conveyor screen which traps floating debris. The debris can then be immediately removed with the use of a conveyor rake. The trash rake helps increase flow efficiency of waterway through 24/7 operation. It also ensures safety and staff morale compared to manual collection/raking methods. The base model covers a width of 6.30m and height of 5.60m with collection rate of 8.8 cu. m per day.	Gharry M. Bathen	No IP	
25	Vacuum Fryer	Equipment used for deep frying under reduced pressure of up to 6KPa. Comparing to conventional frying, the frying temperature is low (90 to 100 deg. C) thus allows the oil to be used for several frying batches. The spinner inside the frying chamber is used to remove excess oil from the fried food product, thereby results to less oil content of finished product. The 17-liters frying chamber can accommodate about 10 kg of food per batch. This equipment is suitable for frying root crops, marine products, vegetables and fruits.	Ulysses B. Ante Jorge Arbie V. Garcia Jose B. Ferrer Franz Joseph D. Libao Rommel M. Belandres Brian U. Rasco Robert O. Dizon Fred P. Liza Melchor C. Valdecañas Oscar T. Magora, Jr. Lorencito M. Pacatang	Ongoing	
26	Wrought Iron Forming Equipment	Integrated hand-powered wrought forming tool that features four function: bending, rolling, twisting and curling of iron and steel bars that exceptionally provides a manageable conveyance that the user can efficiently handle	Laureano L. Dalay Isidro D. Millo Ronie S. Alamon Raymond S. De Ocampo	IP Protected	

DOST-PNRI Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Polyvinylpyrrolidone Carrageenan Hydrogel (4x4 size hydrogel)	This is a patented and modern alternative to gauze and bandage in wound care management. It is hypoallergenic, transparent, and soothing to wounds. Tested on burns, diabetic ulcers, and bed sores in collaboration with medical doctors. As over the counter skin patch, it can be aimed at vanity market.	Chemistry Research Section 929 6011 loc. 234	No info provided yet	Gregory Ciocson Business Development Section, DOST-PNRI 929 6011 - 19 local 232 grciocson@pnri.dost.gov.ph
2	Seaweed-based Plant Growth Promoter	Fully compatible with farmers' practices, this plant growth promoter stimulates an increase in crop production. Based on multi-locational field tests, the technology also provides resistance to the tungro virus and bacterial leaf blight. Crops were able to endure stress from strong winds and rains and survive typhoons. This technology is environment friendly because it is non-toxic.	Dr. Lucille Abad Chemistry Research Section 929 6011 loc. 234	Ongoing	
3	Technetium Radioisotopes	No info provided yet	Chemistry Research Section 929 6011 loc. 234	No info provided yet	

DOST-PTRI Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Four Shaft Modified Handloom Weaving Machine	A modern technical upgrade to the traditional upright loom equipped with alternate foot switch mechanism that allows the weaver to adjust the warp beam without the need to stand and enhanced weaving parts that prevents the usual wear and tear association with wood.	Engr. Daniel J. Lavin Supervising SRS 837 1157 danee_lavin@yahoo.com.ph	Ongoing	Evangeline Flor P. Manalang Angelito T. Uldo Office of the Director – TIPS 8837 1338 / 8837 2071 loc. 2361 epmanalang@gmail.com angelu03@gmail.com
2	Four Shaft Modified Handloom Weaving Machine with Fly Shuttle Mechanism	No info provided yet	Engr. Daniel J. Lavin Supervising SRS 837 1157 danee_lavin@yahoo.com.ph	Ongoing	
3	Manual Sectional Yarn Warper Machine	No info provided yet	No info provided yet	No info provided yet	
4	Natural Textile Blended Yarns	No info provided yet	No info provided yet	Ongoing (Patent)	
5	Sugarcane-Bagasse Textile Processing	No info provided yet	No info provided yet	IP Protected (Utility Model)	
6	Sugarcane-Bagasse Fiber Pretreatment for Yarn Production	No info provided yet	No info provided yet	IP Protected (Utility Model)	
7	Therapeutic Handloom Weaving Machine	This utility model specifically designed for paraplegics or persons with disability is a four-harness handloom weaving machine equipped with a sliding beater and a hand-held lever and can be mounted on a standard wheelchair. It is characterized by convenience and comfort of operation that is adaptable to a wheelchair, and portability for ease of transport to other places.	Engr. Daniel J. Lavin Supervising SRS 837 1157 danee_lavin@yahoo.com.ph	Ongoing	
8	Upscaled Natural Dyeing	No info provided yet	No info provided yet	No info provided yet	

DOST-PCAARRD Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	ABTV Diagnostic Kit	The diagnostic kit developed for the detection of abaca bunchy top virus (ABTV) is based on the principle of dot-ELISA (Enzyme Link Immunosorbent Assay). The primary component of the diagnostic kit is the antiserum generated to specifically detect the presence of the virus. The generated antibody can detect infection in the lowest concentration.	DR. EDGARDO E. TULIN National Abaca Research Center Visayas State University (VSU)	No info provided yet	No info provided yet
2	ACTICon™ Biopesticide for Cavendish Banana	ACTICon™ a biopesticide that uses the fungi actinomycetes as a biocontrol agent against the devastating <i>Fusarium</i> wilt-causing <i>F. oxysporum</i> TR4 (Foc TR4) or more commonly known as the Panama wilt in Cavendish bananas. It was developed to serve as a replacement for the synthetic chemical pesticides that is currently being excessively used in the market, causing harm to the environment, as well as to the human and animal health.	IRENE A. PAPA National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
3	Aerated Bulk Storage System for Peanut	The automated aerated bulk storage system for peanut pods can operate independently without being attended to by a microcontroller programmed to respond intelligently through a customized computer program. It maintains temperature and moisture levels of bulk store and preserves the viability of the peanuts, and keeps the molds infestation low over time.	DR. JOSE D. GUZMAN Cagayan State University (CSU)	No info provided yet	No info provided yet
4	Andali LAMP Kit for Swine PED Virus	The PEDV RT-Lamp test kit is a quick reliable cost-effective diagnostic tool for the early detection and control of Porcine Epidemic Diarrhea Virus (PEDV) in swine. The fast, early and timely diagnosis of PED infection will greatly reduce production losses by minimizing mortalities associated with the disease. It would also enhance the capability of private and regional animal disease diagnostic laboratories in the diagnosis of the PED virus infection.	DR. CLARISSA YVONNE J. DOMINGO Central Luzon State University (CLSU)	IP Protected	CLSU-IP-TBM irwin_salapare@yahoo.com 0997-987-7991
5	Automatic Bottom Feeder for Shrimp	The automatic bottom feeder administer feed at the cage bottom towards the surface. The design considered mainly the cost and efficiency in cage operation. The feeding device can be remotely operated and monitored, thereby, optimizing feeding protocol and minimizing labor cost.	DR. VALERIANO L. CORRE JR. University of the Philippines Visayas (UPV)	IP Protected	UPV-IP-TBM Office cpponce@upv.edu.ph 0917-317-0151
6	Automatic Surface Feeder for Milkfish and Shrimp	The automatic feeder is designed to distribute feeds at the water surface. The unit has a straight feed spreader to cover a larger area when feed is dispensed. Automatic feeders are used to reduce production cost (through reduced labor cost), improve product quality, and minimize waste by maximizing feed utilization.	DR. VALERIANO L. CORRE JR. University of the Philippines Visayas (UPV)	IP Protected	UPV-IP-TBM Office cpponce@upv.edu.ph 0917-317-0151

