Department of Science and Technology

METALS INDUSTRY RESEARCH AND DEVELOPMENT CENTER

LIST OF 2015 DOST-GIA PROJECTS (NEW AND ON-GOING)

Item No.	Title	Project Objectives	Beneficiaries	Duration	Implementing Division	Amount (PhP)	Status of Implementation (as of December 2015)
A. NEW							
1	Design and Development of Forage - Blades & Chopper for Goat Production	Produce the basic equipment for baling and chopping of Indigofera Zollingeriana	Cental Luzon State University; MIRDC	1 Aug 2015 to 31 Jul 2016	Prototyping Division	370,752.00	Fabrication of Forage Chopper blades and the design and development of Otake Model Forage Chopper is on-going.
2	Fabrication of the 3D Print Prototype Scale Model of the Continuous - Type Food Processing Equipment (Vacuum Packaging, Vacuum Fryer, Immersion Freezer)	Promote the locally fabricated equipment, thereby give information as substitute to imports as well as appropriate and affordable for use by the food processing firms.	MIRDC	1 Oct 2015 to 30 Sept 2016	Technology Diffusion Division	143,000.00	Purchase of the equipment is on-going.
B. ON-GOING							
B.1 MACHINE BUILDING (AGRICULTURAL EQUIPMENT)							
1	Design and Development of Superheated Steam Treatment System for Stabilized Brown Rice	Design and develop batch and continuous type of superheated steam treatment system (SSTS) that will extend the shelf life of brown rice from 1-2 months to 5-9 months.	Agricultural sector; M&E industry	1 Aug 2013 to 30 Mar 2016	Prototyping Division	(2013) 3,747,876.00 (2014) 2,472,308.00 (2015) 609,351.00 (TOTAL) 6,829,535.00	• Design and prototype for a batch type SSTS developed. • Optimization and stardardization runs, physico-chemical analysis of batch type SSTS completed. • Design for continuous type SSTS completed. • Fabrication and development of continuous-type SSTS to be completed by 2016.

Item No.	Title	Project Objectives	Beneficiaries	Duration	Implementing Division	Amount (PhP)	Status of Implementation (as of December 2015)
2	Development of a Fluidized Bed Dryer for Production of Stabilized Brown Rice (SBR)	Design and fabricate a prototype batch type fluidized bed dryer in the production of stabilized brown rice; design and fabricate a prototype continuous type fluidized bed dryer based on the prototype batch type fluidized bed dryer for higher capacity; evaluate the performance of the developed prototype batch and continuous type fluidized bed dryers.	Agricultural sector; M&E industry	1 Jul 2013 to 31 Dec 2015	Prototyping Division	(2013) 3,666,386.00 (2014) 3,723,888.00 (2015-TL) 1,395,442.00 (TOTAL) 8,785,716.00	• Design and development of a prototype for a batch type fluidized bed dryer completed. • Testing, optimization and stardardization runs, physico-chemical analysis for the batch type FBD is 95% completed. • Design of the continuous type FBD system is 90% completed. • Signed a Memorandum of Agreement (MOA) with PhilMech for the testing of FBD.
3	Retrofitting of a Compact Rice Mill for Brown Rice Production	Retrofit an existing compact rice mill and attach a paddy separator to facilitate convenient production of both brown rice and well milled rice.	Agricultural sector; M&E industry	1 Jul 2013 to 30 Aug 2015	Prototyping Division	3,130,788.00	• **Terminal report writing is on - going.** • Retrofitting of a compact rice mill in CAPMC and Philmech completed. Necessary performance and endurance tests conducted.
4	Design and Development of Handtractor Attachments (Harvester and Transplanter)	Design and develop a harvester and a transplanter that can be readily mounted and dismounted to typical hand tractors.	Agricultural sector; M&E industry	1 Aug 2013 to 30 Mar 2016	Prototyping Division	(2013) 3,774,770.00 (2014) 2,882,084.00 (2015-TL) 1,427,639.00 (TOTAL) 8,084,439.00	• Developed design and fabricated prototypes for transplanter attached to hand tractor. • Design for harvester attached to hand tractor developed.

Item No.	Title	Project Objectives	Beneficiaries	Duration	Implementing Division	Amount (PhP)	Status of Implementation (as of December 2015)
5	Piloting of the Hand Tractor - attached Harvester in Selected Rice Growing Regions	Conduct field testing of three (3) harvester-attached hand tractor and three (3) transplanter-attached hand tractor prototypes in demo farms of various regions.	Agricultural sector; M&E industry	1 Feb 2015 to 31 July 2016	Prototyping Division	3,526,960.00	• Field testing of initially- developed prototypes conducted. Established test protocols • Ongoing fabrication of three additional units (transplanter) to be used for field testing in demo farms in various regions.
6	Design and Development of Sugarcane Harvesting Equipment for Small-Scale Sugarcane Farm	Develop locally fabricated sugarcane harvesting equipment (cutter, stripper and loader) for small farms.	Agricultural sector; M&E industry	1 Jan 2015 to 31 Dec 2016	Prototyping Division	5,334,956.00	• Technical drawings for sugarcane harvesting equipment (leaf cutter, stripper, & loader) completed. • Fabrication of sugarcane loader and cutter has been bidded out and awarded. • Fabrication of sugarcane leaf stripper expected to be completed by Feb 2016. • Fabrication of sugarcane cutter bidded out; to be awarded Jan 2016 and expected to be completed by Mar 2016
B.2 MACHINE BUILDING (FOOD PROCESSING)							
7	Roll-out of DOST Developed Food Processing Equipment to the Regions	Roll-out the DOST-developed food processing for product quality and productivity improvement of food processors in the regions.	Metals and Engineering Industry, Food Processors in the regions (Manufacturers)	1 Oct 2013 to 30 Jun 2016	Prototyping Division	(2013 SET UP) 15,299,000.00 (2013 ADDT'L FUND) 7,384,500.00 (2014) 860,610.00 (2015) 28,486,548.00 (TOTAL) 52,030,658.00	• Locally developed equipment for food processing industry sector which include: (1) Freeze Dryer, (2) Vacuum Fryer, (3) Vacuum Packaging, (4) Water Retort, (5) Spray Dryer, (6) Immersion Freezer and (7) Vacuum Dryer. • Nine (9) sets of equipment no. 1-5 were developed and deployed to Food Innovation Centers (FIC's in Regions 2,5,6,8,10 and 11. Another nine (9) sets of equipment no. 1-5 is under on-going fabrication.

