

QUARTERLY PHYSICAL REPORT OF OPERATION
as of 1st Quarter 2021

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

Current Year Appropriations
 Supplemental Appropriations
 Continuing Appropriations
 Off-Budget Account

Particulars	UACS CODE	Physical Targets					Physical Accomplishments		Variance as of 1st Quarter	1st
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	Total		
1	2	3	4	5	6	7=(3+4+5+6)	8	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		2	3	3	2	10	7	7	+5	Q1 2021: 1-2. Fruit Magic and DOST-NCR (Ongoing PCIEERD Project: Development of a Compact Wastewater Treatment System for Restaurants and MSMEs Discharging to Manila Bay) 3-6. Orich International Traders, Fenor Foods, Bagundang Enterprises, and PCIEERD (Project cooperator for the PCIEERD Project: Development of Halal Compliant Dehydrated Food Products from Selected Food Materials (Dried Fruits, Dried Vegetables and Dried Root Crops) 7. Techgreen (Project cooperator for the GAA project "Development of Alternative Techniques for Okra Flakes/Sheets Processing")
2. Amount of revenue generated from partnerships		25 M	25 M	25 M	25 M	100 M	45.7 M	45.7 M	+20.7 M	Received funds for 12 GIA-funded projects: 1. Towards Leveling-Up Onelab for Research, Development and Innovation 2. Developing the Capability of Micro and Small-Scale Processors in the Manufacture of Quality Food Products from Philippine Cocoa Beans 3. Development of Draft Standards and Recommended Code of Practice (RCP) Processing of Peanut Butter 4. Pilot Implementation of ITDI's Pre-Commercialization Tools/Strategies for Effective Transfer and Commercialization of Generated Technologies and Intellectual Properties - Y2 5. Development and Field Testing of Retort Foods as Food Ration for Men in Uniform During Combat and Other High Risk Operations 6. Technical Support for DOST Regional Food Innovation Centers (rFICs)

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2. Amount of revenue generated from partnerships (Continuation)										7. Dietary Fiber using Sugarcane Bagassa from Raw Sugar Manufacturing 8. CRADLE: Pilot testing of Packaging Technology Developed for Frozen Durian Using Locally Produced Packaging Materials 9. Scale-up Production, Stability and Application of natural Colorants for Cosmetics 10. Deployment of Energy Monitoring Application and Network at DOST (DEMAND) as Demonstrations Sites 11. Development Competency on Establishment and Validation of Adequate Processes for Thermally Processed Food 12. Development of FIC Competency in Moving New Products from Concept to Market Launch
Output Indicators 1. Number of projects completed		3	3	0	14	20	7	7	+4	*Some projects were carry-over from 2020 due to COVID-19 Q1 2021: 8 projects were completed: 1. RDR-CED-2019-01 - Natural Hydrocolloid as Alternative Emulsifier and Stabilizing Agent from Okra (Hibiscus esculentus) Pods 2. RDR-CED-2020-02 - Processing of Anti-freezing Agent for Biodiesel 3. RDR-CED-2020-03 - Development of Uninterruptible Power Back-Up System Using Motor Control for Lighting Applications as Sample Electrical Load 4. RDR-CED-2020-04 - Catalytic Hydrogenation and Transesterification of Highly Unsaturated Fatty Acids from Rubber Seed Oil 5. RDR-CED-2020-05 - Bench-scale Production of Curcumin from Philippine Turmeric using Different Extraction Methods 6. RDR-PTD-2020-02 - Establishment of Shelf Life and Safety of Chilled Ready to Heat and Freshly Cooked Ready to Eat Foods Sold in Convenience Stores and Delivery Service 7. RDR-EBD-2020-01 - Development of a Fermentation Product (Kimchi-Filipino adaptation) from locally-grown vegetables using indigenous LAB isolates as starter culture

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2. Percentage of projects implemented within the approved timeframe		100%	100%	100%	100%	100%	100% 46/46*	100%	0%	*45 GAA-funded projects and 1 Downloaded (Metrology program) were implemented within the approved timeframe
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		5%	5%	5%	5%	5%	36% 45/126*	36%	+31%	Not cumulative. *45 out of 126 completed GAA projects from the last 5 years (2016-2020) were published/ presented/ filed for IP as of Q1 2021
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% (5/5)*	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	12	15	10	45	78	78	+70	Q1 2021: 78 knowledge/technologies were diffused through different online platforms and media: 1. Calamansi Dietary Fiber 2. Vinegar Production using ITDI Acetator Kit 3. Alcohol Making 4. Banana Chips 5. Cacao Roaster 6. Cacao Desheller 7. Cacao Grinder 8. Calamansi Processing 9. Compact wastewater treatment system for QSRs 10. Dried Fish Processing 11. Ebulliometer 12. Fish Paste Processing (Fermented Fish) 13. Fish Sauce Processing (Fermented Fish) 14. Freeze Dried Products (Mango and Pineapple) 15. Fruit Puree and concentrates 16. Ginger Candy 17. Guyabano Tea and Capsule 18. Hand Sanitizer Production 19. Household Tumbling Composter 20. Liquid Dishwashing Detergent 21. MOSYMU 22. Nipa Sap Sugar 23. OL Trap 24. Portable Biogas Digester 25. RTE Chicken Arroz Caldo 26. Sagip NutriFlour 27. Salt Iodization Machine 28. Salt Washer 29. Soap Making

