

**List of patents produced by the program in the last three years**

List of Technologies	Author	Intellectual Property Rights*	
Apparatus for Chopping Forage	Dr. Joel M. Alcaraz	Utility Model Patent Certificate number 22012000618	
Apparatus for Chipping Cassava	Dr. Joel M. Alcaraz	Utility Model Patent Certificate number 22012000617	
Apparatus for Transporting Farm Inputs	Dr. Joel M. Alcaraz	Utility Model Patent Pending with appli. no 22014000038	
Reciprocating Flour Shifter	Dr. Joel M. Alcaraz	Utility Model Patent Pending with application number 22014000040	
Apparatus for Milling Agricultural Grains	Dr. Joel M. Alcaraz	Utility Model Patent Pending w/ appli. No. 22014000039	
Self-Propelled Riding Type Mower	Dr. Joel M. Alcaraz	Utility Model Patent Pending with application number 22014000041	
Vacuum Type Grain Collector	Dr. Joel M. Alcaraz	Utility Model Patent Pending with application number 22014000317	
Apparatus for collecting pavement dried grains	Dr. Joel M. Alcaraz	Utility Model Patent pending with application number 22014261228	
Self Propelled Riding type Grain Collector	Dr. Joel M. Alcaraz	Industrial Design patent pending with application number 32014000464	
Self Propelled riding type mower	Dr. Joel M. Alcaraz	Industrial Design patent pending with application number 32014000465	

Apparatus for shelling peanut	Dr. Joel M. Alcaraz	Industrial Design patent pending w/ appli. number 32014000462	
Vacuum Type Grain Collector	Dr. Joel M. Alcaraz	Industrial Design Patent Pending with application number 32014000463	
EMC-2 Trademark application	Dr. Joel M. Alcaraz	EMC-2 Trademark 00502289	
ISU Trademark application	Dr. Joel M. Alcaraz		
College of Engineering Trademark application	Dr. Joel M. Alcaraz		
High Capacity Screw Type Tomato Juice Extractor	Dr. Joel M. Alcaraz		
Spin Type Juicer for Vegetables	Dr. Joel M. Alcaraz		
High Capacity Blender for Fruits and Vegetables	Dr. Joel M. Alcaraz		
Multi-purpose Milk Presser	Dr. Joel M. Alcaraz		

List of Technologies	Author	Intellectual Property Rights*	Impact generated in relation to increase arm or firm output, decrease cost of production, and production of new products and services
Water Impounding Assessment Program (for database and impact assessment of small water impounding projects)	Dr. Orlando F. Balderama	Copyrighted 2014, Isabela State University	98 operational units of SWIP in the region as of December 2012 with a service area of 6531 hectares and 4994 farmer beneficiaries.
Cropping System and Water Management Model (2 versions)	Dr. Orlando F. Balderama	Copyrighted 2010, 2011, Water Science and Technology Association and American Society of Agricultural Engineers	Provided platform in the optimum designing of small farm pond and diversified farming system. Presented to large conferences in China, USA and National Conferences
Erosion Control in Community Watershed Using Pigeon Pea Hedge	Dr. Orlando F. Balderama	Copyrighted 2013, International Agricultural Engineering Journal	Agrarian Communities of Quirino and Nueva Vizcaya and Pilot communities in Isabela

<p>Crop Coefficients for Peanut Pn9 (developed through the conduct of Field experiment for wet and drty seasons)</p>	<p>Dr. Orlando F. Balderama</p>		<p>Pn9 is the most common cultivar used by farmers in Region 2. Crop coefficient is being used by researchers to ,predict crop performance under varying environmental condition and in developing strategies for climate change adaptation</p>
<p>Crop Coefficient for Sweet Sorghum SPV 122 (Developed through the conduct of Field experiment for wet and dry seasons)</p>	<p>Dr. Orlando F. Balderama</p>		<p>SPV 122 is the recommended sweet sorghum cultivar for biofuel production. Crop coefficient is being used by researchers to predict crop performance under varying environmental condition and in developing strategies for climate change adaptation</p>

<p>Crop Coefficient for Corn Dekalb 193 (Developed through the conduct of Field experiment for wet and dry seasons)</p>	<p>Dr. Orlando F. Balderama</p>		<p>Dekalb 193 is a common high-yielding corn cultivar used by famers in Isabela. Crop coefficient is being used by researchers to predict crop performance under varying environmental condition and in developing strategies for climate change adaptation</p>
<p>Aerobic Rice Technology Package of Technologies for Cagayan Valley</p>	<p>Dr. Orlando F. Balderama</p>	<p>Copyrighted 2013, Isabela State University</p>	<p>More than 5,000 hectares in Cagayan Valley is being cultivated using aerobic rice, upscaling is made in Mindanao and endorsed by DA-BAR as good practice for climate change adaptation to ASEAN member states. Used for several national trainings on Aerobic Rice Technologies</p>