7	Biogro TM	Biogro TM is a solid-based microbial inoculant containing plant-growth-promoting-bacteria (PGPB), which are root-associated bacteria inducing root growth by producing plant hormones and providing nutrients in soluble form. Based on the research conducted by UPLB BIOTECH, the use of Biogro TM with the recommended rate of chemical fertilizer provided a significant increase in growth rate and productivity of high value crops such as corn and rice.	DR. ERLINDA S. PATERNO National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
8	Biosensor Kit for Shrimp Pathogens	One of the keys to reducing the risk of diseases in shrimp is prevention and early detection. Affordable, rapid, and easy to use for diagnosis of pathogen for shrimps - method that involves the use of genome-based lateral flow strip biosensor has been developed as a diagnostic platform for white spot syndrome virus (WSSV) and other shrimp pathogens. The test strips are field-ready, with an extraction and mobile device kit for first level screening of pathogens on site. Test strips may also be coupled with polymerase chain reaction (PCR) amplification of DNA extracts for faster and low level detection. The test strips may be multiplexed for simultaneous detection of more than one pathogen. The use of mobile strip reader and an accompanying application (app) instantaneously allows the test results of the diagnostic strips to be fed into an on-line pathogen information resource and bio-surveillance system. The mobile strip reader will link the data captured by the app to the cloud server, which in turn is linked to a bio-surveillance data center at the Southeast Asian Fisheries Development Center (SEAFDEC).	DR. ERWIN P. ENRIQUEZ Ateneo de Manila University (AdMU)	IP Protected	No info provided yet
9	Botanical Insecticide for Organic Vegetable	Seven formulations against target insect pests: F3, Curphora, F4, Tacuma, F5, Glicum and F6-Glitap	DR. MARILYN G. PATRICIO Central Luzon State University (CLSU)	IP Protected	CLSU-IP-TBM irwin_salapare@yahoo.com 0997-987-7991
10	By-products from Cacao Wastes	Since cacao waste utilization was one of the identified problems in the cacao production, PhilMech developed technologies that would utilize the high volume of cacao waste such as cacao pod husk, drippings and hull. These cacao wastes are processed into different types of products like wine, vinegar, health drinks, ethanol and fuel briquettes.	ENGR. ANDRES M. TUATES Philippine Center for Postharvest Development and Mechanization (PhilMech)	IP Protected	No info provided yet
11	Carrageenan Plant Growth Promoter	Carrageenan is an indigestible polysaccharide (carbohydrates) extracted from edible seaweeds. Polysaccharide, when subjected to modified irradiation technology, can be an effective plant growth supplement. At a very small dose, this supplement makes an effective organic fertilizer. It has been found to increase rice yield by 15-30%. The application of three and six bags of chemical fertilizer per ha, combined with 20 ml/L of carrageenan yields higher grain weight (450g and 455 g/10 hills, respectively) than the farmers' practice of applying nine bags of chemical fertilizer/ha. Carrageenan enhances the crop vigor of rice. Productive tillers and panicle length (length of inflorescence) are significantly higher	DR. LUCILLE V. ABAD Philippine Nuclear Research Institute (PNRI)	IP Protected	No info provided yet

		in Carrageenan-treated plants. Productive tillers are the rice stems that bear panicles (rice inflorescence) with fertilized grains, while longer rice panicle is associated with producing more grains.			
12	Chevon Products in Retort Pouch	Chevon food products, namely, pinapaitan, sinampalukan, chevon bulgogi and sisig, are packed in retortable stand up pouches, processed through water retort.	DR. ANABELLA G. VALDEZ Don Mariano Marcos Memorial State University (DMMMSU)	IP Protected	No info provided yet
13	Chevon Valley Canned Products	Canned chevon products comes in three different recipes namely, Kalderetang Kambing, Adobong Kambing and Kilawing Kambing. Canning of local delicacies is a way of promoting native dishes and consequently, capturing the bigger market for chevon. It also ensures longer storage and stability of the product and easy transport.	DR. JONATAHAN N. NAYGA Isabela State University (ISU)	IP Protected	No info provided yet
14	Coffee Greenhouse Solar Dryer	A greenhouse-type solar dryer retrofitted with biomass furnace for coffee beans capable of operating at low temperature with no source of electricity. It intends to provide an alternative method for drying coffee beans instead of directly exposing to sunlight.	DR. ROMUALDO C. MARTINEZ Philippine Center for Postharvest Development and Mechanization (PhilMech)	IP Protected	No info provided yet
15	Compact Ultra Impeller Rice Mill	The impeller-type rice mill machine uses impeller as its hulling mechanism. It speeds up the milling process from its milling capacity of 230kg/hour. It is capable of producing both white and brown rice with milling recovery comparable with rubber roll type but higher by 5% as compared with "Kiskisan". The design is suitable for village level operation.	DR. MICHAEL A. GRAGASIN Philippine Center for Postharvest Development and Mechanization (PhilMech)	IP Protected	No info provided yet
16	Darag Native Chicken	Develop and showcase the package of technologies on free range Native chicken production.	DR. EVELYN D. TOMAMBO West Visayas State University	No info provided yet	No info provided yet
17	Dewormer for Native Chicken	Dewormer for native chicken is a formulation of ethnobotanicals against internal parasitism. The combined ethnobotanicals of Ipil-Ipil & betel nuts are most effective in treating roundworms of Darag native chicken which comparable to the effect of commercial dewormer.	DR. BEDE P. OZARAGA, DVM Capiz State University (CapSU)	IP Protected	CapSU-IP-TBM Office
18	Disease Management Products for Organic Vegetables	Develop organic pest management products and systems that students, farmers, and entrepreneurs can produce and apply in organic vegetable livelihood activities in CAR	DR. JANETTE B. MUSNI Pampanga Agricultural State University (PSAU)	IP Protected	PSAU IP-TBM Office
19	DNA-based "SSR (Simple Sequence Repeat) Marker" Kit for Philippine 'Carabao' Mango	DNA-based "SSR (Simple Sequence Repeat) Marker" Kit for Identification of Philippine 'Carabao' Mango Planting Materials	DR. EMMA K. SALES University of Southern Mindanao (USM)	IP Protected	USM-IP-TBM Office
20	Drip Irrigation System for Peanut and Sugarcane	Drip Irrigation (DI) system replaces the furrow irrigation method for peanut. It helps to increase the profitability of peanut production through increased water productivity and improved sees quality.	DR. NATHANIEL R. ALIBUYOG Mariano Marcos State University (MMSU)	No info provided yet	MMSU IP-TBM Office