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										30. Trickling Filter System for Removal of Nitrates and Phosphates from Wastewater Effluent 31. Vacuum Fried Langka 32. Virgin Coconut Oil (VCO) Processing 33. Waste Analysis and Characterization Study (WACS) Plan Preparation 34. Wine Kit 35. Bangus in Oil Processing (Thermal Processing) 36. DOST Tablea Processing 37. Drum Dried Mango 38. Nanoclay 39. Natural Fiber Thermoplastic Composite 40. Smoked Fish in Oil Processing (Thermal Processing) 41. Tuyo in Oil Processing (Thermal Processing) 42. 3D Printing Services 43. Basil Sauce with Pili Peels and Pupl Oil 44. Bioreactor 45. Bottled Bangus and Potato Chips 46. Dual Drum Composter 47. Emergency Food Reserve 48. Extraction of Essential Oils 49. Ginger Tea Processing 50. Gourmet Salt Spice Mix 51. Herbal Milk Tea - Banaba Leaves 52. Herbal Milk Tea - Mangosteen Rind 53. Herbal Milk Tea - Moringa Leaves 54. Herbal Milk Tea - Soursoup Leaves 55. Herbal Tea - Banaba Leaves 56. Herbal Tea - Bitter Melon Leaves 57. Herbal Tea - Mangosteen Leaves 58. Herbal Tea - Moringa Leaves 59. Herbal Tea - Soursoup Leaves

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1. Number of knowledge/technologies diffused (Continuation)										60. Isotonic Drink 61. Mango Peel Dietary Fiber 62. .Massage oils using VCO with Essential oils 63. Mayonnaise with Pili peels and Pulp oil 64. Mayonnaise with VCO 65. Mixed Fruit Peel Dietary Fiber 66. Mouthwash with Calamansi Seed Oil 67. Nutribun Making 68. Pili Pulp Dietary Fiber 69. Pili Pulp Oil 70. RTD Tablea 71. RTE Smoked Fish 72. RTE Sweet Potato 73. Tomato Pomace Dietary Fiber 74. Tomato Sauce with Pili peels and Pulp Oil 75. Tomato Sauce with VCO 76. Tomato-garlic sauce with VCO 77. Toothpaste with Calamansi Seed Oil 78. Turmeric Tea Processing
2. Number of technologies transferred/commercialized through technology transfer agreement		1	1	2	1	5	6	6	+5	Q1 2021: 1. Vacuum Fried Langka (Bounty Harvest Corp.) 2. Calamansi Processing Plant Set-Up (Campfarms, Inc. and Maryland Manufacturing Corp.) 3. Setting UP of a Start Up and Operation of a Trickling Filter System for the Removal of Nitrates and Phosphates from Wastewater Effluent (CENMACO) 4-6. Acetator Kit, Wine Kit, Ebulliometer (Lozada Machinerics Corp.)
3. Percentage of request for technology transfer that have been provided within the required time frame		95%	95%	95%	95%	95%	100% (5/5)*	100%	+5%	*5 out of 5 requests for technology transfer was completed within the required time frame

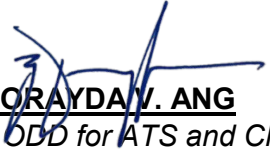
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III Industrial Technology Technical Services Program Outcome Indicators 1. Percentage of customers that rate the technical services as satisfactory or better		90%	90%	90%	90%	90%	99.86% (736/737)*	99.86%	+9.86	*736 out of 737 clients rated the technical services as satisfactory or better
Output Indicators 1. Number of technical services rendered		5,000	5,000	5,000	5,000	20,000	4,594	4,594	-406	The operation of laboratories was hampered due to the implementation of enhanced community quarantine
2. Percentage of request for technical services that have been provided within the required time frame		90%	90%	90%	90%	90%	100% (4,594/4,594)*	100%	+10%	*4, 594 out of 4,594 of technical services were provided within the required timeframe
3. Number of clients benefitting from technical services		500	1,000	1,000	500	3,000	899	899	+399	