Item No.	Title	Project Objectives	Beneficiaries	Duration	Implementing Division	Amount (PhP)	Status of Implementation (as of December 2015)
B.3 MACHINE BUILDING (DISASTER MITIGATION)							
8	Development of Tent Systems for Emergency Applications	Develop cost effective and easily manufacturable tent systems for emergency use.	Public, Housing Sector, Metals and Engineering Industry	1 Jan 2014 to 30 Nov 2015	Materials and Process Research Division	1,500,000.00	• **Terminal report writing is on - going.** • The five (5) sets of tents were already deployed in Paoay and Bangui, Ilocos Norte last September 2015.
B.4 MACHINE BUILDING (INDUSTRIAL / SPECIAL PURPOSE EQUIPMENT)							
9	Setting-up of a One-Stop Laboratory Services for Global Competitiveness (ONELAB)	Develop and establish a DOST-wide Unified Laboratory Information System (ULIMS) with a comprehensive database of each agency's testing services and real time status of each laboratory.	Metals and Engineering Industry	31 Aug 2014 to 31 Dec 2015	Analysis and Testing Division	(2014) 286,615.00 (2015) 5,757,564.00 (TOTAL) 6,044,179.00	Creation, viewing, updating and cancellation of entries using the system were tested.
10	Prototyping and Pilot Production of Eyelet Rivetter/Eyelet Machine	Develop an eyelet riveter that could bind documents as required by the Department of Foreign Affairs' Authentication Division - Office of Consular Affairs (ADO - CA).	DFA ADO - CA	1 Jul 2015 to 30 Jun 2016	Prototyping Division	1,300,000.00	Fabrication of the first prototypes completed. Modification is on-going.
B.5 FACILITY UPGRADING (GEAR MAKING AND ASSEMBLY FACILITY)							
11	Establishment of a Gear Making Assembly Facility	Enhance local capabilities for gear design and prototype production, and develop gear assembly manufacturing industry for transport.	Metals and Engineering Industry, Transportation Sector	1 Jul 2014 to 30 Jun 2016	Prototyping Division	(2014) 72,190,126.00 (2015) 120,296,809.60 (TOTAL) 120,296,809.60	• Bidding for the Renovation of the Gear Making and Assembly Facility was awarded. Renovation of Gear Making Facility to be completed Jan. 2016. • Completed the bidding / awarding of all advanced machinery / equipment for acquisition: o Gear measuring system delivered Aug.2015 o CNC Gear Hobbing Machine, Dynamic balancer to be delivered by Aug. 2016 o 5-axis CNC machine to be delivered by May 2016

Item No.	Title	Project Objectives	Beneficiaries	Duration	Implementing Division	Amount (PhP)	Status of Implementation (as of December 2015)
B.6 ADVANCED TRANSPORTATION SYSTEMS (AUTOMATED GUIDEWAY TRANSIT - AGT)							
12	Study on the Viability of Deploying DOST Developed Mass Transportation Technologies in Baguio and La Trinidad	Assess the feasibility of deploying the Automated Guideway Transit System developed by MIRDC in several routes pre-determined by Local Government Unit of Baguio City	Local Government of Baguio City, Transport Sector, Public	1 Jul 2014 to 30 Sept 2015	Materials and Process Research Division	1,000,000.00	**• Terminal report writing is on - going.** • Transport and Traffic Planner Inc. (TPPI) conducted a feasibility study for the proposed AGT system in Baguio to address heavy traffic. A meeting will be held between MIRDC and Baguio Regional Development Council in February 2016.
B.7 CAPABILITY BUILDING (TRAINING AND CONSULTANCY)							
13	Enhancing Tool and Die Industry Competitiveness by Expanding the Pool of Trained and Highly Skilled Die and Mold Designers and Makers (D2M2)	Enhance the competitiveness of the local tool and die sector in support of the automotive industry through manpower development and project output assessment activities.	Tool and Die Industry; Automotive Industry	1 April 2015 to 1 May 2016	Prototyping Division	6,717,884.00	• Relevant training curriculum for die and mold designers and makers were updated. • Certification schemes for accrediting the skills of existing tool and die specialist were established. • Personnel on Die and Mold designing and making were trained. • Marketing strategies to attract local talents to tool and die courses were formulated. • 2 batches completed; 2 batches on-going. MIRDC has submitted project proposal to BOI for funding another 20 batches of training for the next 3 years.

Prepared by:

SHEENA S. BEDIS
Administrative Officer IV, PMD
2/10/16

Reviewed by:

MERCEDITA G. ABUTAL
Chief, PMD

Approved by:

ROBERT O. DIZON
Asst. Sec., DOST & OIC, MIRDC