

Department : DEPARTMENT OF SCIENCE AND TECHNOLOGY
Agency : INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE
Operating Unit :
Organization Code (UAC): 190050000000

x

Current Year Appropriations
Supplemental Appropriations
Continuing Appropriations
Off-Budget Account

Particulars	UACS CODE	Physical Targets					Physical Accomplishments					Variance as of 4th Quarter	Remarks
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total		
1	2	3	4	5	6	7=(3+4+5+6)	8	9	10	11	12=(8+9+10+11)	13	14
I. Industrial Technology R&D Program													
Outcome Indicators													
1. Number of partnerships with public and private stakeholders and international organizations		3	3	6	3	15	3	11	1	6	21	+6	Q4 2020: 1. DOST-PNRI (Project Cooperation) 2. D. Farmers' Market Fruits and Pastries Center (CRADLE Project) 3. Rosario's Delicacies (CRADLE Project) 4. Iloilo Science & Technology University (R&D Collaboration) 5. Rosy Chicks Farm (Project Cooperation) 6. Quickstop Convenience Store Inc (Project Cooperation) Q3 2020: 1. Korea International Cooperation Agency (KOICA) - CIAT Training "Capacity Building on Off-Grid Renewable Energy for Remote Areas across the Philippines" *MOA for five(5) collaborations are under review of possible partners. Q2 2020: 1. Edge Electronics Inc. (Supply of Energy Monitoring Supplies and Materials) 2. CBRE Global Workplace Solutions IFM Phils. Corp. (Energy Audit and Energy Audit Training) 3. Mang Inasal – Catidlan, Aklan (Project Cooperation) 4. Kolai Mangyan – Boracay Island (Project Cooperation) 5. Polo Services Incorporated (Contract Research) 6. VCO Phils. (Contract Research) 7. Phil Rice (Contract Research) 8. BPI (Contract Research) 9. Food and Agriculture Organization (Technical Collaboration) 10. Air21 Global (Licensing Agreement) 11. Greenstone Pharmaceutical (HK) Inc. (Project Cooperation)

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													Q1 2020: 1. KLT (Contract R&D) 2. JALD Industries (CRADLE) 3. Kolai Mangyan (GIA project)
2. Amount of revenue generated from partnerships		25 M	25 M	25 M	25 M	100 M	16 M	75 M	64 M	10 M	165 M	+65 M	Q4 2020: Received funds for six (6) GIA-funded projects: 1. Development of Compact Wastewater Treatment System for Restaurants 2. Development of Emulsified Chicken Meat Products (Sausage, Nuggets and Burgers for Local Halal Market) - YEAR 2 3. Establishment of Halal Assurance System for Selected Food Ingredients (Dried and Powdered Onion, Garlic, Black Pepper and Chili) 4. Development of Halal Compliant Dehydrated Food Products from Selected Food Materials 5. 2021 ASEAN Conference on Additive Manufacturing 6. 34th ASEAN Consultative Committee on Standards and Quality (ACCSQ) Working Group on Legal Metrology (WGS) Meeting
Output Indicators 1. Number of projects completed		0	0	0	25	25	2	1	1	8	12	-13	*Some projects were extended due to the community quarantine caused by the COVID-19 pandemic Q4 2020: Eight (8) projects were completed: 1. Nanoeolite Monoliths for Gas Adsorption Application 2. Synthesis, Characterization and Production of Starch Nanocrystals 3. Biomass-derived Carbon Quantum Dots and CQD/Polymer Composites for Biomedical & Industrial Applications 4. Superparamagnetic Iron Oxide Nanoparticles (SPIONs) from Natural Mineral Deposits-Phase 1 5. Development of Portable Ultrafiltration/Nanofiltration Membrane Module for Treatment of Potable Water for Remote/Field Application (Mabuhay Straw) 6. Utilization of Chicken Egg Shell Wastes as Biomaterial for Hydroxyapatite Synthesis 7. Development of Shelf-Stable Food Products as Ready Food Reserve 8. Characterization of Philippine Banana for Food Processing Application Q3 2020: One (1) project of the Packaging Technology Division was completed: 1. Shelf-life Extension of "Bukayo" and "Budin" through the Application of Improved Packaging Technology