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LOCALLY-FUNDED PROJECTS (LFP)							Physical accomplishment	Budget Utilization			
1. Repair/Renovation & Maintenance of ITDI Buildings and Facilities		12%	28%	35%	25%	100%	51.28%	0% 0/40M budget utilized	51.28% Budget utilization: 0% 0/40M budget utilized	+39.28%	Accomplishments as of Q1 2021: 1. Repair / renovation of FPD- 75% 2. Repair / renovation of the repair & improvements of EBD building - 38.47% 3. Repair / renovation of the repair & improvements of NMD building - 75% 4. Repair and renovation of CED bldg - 39.06% Problems encountered and actions taken - Due to ECQ, there were delays in the release of certificate of final electrical inspection from LGU. Constant follow-up to the LGU was done by the contractor. - Requested all supporting documents and prepared recommendation to the requested extension of time.
2. Enhancement of the Competence and capabilities of the National Metrology Laboratory of the Philippines		20%	25%	30%	25%	100%	22.74%	33.43% 14.78M/ 44.21 M utilized	22.74% Budget utilization: 33.43% 14.78 M / 44.21 M utilized	+22.74%	Accomplishments as of Q1 2021: Project 1: •Validated method for chlorpyrifos and phentoate in mango •Developed method for CAP residue in meat •Produced 99 bottles of RM for histamine in canned tuna Project 2: •Conducted virtual Pre-PT Workshop for Co, Mn, and Ni in Drinking Water •Conducted virtual Pre-PT Workshop for As and Hg in Drinking Water •Completed method validation for As using HVG-AAS •Completed stability tests for RMs of As and Hg in Drinking Water •Prepared spiked RM samples for As, Pb, and Cd in Rice

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2. Enhancement of the Competence and capabilities of the National Metrology Laboratory of the Philippines (Continuation)										<p>Project 3:</p> <ul style="list-style-type: none"> •Conducted homogeneity and stability study for candidate PT material - Salmonella sp. in milkfish •Conducted simultaneous preparation of S. enterica (S8) and P. mirabilis (S3) were being conducted to accumulate sufficient analyte for the PT material – Salmonella sp. in milkfish. •Sterilized milkfish samples to reduce the microbial contaminants. •PT scheme: Interlaboratory Comparison Scheme for Microbiology (ICSM-2021-01) - currently, thirty (30) prospective participant laboratories have already declared their intent to join the PT scheme. <p>Project 4:</p> <ul style="list-style-type: none"> •Submitted request for forwarding of 2020 funds which consists of savings and unexpended balances to C.Y. 2021 and realigned our line-item-budget (subject to approval by the DOST-EXECOM). •Prepared PRs for 28 equipment •Continued revision and improvement of laboratory quality manuals, work instructions, technical procedures, among others for accreditation by DAkkS under the terms of ISO/IEC 17025:2017. •The NML Quality Management Team has already started the processing the application to DAkkS last February 22, 2021. <p>Problems encountered and actions taken:</p> <ul style="list-style-type: none"> •Equipment scheduling conflict <ul style="list-style-type: none"> -Sharing of equipment and space with STD Microbiology Laboratory and MIC Laboratory; Scheduling of activity; repair of electrical line for new equipment •Lack of space for temporary storage of equipment <ul style="list-style-type: none"> -Rooms at NML and SRT building used as storage areas •Technical issues on homogeneity and stability of PT materials <ul style="list-style-type: none"> -Use of other methods/ techniques. Consultations

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3. ITDI Information Technology Capability Enhancement and Sustainability		15%	20%	40%	25%	100%	15.00%	46.79%	6.49 M/ 13.87 M utilized	Budget utilization: 46.79%	6.49 M / 13.87 M utilized	0%	Major Accomplishments for Q1 2021: -Distribution and installation of heavy-duty printers to all divisions - Distribution of laptop computers - Configuration of eNGAS to make it accessible to work-from-home staff - Processing of Purchase request for VOIP Phone, additional data network ports for printers and end-user workstations, and access points on all ITDI buildings (ICT inventory, Network Design and layout) - Development of Accounting and Cashier Module - Live implementation of Technical Support Information System including the Laboratory module Problems Encountered: - Difficulty in data gathering for system design due to lack of detailed process documentation - Difficulty during testing and implementation due to the conflict in schedule of end-users (Skeletal and WFH setup of Schedule) Actions Taken: - Created a process flow with system graphics user interface to provide visual overview to the end-users - Conducted online training, meetings and presentation to end-users

Prepared By:


Dr. ZORAYDA V. ANG
 OIC, ODD for ATS and Chief,
 PMISD


Date: April 12, 2021

In coordination with:


DR. JANET F. QUIZON
 Chief, FMD

Date: April 12, 2021

Approved by:


Dr. ANNABELLE V. BRIONES
 Director, ITDI

Date: April 12, 2021