21	Dwarf Saba Strain	Saba banana strains with short stature (about 4 meter or less) and early maturing (harvestable at 12-16 months). It intends to make Saba banana production more profitable to small hold farmers.	Dr. LAVERNEE S. GUECO University of the Philippines Los Baños (UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
22	Effective Microorganisms (EMs) as bio fungicide for rubber	Indigenous substrates containing effective microorganisms (EMs) as biofertilizers and bio fungicides against <i>Phytophthora palmivora</i> of budded rubber seedlings, with comparable effect to commercial synthetic fertilizers and pesticides.	DR. ELVIE V. DIAZ Sultan Kudarat State University (SKSU)	IP Protected	No info provided yet
23	ETAG Products from Native Pigs	Etag is an ethnic and traditional meat delicacy of the Cordilleras processed through curing of the meat of native pig with salt and then either sundried or smoked for preservation. It is popularly used as flavor enhancer in different viands. Today Etag is a popular term used for salted and dried pork.	CYNTHIA D. GARAMBAS Benguet State University (BSU)	IP Protected	BSU-IP-TBM Office
24	Far-Infrared Grain Dryer	A new rapid-drying technology for paddy using far-infrared technology. It has an average milling recovery of 69.5% and head rice yield of 47%.	DR. MANUEL JOSE C. REGALADO Philippine Rice Research Institute (PhilRICE)	IP Protected	PhilRICE-IP-TBM Office jeesup9@yahoo.com 0917-632-0703
25	Fertigro™ Controlled-Release Fertilizer	Controlled-release nitrogen fertilizer (CRNF) aims to replace conventional fertilizer and to reduce the cost of farming. The technology utilized the inherent properties of nanofertilizer, such as controlled release of nitrogen and greater surface area for higher absorption rate. Since CRNF can fully replace conventional fertilizers, the input cost of farming can be minimized. Reduced amount in comparison with conventional fertilizers (up to 50% reduction) will be needed to acquire targeted plant development when CRNF is used.	DR. LILIA M. FERNANDO National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
26	Goat Semen Extender	The semen extender was developed with soybean lecithin as the source of non-penetrating cryoprotectant in lieu of egg yolk. It is very effective in lengthening the viability of the goat spermatozoa under refrigerated storage from 48 to 110 hours and increasing post thaw motility to as high as 60%.	AUBREY JOY BALBIN Isabela State University (ISU)	No info provided yet	ISU-IP-TBM Officer niloepadilla0926@gmail.com 0916-322-5967
27	GRAS "Generally Regarded as Safe" Coatings for Vegetables	Coatings derived from phytochemical extracts can be generally regarded as safe (GRAS) to enhance the shelf life of highly perishable vegetables. The application of extracts extended the shelf life and sustained the free radical scavenging activity (FRSA) of coated vegetables.	DR. MARCELO A. QUEVEDO Visayas State University (VSU)	IP Protected	No info provided yet
28	Green Coffee Sorter	A mechanical and sensor-based machine for coffee quality measurement and sorting.	REYNALDO P. GREGORIO Philippine Center for Postharvest Development and Mechanization (PhilMech)	IP Protected	No info provided yet