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													Q2, 2020: One (1) project of the Food Processing Division was completed: 1. Exploratory Study on Chocolate Confectionery Q1 2020: Two (2) projects for completion on December 2019 were extended to Q1 2020: 1. Data Acquisition of Shock and Vibration Values in the Last Leg Delivery (Motorcycle and Closed Van) of Small Products within Metro Manila 2. Effect of Storage Conditions on Migration Characteristics of Benzophenone in Paper and Paper-based Food Packaging (Phase 2)
2. Percentage of projects implemented within the approved timeframe		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0	*31 GAA-funded projects and 1 Downloaded program (Metrology program) were implemented within the approved timeframe Not commulative. *44 out of 119 completed GAA projects from the last 5 years were published/ presented/ filed for IP as of Q4 2020 10 papers were already submitted for review and possible publication.
3. Percentage of projects completed which are published in peer-reviewed journals, presented in national and/or international conferences, or with IP Filed or approved		50%	50%	50%	50%	50%	32% 38/119*	34% 41/119*	36% 43/119*	37% 44/119*	37%	-13%	
II. Industrial Technology Transfer Program Outcome Indicators 1. Percentage of clients that rate the technology transfer as satisfactory or better		90%	90%	90%	90%	90%	100%	100%	100%	100%	100%	+10%	*5 out of 5 clients rated technology transfer as satisfactory or better

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Output Indicators 1. Number of knowledge/technologies diffused		8	10	15	12	45	21	32	66	58	177	+132	Q4 2020: 58 knowledge/technologies were diffused through different online platforms and media: 1 Abaca Fiber for transport application 2-4 Banana Processing (chips, ketchup, sauce) 5-9 Banana processing (Hallai Banana chips, Halal Ketchup, Banana flour, Vacuum Fried Banana, Charcoal briquette from banana peels) 10 Waste Water Treatment System 11 Biogas digester 12 Bioplastics/biopolymers 13 Bioreactor 14 Cacaco Desheller 15 Cacao Roaster 16 Coco Water Concentrate Processing 17 Coconut Mungbean Beverage 18 Dietary Supplement - MOSYMU 19 DOST Tablea 20 Drum Dried Mango Flakes 21 Dual Drum Composter 22-24 Flavoured Salts (seagrapes, shrimpheads and shitake mushrooms) 25 Household Tumbling Composter 26 Instant Powdered Ginger (spicy flavor) 27-30 Integrated calamansi processing (concentrate, RTD Juice, Dietary fiber, essential oil) 31-34 Integrated coconut processing (flour, VCO, vinegar, sap sweetener) 35 Integrated Fruit Processing 36 Introduction to Shelf Life Testing of Food Products 37 Isotonic Beverage 38 Jam Making 39 Mandatory Packaging and Labelling 40 Mango Processing 41 Nanoclay 42 Natural Fiber Thermoplastic Composite 43 Oyster Processing 44 Pottery Production, Kiln Operation, and Firing Techniques (1) 45 RTE Chicken Arroz Caldo 46 RTE Smoked Fish Rice Meal 47 RTE Sweet potato 48 Salt Iodization Machine 49 Salt Iodization Processing 50-52 Smoked Salts (guava, mango and tamarind leaves) 53 Squash Chips Processing 54 Styro-plastic densifier 55 Suman 56 Taho Processing 57 Virgin Coconut Oil (VCO) - Cream 58 Virgin Coconut Oil (VCO) - Lotion

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													Q3 2020: 66 knowledge/ technologies were diffused through different online platforms and media: 1. Accelerated Vinegar Production 2. Awareness Seminar on Salt Production 3. Banana Processing 4. Bottled Dried Fish (Tuyo in oil) 5. Brick Making 6. Cacao Desheller/Winnowers 7. Cacao Grinder 8. Candle Making 9. Carrageenan Products 10. Charcoal Briquette Production 11. Chemical Safety and Hazardous Waste Management 12. Coconut Flour 13. Coconut Products Processing 14. Compact Wastewater treatment Facility 15. Dragon Fruit Processing 16-17. Durian and Mangosteen Products 18. Energy Audit 19-20. Fish and Shellfish Processing 21. Food Product and Process Development 22. Food Safety at Home 23. Formulation and Production of Natural-based Analgesic Balm 24. Fruit Juice Drink Concentrate Processing 25. Fruit Wine Making 26-27. Ginger Processing (instant salabat and candy) 28. Guava Products 29. Guyabano Herbal Supplement 30. Hair Shampoo Formulation 31. Hand Sanitizer Production 32. Integrated Coconut Processing 33. Jackfruit processing 34. Kalabasa Food Products 35. Kamlas Prunes Processing 36. Lamayo Production 37. Liquid Hand Soap Production 38. Meat Processing 39. Mosquito Repellent Lotion 40. MOSYMU 41. Nata de Piña Making 42. OL trap System 43. Packaging Technology and Mobile Modular Processing Facility 44. Passion Fruit Processing 45-46. Pastillas and Polvoron 47. Patis Making 48. Pickled Quail Eggs 49. Pili Food Products 50. Pineapple Processing 51. Portable Biogas Digester 52. RTD Tablea

