

PROJECT APPRAISAL REPORT (PAR)

A.I.D. <sup>RS/RS</sup> 5240073 ①  
 Reference Center 107

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1. PROJECT NO. <b>524-11-110-073</b>	2. PAR FOR PERIOD: TO <b>6/30/71</b>	3. COUNTRY <b>Nicaragua</b>	4. PAR SERIAL NO. <b>72-8</b>
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**Agricultural Production and Diversification**

6. PROJECT DURATION: Began FY <b>1970</b> Ends FY <b>1973</b>	7. DATE LATEST PROP <b>9/19/69</b>	8. DATE LATEST PIP	9. DATE PRIOR PAR <b>1/28/70</b>
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10. U.S. FUNDING	a. Cumulative Obligation Thru Prior FY: \$ <b>420,000</b>	b. Current FY Estimated Budget: \$ <b>470,000</b>	c. Estimated Budget to completion After Current FY: \$ <b>505,000*</b>
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11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

a. NAME <b>Louisiana State University</b>	b. CONTRACT, PASA OR VOL. AG. NO. <b>B/G (GON) 1969-1</b>
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I. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

A. ACTION (X)			B. LIST OF ACTIONS	C. PROPOSED ACTION COMPLETION DATE
USAID	AID/W	HOST		
			<p>*It is recognized that although the program will be fully implemented with the FY 72 funds, planned additional inputs in the same area will contribute to increased gains. Outputs have been projected as feasible of accomplishment with inputs provided through FY 72. Mission wishes to keep option open for re-evaluation in late CY 72 and possible extension of the project on either a grant or a loan basis at that time. Project currently approved through FY 72.</p>	

D. REPLANNING REQUIRES	E. DATE OF MISSION REVIEW
REVISED OR NEW: <input type="checkbox"/> PROP <input type="checkbox"/> PIP <input type="checkbox"/> PRO AG <input type="checkbox"/> PIO/T <input type="checkbox"/> PIO/C <input type="checkbox"/> PIO/P	<b>November, 1971</b>

PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE <b>Carl D. Koone</b> <i>Carl D. Koone</i>	MISSION DIRECTOR: TYPED NAME, SIGNED INITIALS AND DATE <b>William R. Haynes</b> <i>William R. Haynes</i>
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**II. PERFORMANCE OF KEY INPUTS AND ACTION AGENTS**

A. INPUT OR ACTION AGENT CONTRACTOR, PARTICIPATING AGENCY OR VOLUNTARY AGENCY	B. PERFORMANCE AGAINST PLAN							C. IMPORTANCE FOR ACHIEVING PROJECT PURPOSE (X)					
	UNSATISFACTORY		SATISFACTORY			OUT-STANDING		LOW	MEDIUM			HIGH	
	1	2	3	4	5	6	7	1	2	3	4	5	
1. <b>Contractor</b>					X								X
2.													
3.													

Comment on key factors determining rating

**Selection of technicians early in the Project was not highly satisfactory; however, contractor has taken corrective action and replaced weaker members of the contract team.**

4. PARTICIPANT TRAINING		1	2	3	X	5	6	7	1	2	3	4	5
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Comment on key factors determining rating

5. COMMODITIES	<b>N. A.</b>	1	2	3	4	5	6	7	1	2	3	4	5
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Comment on key factors determining rating

6. COOPERATING COUNTRY	a. PERSONNEL				X	5	6	7	1	2	3	4	X
	b. OTHER			X									X

Comment on key factors determining rating

7. OTHER DONORS	<b>C. A. S. A.</b>	1	2	3	4	5	X	7	1	2	3	4	X	5
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(See Next Page for Comments on Other Donors)

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II. 7. Continued: Comment on key factors determining rating of Other Donors

The Cooperativa de Arroceros S. A. (C. A. S. A.) and the Rice Growers Association have contributed the use of land, materials and equipment for use in the rice research program.

### III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS		TARGETS (Percentage/Rate/Amount)					END OF PROJECT
		CUMU- LATIVE PRIOR FY	CURRENT FY <sup>72</sup>		FY ____	FY ____	
			TO DATE	TO END			
Select 6 HYV's of rice from several hundred strains and varieties available for testing.	PLANNED	6	-	-			6
	ACTUAL PERFORMANCE	6					
	REPLANNED						
2,500 tons HYV seed made available for planting to produce milling rice.	PLANNED	20		2,480			2,500
	ACTUAL PERFORMANCE	20	Multiplication in progress				
	REPLANNED						
100+ strains and varieties sorghum and forage crops tested and 5 HYV's selected.	PLANNED			5			5
	ACTUAL PERFORMANCE		Testing in progress				
	REPLANNED						
Relative values of 12 locally produced feed ingredients determined for swine and cattle feeding.	PLANNED	11	1	12			12
	ACTUAL PERFORMANCE	11	-				
	REPLANNED						
B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS	COMMENT:						
1. Survey of milk market structure and recommendations developed.	Survey completed. Recommendations under consideration by producers and GON.						
2. Market news reports published daily with weekly radio reports.	COMMENT: A daily market news bulletin is published which covers prices paid for the principal grains, vegetables, and pork in the principal markets in Managua.						
3. Crop forecasting and reporting service organized.	COMMENT: An economist has recently been employed by INCEI who will have responsibility for organizing this activity.						