29	Hi-Yeast Biocontrol Agent for Fruits and Vegetables	Hi YEAST is a yeast-based biocontrol agent that prevents fruit and vegetable decay caused by pathogens during postharvest handling. The technology is designed as an alternative and/or supplement to reduce the use of chemicals in nature. Consequently, it will reduce human health and environmental risks that comes with the use of existing synthetic control agents. It is applicable to fruits and vegetables, specifically, to banana, tomato, calamansi, mango, garlic, nuts and onion.	DR. SEVERINA B. EXCONDE National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	No info provided yet	UPLB-TTBDO (049) 501-4756
30	Hog Cholera LAMP Kit	A dry format RT-LAMP test kit which can differentiate the vaccine virus from the field CSF virus to serve as a surveillance tool for the swine industry.	DR. CLARISSA YVONNE J. DOMINGO Central Luzon State University (CLSU)	No info provided yet	CLSU-IP-TBM irwin_salapare@yahoo.com 0997-987-7991
31	Itik Pinas	Itik Pinas is a genetically superior breeder duck which has a higher average productive period of 70% in a year, compared with 55% for the old breed. The strains of Itik Pinas are products of organized breeding and selection that focus on the uniformity of physical characteristics, higher and predictable egg production performance, and consistent egg quality. Itik Pinas can adapt to local conditions and can perform well even with simple housing and low-cost feeds.	DR. RENE C. SANTIAGO, DVM BAI-NSPRDC	IP Protected	No info provided yet
32	JAMP® Juan Amplification WSSV Detection Kit (Old name: LAMP Kit for Shrimp Pathogens)	Loop-Mediated Isothermal Amplification (LAMP) diagnostic kit is a practical alternative to the conventional polymerase chain reaction (PCR) and standard microbiological techniques in the detection of White Spot Syndrome Virus (WSSV). It is 10x more sensitive for the detection of WSSV compared to PCR. It is aided by a heat block apparatus which replaces the expensive thermal cycler. Results can also be obtained within 1 hour. Due to its convenience, simplicity and speed of detection, it can be used on-site. Diagnostic kit utilizing locally fabricated machine will significantly bring down the cost of pathogen detection in the country.	DR. MARY BETH B. MANINGAS University of Santo Tomas (UST)	IP Protected	No info provided yet
33	Juan Algae Microalgal Paste (Aquafeed)	Algae pastes are concentrates of liquid microalgae cells which are used in nurseries as feed for larval fish, shrimp and other aquaculture species. The microalgae paste is an instant feed that can be used as an alternative to on-site algal culture especially when rations of live algae are insufficient. It is easy to apply and can be provided to the stock anytime.	DR. SOLEDAD S. GARIBAY University of the Philippines Visayas (UPV)	No info provided yet	UPV-IP-TBM Officer cpponce@upv.edu.ph 0917-317-0151
34	Local Riding-type Rice Transplanter	Suitable for transplanting inbred and hybrid rice. It can transplant 2 to 6 seedlings per hill at a planting depth of 2-6 cm, hill spacing of 12-18 cm, and row spacing of 30 cm. Helps minimize labor cost compared to manual transplanting, which requires 20-25 persons/day/ha and takes only two persons to complete transplanting activities and has a planting capacity of 2 ha/day with 24 hills/m ² planting density.	DR. ARNOLD S. JULIANO Philippine Rice Research Institute (PhilRICE)	IP Protected	PhilRICE-IP-TBM Office jeesup9@yahoo.com 0917-632-0703

35	Mangife Tek Integrated Postharvest Facility for Mango	The integrated postharvest facility for mango has six units to operate the six (6) postharvest stages. It includes, the automatic table sorter for sorting; control wash tank for washing; automated hot water treatment; automated controlled industrial fan for cooling; automated weight classifier for classification according to size and weight; and table for packing.	DR. ROGER C. MONTEPIO University of Southeastern Philippines (USEP)	IP Protected	USEP-IP-TBM Office filmann.simpao@usep.edu.ph 0933-3266-173
36	Meat Detection Kit	The meat detection kit is used for various meat authentication and identification, food safety test, Halal authentication, forensic investigation, and animal and research studies.	JOY B. BANAYO University of the Philippines Los Baños (UPLB)	No info provided yet	UPLB-TTBDO (049) 501-4756
37	Mechanical Fruit Picker	The existing picker (sigpao) was modified by fabricating additional blades as cutting mechanism during pulling and triggering. The prototype has two types of mango picker, the pull type and trigger type picker which are both attached to bamboo poles. The trigger type was made up of a cutting device controlled by a trigger while the pull type picker was fabricated with double blades. Based on the results compared with the conventional mango picker having an average capacity of 22 pieces/min, the trigger and pull type registered a capacity of 12 pieces/min and 21 pieces/min respectively. Latex stain reduced by 91.77 % when the trigger type picker was used. An 86.88 % stain reduction was observed when the pull type picker was utilized. The use of both pickers resulted to insignificant number of fallen and mechanically damaged fruits.	DR. ROGER C. MONTEPIO University of Southeastern Philippines (USEP)	No info provided yet	USEP-IP-TBM Office filmann.simpao@usep.edu.ph 0933-3266-173
38	Mechanical Peanut Sheller-Sorter	A peanut sheller with sorter machine to separate the peanut kernel from pods and sort the kernels into three sizes. It has a capacity of 150 kg/h with an overall shelling performance that is above the standard set by the PAES (Philippine Agricultural Engineering Standards).	DR. JOSE D. GUZMAN Cagayan State University (CSU)	IP Protected	No info provided yet
39	Mechanical Peanut Stripper and Sorter	The peanut stripper with pod sorter machine is used to separate the peanut pods from the vines, removing the dust, sticks and foreign materials, and sort the pods into three sizes. It has a capacity of 117 kg/h depending on the pod/vine ratio and or the variety and season of harvesting.	DR. JOSE D. GUZMAN Cagayan State University (CSU)	IP Protected	No info provided yet
40	Mechanized Coffee Depulper	A medium-scale coffee mechanical depulper with 20% increased capacity and pulp-parchment separation efficiency by at least 20%.	RAYMUND JOSEPH P. MACARANAS Philippine Center for Postharvest Development and Mechanization (PhilMech)	IP Protected	No info provided yet
41	MicroMix Biostimulant for Bell Pepper and Bitter Gourd	MicroMix is a biostimulant that is composed of a consortium of bacteria that enhances the growth of crops, particularly of bell pepper and bitter gourd. It was developed as a response to the excessive use of chemical stimulants and fertilizers and its increasing costs.	DR. MANNIX S. PEDRO National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	No info provided yet	No info provided yet