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													Q3 Contd: 53. Salted Eggs Production 54. Santol Processing 55. Saueed Shrimp Paste 56. Soap technology 57. Soy Sauce Manufacture 58. Soybean Products 59. Sugar Palm (Kaong) in Syrup 60. Tamarind Fruit Procesisng 61. Tomato Food Products 62. Ube Processing 63. Updates on Chemical Weapon Convention 64. VCO Processing 65. Vegetable processing 66. Vinegar Making Q2 2020: 32 knowledge/technologies were diffused through lectures and trainings: 1. Calamansi Processing 2. Taho Processing 3. DOST- ITDI Guidelines on Facility Disinfection and Proper Waste Disposal 4. Dietary Fiber Powder from Calamansi Wastes 5. Packaging for Frozen Durlan 6. Food Colorant from Monascus purpureus 7. DOST Tablea (Chocolate Liquor in a Bar) 8. Nipa Sap Sugar 9. Drum Dried Flakes 10. Continuous Scre-Type Salt Iodizing Machine 11. Biomass-Fired Steam Kettle 12. Cacao Roasting Equipment 13. Wine Processing technology (Wine Fermentation Kiln) 14. Smoked Fisdh Processing 15. Sagip NutriPowder (Emergency Food Reserve) 16. Preparation of Meatless Burger 17. Preparation of Spring Rolls 18. Preparation of Pickled Papaya 19. Ham Making 20. Freeze Drying Technology 21. Spray Drying technology 22. Vacuum Fryong Technology 23. Thermal Processing Technology using Water Retort 24. Mango Processing (dried) 25. Mango Processing (juice) 26. Mango Processing (puree) 27. Natura Vinegar Production (an accelator technology) from coconut water 28. Coconut Sap Sugar Production 29. Bioreactor 30. Household Tumbling Composter 31. Carrageenan Capsule from Seaweed 32. CRM Beverage


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													Q1, 2020: 21 knowledge/technologies were diffused through trainings: 1. Nano-precipitated CaCO ₃ 2. Nano Clay production 3. Salt production 4. Dual Drum Composter Technology 5. 500 Kg. Bioreactor 6. Styro-Plastic Densifier 7. WACS 8. Root Crop processing 9. Banana in syrup 10. Dried Banana 11. Soy milk processing 12. Personal care products 14. RTE Chicken Arroz Caldo 15. Nata de Coco 16. Salt Iodization Machine 17. Analgesic balm 18. Slimming cream 19. Salt processing technology 20. Compact Wastewater treatment system for QSRs 21. Biogas Digester
2. Number of technologies transferred/commercialized through technology transfer agreement		1	1	2	1	5	1	4	3	3	11	+6	Q4 2020: 1. Biogas Digester (Greenphil & WARM) 2. RTE Chicken Arroz Caldo (Prime Global) 3. Isotonic Drink (Banawe Soybean Curd Food Products) Q3 2020: 1. OL Trap (Heritage Veterinary Corporation) 2. MOSYMU (Geriatrica International Inc.) 3. Analgesic Balm (Jose Leo Viñas) Q2, 2020: 1. Dietary Fiber using Calamansi Waste with Essential Oil training (Zambo Tropical Foods) Both BBM Machine Shop and LAMACO availed the ff. technologies: 2. Dual Drum 3. Portable Biogas Digester 4. Household Tumbling Composter ---000--- Q1, 2020: (1) Setting-up of salt equipment line -Two individuals from Ilocos were assisted in setting up salt production facility through the intervention of PSTC Ilocos Sur