42	Milkfish Automatic Fry Counter	Automatic Fry counter is a laser fry counting that addresses the problem of laborious and inaccurate manual counting of milkfish fry. The design was able to minimize the stress during the counting process and reduce the time it takes to count the fry. Trials of the counting mechanism have shown 95% accuracy with six pieces per second counting rate.	DR. VALERIANO L. CORRE JR. University of the Philippines Visayas (UPV)	IP Protected	UPV-IP-TBM Office cpponce@upv.edu.ph 0917-317-0151
43	Mykoplus Biofertilizer	MykoPlus biofertilizer is a breakthrough agricultural solution in improving crop production by significantly reducing the amount of required synthetic fertilizer application in farm operations while improving soil condition. It capitalizes on naturally-occurring microbial organisms such as mycorrhiza and phosphorus solubilizing bacteria to enhance nutrient uptake of plants. It is intended to help farmers in their farming operations by lowering the total cost of soil fertilization as well as allowing a more sustainable agricultural practice through the preservation of the soil's natural ecosystem. Mykoplus promises to serve as a source of affordable and sustainable biofertilizer that can improve the yield of farmers and fortify the survivability of crops to withstand various pernicious environmental factors. It is a stand-alone product in the form of powder which is applied as seeds as coating.	DR. JOCELYN T. ZARATE National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
44	Non-destructive moisture meter for coffee	A Moisture Meter for coffee is an improved moisture meter that is non-destructive, inexpensive, simple yet provides accurate results in determining the moisture content (MC) coffee beans.	ENGR. ARLENE C. JOAQUIN Philippine Center for Postharvest Development and Mechanization (PhilMech)	IP Protected	No info provided yet
45	Nutrio™ Biofertilizer for Eggplant and Sugarcane	Nutrio™ is a biofertilizer that uses endophytic bacterial inoculants which promote nitrogen fixation and production of plant growth promoting hormones of eggplant and sugarcane. It is a foliar spray biofertilizer in powdered form suspended in water and is directly sprayed on growing crops. It is also a stand-alone product.	DR. VIRGINIA M. PADILLA National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
46	OTOP-developed Peanut Products	Peanut processed products in improved packaging using food grade PET jars for peanut butter and oriental propylene (OPP) extended the shelf life of sand toasted and peanut.	DR. HILDA L. QUINDARA Cagayan State University (CSU)	IP Protected	No info provided yet
47	Pelletizing Machine for Goat Feeds	A portable pellet mill developed mainly from scrap-materials that is appropriate for on-farm pellet production. It is used in pelletizing total mixed ration (TMR) for goats. It has a milling capacity of 130 kg/hr and machine efficiency of 93.30% with fuel consumption of 0.17 li/hr.	DR. EDGAR A. ORDEN Central Luzon State University (CLSU)	IP Protected	CLSU-IP-TBM irwin_salapare@yahoo.com 0997-987-7991

48	Portable Mango Sprayer	The Portable Mango Power Sprayer prototype has a total discharge of 9.07 – 9.83 li/min and 10.03 – 12.03 li/min with spray coverage width of 2.1 to 2.4 meters at 250 to 300 psi pump pressure, 2-1 to 3-1 orifices two-nozzle combination and 45 to 240 degrees' end cap twist setting, respectively. It has an approximate spraying capacity between 3.33 – 6.67 minutes per tree depending the age of tree and canopy on normal average walk. Longest reach of spray materials varies from 3.68 to 5.62 meters away from the two nozzles. Using the prototype, the amount of chemical (solution) savings was around 398 li/ha (100 trees). It has more uniform spray deposition with around 34.54 – 45.00 percent distributed on lower half and 65.46 – 55.00 percent distributed at upper half of the tree canopy. It is more effective to control trips by as much as 18.23% mortality rate than using the conventional of only around 64.15%.	DR. ROGER C. MONTEPIO University of Southeastern Philippines (USEP)	No info provided yet	USEP-IP-TBM Office filmann.simpao@usep.edu.ph 0933-3266-173
49	Protein Enriched Copra Meal (PECM) as Feeds	Protein enriched copra meal (PECM) is the product of the bioprocessing of copra meal through solid state fermentation to improve its nutritive value. It is potentially high in valuable protein feed ingredient with CP of 36%-40%. It can be used to produce economical feed ration because it has better nutrient profile and digestibility.	IRENE A. PAPA National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
50	Protein-based "Dipstick" Kit for Philippine 'Carabao' Mango	The Philippine "Carabao" Mango Detection Kit is a technology designed based on Competitive dot-ELISA colorimetric assay principle used to discriminate true-to-type Philippine "Carabao" Mango varieties from other mango cultivars.	DR. EDGARDO E. TULIN Visayas State University (VSU)	IP Protected	No info provided yet
51	Queen Pineapple Bran	Queen Pineapple Bran is a feed supplement for native chicken and other fowls from queen pineapple wastes. It also makes the native chicken more flavorful and more tender.	Dr. MICHELLE S. CARBONELL & Dr. Sonia S. Carbonell Camarines Norte State College (CNSC)	IP Protected	No info provided yet
52	Queen Pineapple Multi-Use Marinade	A multi-use marinade/meat tenderizing products for food processing, cooking, and other food preparation processes. It has aromatic herbs which add freshness and depth to roasted or grilled meat. It is more affordable than commercially available marinade.	Dr. MICHELLE S. CARBONELL & Dr. Lilibeth A. Roxas Camarines Norte State College (CNSC)	IP Protected	No info provided yet
53	Queen's Coal	A molded/briquetted coal from queen pineapple wastes use as alternative fuel for cooking, grilling, roasting and the like. It has high thermal/calorific value that it boils water three times faster than other commercial briquettes.	Dr. MICHELLE S. CARBONELL & Ma. Kathrina M. Pobre Camarines Norte State College (CNSC)	IP Protected	No info provided yet
54	Rice Combine Harvester	An improved rice combine harvester with ground drive rubber tracks, triple airstream separation system, screw-type conveyor and hydraulic system for header and reel height adjustment. It has the ability to operate during wet harvest season with an increased capacity from 1.5 to 2 ha/day.	DR. CAESAR JOVENTINO M. TADO Philippine Rice Research Institute (PhilRICE)	IP Protected	PhilRICE-IP-TBM Office jeesup9@yahoo.com 0917-632-0703

55	Rice Harvester Attachment	An efficient rice harvesting implement that can be readily mounted to and dismounted from the hand tractor unit thus, increasing the utilization of hand tractor and helps reduce labor cost. It has an estimated capacity of 0.5 ha/day for an eight-hour operation.	ENGR. ISIDRO D. MILLO Metals Industry Research and Development Center (MIRDC)	No info provided yet	No info provided yet
56	Rice Transplanter Attachment	This prototype has rice transplanter implements that can be readily mounted to and dismounted from the common hand tractor. It was aimed that the availability of such implements will significantly increase further the utilization of hand tractor in farm areas as well as to reduce the cost of farm level mechanization that will directly benefit the farmers, rice field owners and planters.	ENGR. ISIDRO D. MILLO Metals Industry Research and Development Center (MIRDC)	No info provided yet	No info provided yet
57	Ride-on Precision Seeder for Wet Direct Seeding (Old name: Riding-type, self-propelled rice seeder)	The machine is a local 8-row riding-type precision seeder that can have a seeding rate of 15kg/ha to 30 kg/ha and at least 2 ha/day field capacity and suitable both for hybrid and inbred rice production.	ENGR. EDEN G. GAGELONIA Philippine Rice Research Institute (PhilRICE)	IP Protected	PhilRICE-IP-TBM Office jeesup9@yahoo.com 0917-632-0703
58	Sea Cucumber Dryer	The hybrid dryer for sea cucumber is a mechanized system that was designed to be easily used by small-scale fisherfolks involved in the harvesting of sea cucumbers. It helps produce premium-grade dried sea cucumber with reduced microbial content, improved shelf life and no foul odor versus traditional drying. The hybrid dryer can be operated using solar heat, biomass burner or electricity.	Dr. KEVIN F. YAPTENCO University of the Philippines Los Baños (UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756
59	SFEED Forage-based Pellet Feeds for Goat	Pellet feeds are bite-size pieces of sundried compressed nutritionally-balanced mixture of forage and grain ingredients such as ipil-ipil, rice bran, copra and molasses.	DR. EDGAR A. ORDEN Central Luzon State University (CLSU)	IP Protected	CLSU-IP-TBM irwin_salapare@yahoo.com 0997-987-7991
60	SIPBIO (Screening Indigenous Plant as Biopesticide)	Indigenous plants were used in the development of biopesticide formulations for vegetables and sugarcane pests and diseases. Plant extracts with significant biopesticide results against insects, bacteria and fungi were processed into prototype products. These are in the form of spray mixture using plant oil and emulsifiers. It can also be in powder form, when appropriate, by adding cornstarch and other appropriate additives.	DR. VICTOR B. AMOROSO Central Mindanao University (CMU)	IP Protected	CMU IP-TBM Office vel.suminguit@cmu.edu.ph 0935-860-4278
61	Stabilized Brown Rice (SBR)	Stabilized brown rice/unpolished rice is a freshly milled paddy/rough rice with improved shelf-life from 1-4 months to 4-9months. The rice is subjected to optimum combination of saturated steaming and oven drying for a certain period of time and temperature which inactivates the inherent enzymes present in the bran layer of brown rice/unpolished rice to improve its shelf-life.	ROSEMARIE G. GARCIA Food and Nutrition Research Institute (FNRI)	IP Protected	No info provided yet

62	Superheated Steam Treatment System for SBR	The Superheated Steam Treatment Machine is used to produced Stabilized Brown Rice (SBR). It facilitates treatment of brown rice with superheated steam to prolong its shelf life from 1-2 months to 5-9 months. It is intended to provide economic advantage to brown rice producers by preventing rapid degradation of produced brown rice.	DR. DOMINIC S. GUEVARRA Metals Industry Research and Development Center (MIRDC)	No info provided yet	No info provided yet
63	<i>Trichoderma</i> Microbial Inoculant (TMI)	TMI is used to control crop plant diseases caused by soil-borne fungal pathogens. It also serves as a biofertilizer, which digests and decomposes soil organic matter and releases mineral nutrients needed for the promotion of crop growth.	DR. VIRGINIA C. CUEVAS Professor Emeritus Academician, NAST National Institute of Molecular Biology and Biotechnology – (BIOTECH-UPLB)	IP Protected	UPLB-TTBDO (049) 501-4756

DOST-PCIEERD Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Vigormin/ Organo Mineral	A wastewater treatment and odor-reducing formulation composed of naturally-occurring organo minerals that stimulate growth of indigenous aerobic microorganisms in wastewater and boost the degradation of organic pollutants.	Dr. Merlinda Palencia Adamson University	No info provided yet	Engr. Noe Enriquez noe_d_enriquez@yahoo.com.ph
2	CHARM	CharM or Charging in Minutes is a system for fast charging electric vehicles (EVs) that are using the Lithium-ion battery storage technology. CharM provides an alternative charging strategy that eliminates the need for several hours in order to fully charge an EV.	Prof. Lew Andrew Tria UP Diliman	No info provided yet	Ms. Mitchay Pacia mitchay.pacia@gmail.com
3	FISH-I	A cost-effective and efficient method of performing fish census using a camera and fish video software. Similar to a fish census, it generates data on species count, biomass, and fish size and population. Using a hardware-software tandem, it semi-automates the process, allowing for rapid reef fish assessment which would otherwise require a high level of knowledge and expertise in the Marine Sciences	Dr. Prospero Naval Jr. UP Diliman	No info provided yet	Mr. Paul Natividad ppnatividad@up.edu.ph
4	USHER	USHER: The Universal Structural Health Evaluation and Recording (USHER) System is a 24/7 economical and hassle-free system that allows stakeholders such as building managers to comply with the set NSCP and DPWH IRR on Earthquake Recording Instruments.	Dr. Francis Aldrine A. Uy Mapua University	No info provided yet	Dr. Jonathan Salvacion T2Tantan@yahoo.com
5	CATCH-ALL	Catch-all: CATCH-ALL system is an integration of vision and machine learning systems that offers better performance in visual monitoring, recording, and evidence gathering tasks.	Dr. Elmer Dadios De La Salle University	No info provided yet	Atty. Christopher Cruz christopher.cruz@dlsu.edu.ph Mr. Peter Teñido peter.tenido@dlsu.edu.ph
6	Smart Surface	An electronic sensor system that can convert virtually any flat surface into an interactive interface. Also, a system composed of a number of sensors and a central controller and more affordable and robust than Smart board. Smart Surface boasts for its distinct features that can compete with the already existing products in the market. Its content can be customized according to the client's preference; it is portable; it can be installed in existing surfaces; and most importantly, it is low-cost with speedy after-sales support in cases of replacement, repair services, or technical help.	Dr. Nestor Michael C. Tiglao UP Diliman	No info provided yet	Ms. Agnes Bantigue abbantigue@up.edu.ph Mr. Paul Natividad ppnatividad@up.edu.ph
7	VISSER	VISSER is an all-in-one, mini-laboratory kit developed by UP Diliman which aims to provide easier understanding and enhanced appreciation for the sciences. It is a modular system designed to carry out over 50 experiments in biology, chemistry, physics, and engineering for students	Dr. Giovanni A. Tapang UP Diliman	No info provided yet	Ms. Christina Mate msmate@up.edu.ph