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3. Percentage of request for technology transfer that have been provided within the required time frame		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	*5 out of 5 requests for technology transfer were carried out within the required time frame		
III. Industrial Technology Technical Services Program															
Outcome Indicators 1. Percentage of customers that rate the technical services as satisfactory or better		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	*2,448 out of 2,448 customers rated the technical services as satisfactory or better		
Output Indicators 1. Number of technical services rendered		5,000	5,000	5,000	5,000	20,000	5,027	1,467	2,286	4,468	13,248	-6,752			
2. Percentage of request for technical services that have been provided within the required time frame		90%	90%	90%	90%	90%	100%	100%	100%	100%	100%	+10%	*4,468 out of 4,468 technical services were completed within the required time frame		
3. Number of clients benefitting from technical services		1,000	1,000	1,300	700	4,000	1,348	2,149	5,885	3,006	12,388	+8,388	The use of different social media platforms for seminars, trainings, and other technical services enabled the Institute to reach more clients despite the COVID-19 pandemic.		
LOCALLY-FUNDED PROJECTS (LFP)							Physical accomplishment	Budget Utilization	Physical accomplishment	Budget Utilization	Physical accomplishment	Budget Utilization	Physical accomplishment	Budget Utilization	Q4 2020: Major accomplishments: - Repair/renovation of the MSD pilot plant for the establishment of Material Development Lab for Additives Manufacturing - 100% - Repair/renovation of ITDI bldg. MSD- 100% - Repair & improvements of NML Building - 100% - Repair and renovation of CED Building - 52.85% Problems encountered: - Some activities were not completed due to delay in delivery of materials
1. Repair/Renovation & Maintenance of ITDI Buildings and Facilities		12%	28%	35%	25%	100%	12%	0.95%	0%	0%	44%	0%	14%	94.05%	
								0.38 M / 40 M utilized					37.62 M / 40 M utilized		
										Budget was decreased to 22M as per DBM National Budget Circular No. 580 dated April 22, 2020			Budget utilization: 95%		
													38M / 40M utilized		


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																	Action taken: Requested for extension for repair and renovation	
2. Enhancement of the Competence and capabilities of the National Metrology Laboratory of the Philippines		20%	25%	30%	25%	100%	15%	27.54% 40.49 M / 147.01 M utilized	10%	27.02% 39.72 M / 147.01 M utilized	50%	9.31% 12.78 M / 137.34M utilized Budget was decreased as per DBM National Budget Circular No. 580 dated April 22, 2020	5%	11.29% 15.51 M / 137.34 M utilized	80% Budget utilization: 79% 108.50 M / 137.34 M utilized	-20%	Q4 2020: Major accomplishments: Project 1 (40.95%): -Conducted virtual Post-PT workshop for Histamine in Dried Fish - Performed method validation for chlorpyrifos and phentoate in Mango and AOZ and AMOZ in fish - Conducted method development for cypermethrin in mango and chloramphenicol in meat - Prepared Reference Material (RM) of Histamine in canned tuna - Drafted interim reports for the ARMN PT, Additives in Tomato Sauce Project 2 (51.47%): - Conducted virtual Post-PT Workshop for Ca, Mg, and Zn in Drinking Water - Conducted method development for 1) As, Pb, and Cd in Rice, 2) As, Hg, Pb and Cd in Tuna - Performed method validation for 1) As and Hg in Drinking Water, 2) Cd calibration solution - Produced 146 bottles of RM of As and Hg in Drinking Water - Participated in HSA Interlaboratory Comparison on Elements in Lipstick Material Project 3 (60%): - Optimized processing of analytes and matrices for the development of PT materials for Salmonella sp., coliform E.coli and APC in octopus, and milkfish Project 4 (91%): - 52 out of 70 equipment were already acquired and installed - Volume and Flow Standards Section was assessed on October 1-2, 2020 by DAkkS assessor - DAkkS has granted the re-accreditation of NML in the following fields: Temperature, Mass, Pressure and Volume. Problems encountered: - Delayed conduct of activities due to typhoon and power interruption - Limited space for equipment	

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																	Actions taken: - Room at STD was renovated to temporarily house some equipment for conduct of experimental activities. - Incoming equipment are temporarily housed at Conference Room at NML - Proper scheduling on the use of equipment - Use of freeze dryer unit of FNRI. Renovation for additional electrical line at STD was requested to temporarily operate purchased freeze dryer. - Revised workplan.
3. ITDI Information Technology Capability Enhancement and Sustainability		15%	20%	40%	25%	100%	15%	21.45% 10.37 M / 48.34 M utilized	20%	0.12% 0.057 M / 48.34 M utilized	40%	0%	25%	70.43% 34.05 M / 48.34 M utilized	100% Budget utilization: 92% 44.47 M / 48.34 M utilized	0%	Major accomplishments for Q4 2020 were as follows: - Developed Document Tracking System – Phase 1 - Developed and Tested Technical Services Information System Laboratory Module - Implemented Network firewall, enterprise anti-virus and Local Domain Controller using Active Directory Problems encountered: - Difficulty during testing and implementation due to the conflict of schedule of end-users (Skeletal and WFH setup) Actions undertaken: - Conducted separate training in each group or individual end-users

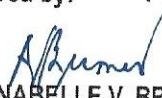
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