		in the K-12 program. VISSER is a low-cost, locally-made system intended to put modern science laboratories into every school and college.			
8	ARRAS	provides coastal survey and mapping services through fast, diverless means of creating permanent visual records of the marine environment	Dr. Maricor Soriano UP Diliman	No info provided yet	No info provided yet
9	Mango Flakes	No info provided yet	No info provided yet	No info provided yet	No info provided yet
10	LEAP	LEAP is a Windows-based application that enhances language learning experience, therefore, improving the proficiency of Filipinos and enable them to be more competitive in the global job market. The LEAP aims to improve the participant in English proficiency of speech, grammar and vocabulary.	Dr. Susan Festin UP Diliman	No info provided yet	Ms. Agnes Bantigue abbantigue@up.edu.ph Mr. Paul Natividad ppnatividad@up.edu.ph
11	KamoTea	Ready-to-Drink Sweet Potato Leaf Extract Beverages (SPLE) or KamoTea contains vitamins, minerals and high amounts of antioxidants. It consists of the following ingredients: Sweet Potato Leaf Extract, Calamansi Honey Concentrate and Earl Grey Black Tea (for black tea flavored variant).	Dr. Casiana Blanca Villarino UP Diliman	No info provided yet	Ms. Agnes Bantigue abbantigue@up.edu.ph Mr. Paul Natividad ppnatividad@up.edu.ph
12	Microbial Rennet	It is the ingredient responsible for solidifying the milk without a change in taste, creaminess and sweetness of milk during cheese manufacturing	Dr. Susan Mercado UPLB BIOTECH	No info provided yet	Mr. Ronnie Violanta ronnie_violanta@yahoo.com
13	CLINN-GEM	CLINN-GEM is applied in an environment-friendly gold-copper mineral processing plant that employs practical technology so it no longer requires cyanide or mercury to dissolve rock and soil from raw gold or copper, hence it improves the mining operations of small-scale miners. The CLINN GEM technology offers a more faster and cheaper way of extracting gold from the ore compared to the traditional way.	Dr. Herman Mendoza UP Diliman	No info provided yet	Ms. Monica Mateo mmmateo@up.edu.ph
14	Brown Rice Product	Brown rice or “unpolished rice” is getting popular today due to its nutritional and health benefits. This project aims to improve the shelf-life of brown rice through process optimization	Engr. Rosemarie Garcia DOST-FNRI	No info provided yet	Mr. Alexis M. Ortiz amortiz1@yahoo.com
15	Stabilized Brown Rice	the shelf-life of brown rice was improved through a combination of steaming and force-draft drying	Engr. Rosemarie Garcia DOST-FNRI	No info provided yet	Mr. Alexis M. Ortiz amortiz1@yahoo.com
16	Coatin	The technology enables synthesis of titanium nitride (TiN) coating on industrial tools such as drill bits, taps, punchers and extrusion molds using a locally developed magnetized sheet plasma source.	Dr. Henry J. Ramos UP Diliman	No info provided yet	Ms. Agnes Bantigue abbantigue@up.edu.ph Mr. Paul Natividad ppnatividad@up.edu.ph

17	Food Processing Firm	This project was conceived to promote locally developed technologies or Filipino innovation addressing the needs and problems of food processing industry/sector and nutrition in the country. The Food Processing Firms (FPFs) are recognized to be the prime movers of the country's economic growth. FPFs provide a reliable and equitable basis for economic development as experienced by most successful and newly industrialized countries in the world. It intends to test three (3) food processing equipment and the production line of the complementary baby food production (CFP) plant	Engr. Jose B. Ferrer DOST-MIRDC	No info provided yet	Ms. Girlie Millo mmillo@mirdc.dost.gov.ph
18	Probiotic Fish & Prawns	No info provided yet	No info provided yet	No info provided yet	No info provided yet
19	Iron Fortified Rice	No info provided yet	No info provided yet	No info provided yet	No info provided yet
20	Biotech Cellulase	No info provided yet	No info provided yet	No info provided yet	No info provided yet
21	Arroz Caldo retort	A disaster mitigation/relief foods using DSWD's and LGU's distribution system. This type of relief food will address the immediate hunger of disaster victims, and address the problems reported by the victims on preparation of relief food such as difficulty of cooking rice, noodles, opening of canned goods, etc.	Ms. Floridel Loberiano DOST-ITDI	No info provided yet	No info provided yet
22	Cacao Project 1	No info provided yet	No info provided yet	No info provided yet	No info provided yet
23	Gitara ni Juan	Gitara ni Juan is a multi-disciplinary approach in classical guitar making that also promotes the use of locally-available wood materials. It aims to address the current issues of locally-made classical guitars (sound quality, playability, and manufacturing consistency) in order to standardize the guitar making industry in the Philippines.	Engr. Crisron Rudolf G. Lucas UP Diliman	No info provided yet	Ms. Christina Mate msmate@up.edu.ph
24	XLipad	The Drone Starter Kit is a cost competitive kit that can be modified and upgraded (hardware and software) to fit different applications e.g. Search and Rescue, Disaster Prevention, Mitigation and Preparedness, and Infrastructure Monitoring.	Dr. Alvin Chua De La Salle University	No info provided yet	Mr. Kenbert Ting kenbert.ting@dlsu.edu.ph
25	MapX	Platform that provides end-to-end solutions for the LGU and real property owners in real property tax mapping and assessment	Dr. Rolyn C. Daguil Caraga State University	No info provided yet	Engr. Jeffrey T. Delloso jtdelloso@gmail.com
26	NanoPGR/ Hormogrooe	A controlled release nanoformulation of plant hormones derived from naturally occurring plant growth-promoting bacteria	Dr. Lilia Fernando UPLB BIOTECH	No info provided yet	Mr. Glenn Baticados gnbaticados@up.edu.ph

27	Fruitect	Coating that delays ripening of fruits and is made from biomaterials derived from wastes of agricultural and food processing sectors	Dr. Hideliza Hernandez & Dr. Veronica Sabularse UP Los Baños	No info provided yet	Mr. Glenn Baticados gnbaticados@up.edu.ph
28	Monascus	No info provided yet	No info provided yet	No info provided yet	No info provided yet
29	Nipa Sugar	is an optimized and sanitized process of converting nipa sap into sugar. The pilot production facility of Nipa sugar operates at 60 kgs per day. The Nipa sugar is found to be a good alternative for cane sugar since it has low glycemic index.	No info provided yet	No info provided yet	No info provided yet
30	Marine Nanocoat	A hydrophobic, anti-corrosive, and anti-barnacle coating composed of polyaniline, graphene, polysiloxane applied to ship vessels	Dr. Gil Nonato Santos De La Salle University	No info provided yet	Atty. Christopher Cruz christopher.cruz@dlsu.edu.ph
31	Project e-Bayanihan: A Nationwide Web – Mobile Based System for Participatory Disaster Management	A system that provides ordinary citizens a web and mobile based application to report disaster experiences and provide OCD and other stakeholders on real time experiences of ordinary citizens before, during and after disaster.	Dr. Ma. Regina Estuar Ateneo De Manila University	No info provided yet	No info provided yet
32	InteliSense	InteliSense is software that is capable of emotional analysis of people with Autism using three different signal namely Vocal Signals, Physiological Signals, and Facial Signals.	Dr. Merlin Teodosia C. Suarez De La Salle University	No info provided yet	Atty. Christopher Cruz christopher.cruz@dlsu.edu.ph
33	Geosafer (Startup)	No info provided yet	No info provided yet	No info provided yet	No info provided yet

DOST-PCHRD Technologies for Commercialization

No.	Technology	Description	Technology Generator	IP Protection	TTBDO / Contact Details
1	Sambong tablet	An herbal medicine that is clinically proven to dissolve kidney stones, and reduce size and number of urinary tract stones.	Dr. Natividad F. De Castro UP Manila	IP Protected (Patent)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
2	Lagundi tablet	A remedy for cough and relief and control of asthma	Dr. Natividad F. De Castro UP Manila	Expired (Utility Model)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
3	Lagundi syrup	A remedy for cough and relief and control of asthma	Dr. Natividad F. De Castro UP Manila	Expired (Utility Model)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
4	Axis Knee System	A total knee replacement system that is designed for a wide range of sizes. This world class, FDA-approved product was conceptualized and developed by Filipino doctors and engineers, together with some consultants from Japan, China, and US, and is being manufactured locally in Orthopaedic International, Inc.'s ISO 13485-certified plant in Cabuyao, Laguna.	Dr. Ramon Gustilo Orthopaedic International, Inc.	IP Protected (Patent)	No info provided yet
5	Biotek M	A diagnostic kit which acts as a confirmatory test for diagnosis of dengue infection in the first 0-5 days of illness, and results would be known in an hour or less. Designed to be used in hospitals or clinics with minimal laboratory facilities, using this technology would mean less admissions for dengue-suspected cases, therefore saving resources for both hospital and patients.	Dr. Raul V. Destura Manila Health Tek, Inc.	IP Protected (Patent, Utility Model, PCT)	No info provided yet
6	eHATID	An android-based electronic medical record system that was developed with the aim to improve patient data management and delivery of health care services. This mobile application allows target end-users to electronically encode and store patient data in database even in the absence of an internet connection.	Dr. Dennis B. Batangan Ateneo de Manila University	Ongoing (Copyright; Trademark application on-going)	Dr. Proceso Fernandez, Jr tmo.ose@ateneo.edu; +632-927-0096 +632-426-6001 local 5679, 5672
7	OL Trap	A mosquito trap designed to detect, monitor, and control the population of dengue-carrying <i>Aedes aegypti</i> mosquitoes. This technology works by attracting the female mosquitoes to lay eggs on the paddle drenched with organic solution that kills the eggs and larvae, preventing mosquitoes from reaching adulthood.	Ms. Annabelle V. Briones DOST-ITDI	No info provided yet	No info provided yet
8	Akapulko lotion	An affordable locally sourced herbal medicine which has been used to treat fungal skin infection such as ringworms, scabies, and eczema. It is clinically proven to be as effective as synthetic antifungal agents in the treatment of superficial skin infections.	Dr. Natividad F. De Castro UP Manila	Expired (Utility Model)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
9	Yerba buena tablet	An analgesic drug from yerba buena extract clinically proven safe and effective in relieving moderate to severe post-operative pain after circumcision, dental extractions, and childbirth (post-episiorrhaphy).	Dr. Natividad F. De Castro UP Manila	Expired (Utility Model)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph

10	Tsaang-gubat tablet	An affordable herbal medicine helps relieve abdominal pain and diarrhea in adults. A single dose of this tablet relieves pain from these conditions within 30 mins to 1.5 hours	Dr. Natividad F. De Castro UP Manila	IP Protected (Patent)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
11	Ulasimang-bato	A drug formulation from ulasimang-bato extracts targeted to cure hyperuricemia and gout. Optimum dosage is recommended initially at 80 mg/kg/day, and then reduced to 40 mg/kg/day after 2 weeks. Formulation can significantly reduce serum uric acid levels comparable to allopurinol.	Dr. Natividad F. De Castro UP Manila	IP Protected (Patent)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
12	Guaviderm	Guaviderm is a natural antibacterial ointment for MRSA. It contains quercetin compound which can kill skin pathogens such as Streptococcus and Staphylococcus, even the methicillin resistant strains.	Dr. Cecilia Lazarte-Maramba IHM – UP Manila	IP Protected (Patent)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
13	Community Health Information Tracking System (CHITS)	An electronic medical record system that reduces patient waiting time and improves monitoring of patient care through efficient data encoding and records retrieval. It is capable of immediate and direct transmission of reports to the Philippine Health Insurance Corporation for faster processing of reimbursements to support the delivery of more responsive quality health care services for everyone, everywhere, at any time.	UP Manila	IP Protected (Trademark)	Dr. Lourdes Marie S. Tejero ttbdo@post.upm.edu.ph
14	Agapay	Agapay Exoskeleton is a 12-degrees-of-freedom system (shoulder, elbow, hand, and wrist movements) that provides high-performance rehabilitation system for post-stroke and injured patients	Dr. Nilo Bugtai De La Salle University	Ongoing (Patents)	Ms. Aubrey Nichole Reyes, Intellectual Property Officer Ms. Michell Joson, DITO Secretary aubrey.reyes@dlsu.edu.ph; michell.jonson@dlsu.edu.ph; dipo@dlsu.edu.ph; (02) 5244611 local 279