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IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged.

2. Same as in PROP?  YES  NO

1. To establish a scientific basis for increased production of selected crops through research studies.
2. To establish a scientific basis for increased meat production through applied nutrition research.
3. To establish the basis for an expanding market in food and feed crops, livestock, and livestock products through execution of production, transport, storage, price, demand and related studies

B. 1. Conditions which will exist when above purpose is achieved.

2. Evidence to date of progress toward these conditions.

1. Studies distributed to action agents and agencies and action taken on principal recommendations.
2. As above.
3. Results of studies and survey-published and distributed to action agents and market news service functional. Action taken on principal recommendations.

1. Applied research programs in progress on rice, sorghum and pasture grasses.
2. Applied nutrition research in progress for cattle and swine to determine economic feasibility of converting agro-industrial by-products and grains to animal and animal products.
3. An economic section is being staffed and trained in the Price Stabilization Agency. A study of milk marketing and pricing policy has been completed and recommendations made. Studies related to production and marketing of livestock and produce in progress. Publication of a daily market news bulletin initiated.

V. PROGRAMMING GOAL

A. Statement of Programming Goal

To assist the GON in increasing and diversifying the productive capacity of the economy.

B. Will the achievement of the project purpose make a significant contribution to the programming goal, given the magnitude of the national problem? Cite evidence.

The achievement of the project purpose will contribute to the Program Goal. However, the impact of this contribution would be more immediately realized if there were larger budgetary allocations to research and extension activities than is currently the case. Further, as implied in Section IV B, the implementation of studies, research, surveys, etc. lies with the Government agencies and is not a direct activity of this project.

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS AN AID TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

Life of Project:  
From FY 1970 to FY 1973  
Total U.S. Funding \$1,395,000  
Date Prepared: 10/13/71

Project Title & Number: Agric. Production and Diversification - 524-11-110-073

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To assist the GOM in increasing and diversifying the productive capacity of the economy.</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> <li>1. Applied research programs developed and operational for selected crops and for livestock production.</li> <li>2. Price stabilization program for basic grains developed and operational with reductions in historical seasonal price fluctuation.</li> <li>3. Studies conducted and plans developed and being implemented for improving marketing practices for selected crops, livestock and livestock products.</li> <li>4. Programs implemented by the Ministry and other action agencies contributing to conversion of grains and agricultural industrial by-products to animal products, thereby contributing to diversification.</li> </ol>	<ol style="list-style-type: none"> <li>1. On-site visit MAG research facilities.</li> <li>2. Review agricultural marketing statistics.</li> <li>3. Review of completed studies-on-site visits to marketing places.</li> <li>4. Establishment and expansion of feed-lot operations for cattle and swine verified through on-site visits.</li> </ol>	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> <li>1. It is assumed that the action agents and agencies have both the desire and the means to implement the changes suggested by the studies.</li> <li>2. It is assumed that stabilization of basic grains prices will contribute to both increased production and increased utilization for animal feeding.</li> <li>3. As in "1" above.</li> <li>4. As in "1" above.</li> </ol>

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<p>Project Purpose:</p> <ol style="list-style-type: none"> <li>To establish a scientific basis for increased production of selected crops through research studies.</li> <li>To establish a scientific basis for increased meat production through applied nutrition research.</li> <li>To establish the basis for an expanding market, in food and feed crops, livestock, and livestock products, through execution of production, transport, storage, price, demand and related studies and surveys and the initiation of a functioning market news service.</li> </ol>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> <li>Studies distributed to action agents and agencies. Action taken on principal recommendations.</li> <li>As above</li> <li>Results of studies and surveys published and distributed to action agents and market news service functional. Action taken on principal recommendations.</li> </ol>	<ol style="list-style-type: none"> <li>On-site visits to farms, milling companies, MAG, etc.</li> <li>On-site visits to livestock raisers, slaughter houses, MAG, etc.</li> <li>Technicians' reports and published market price information.</li> </ol>	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> <li>It is assumed that the action agents and agencies have both the desire and means to implement the changes suggested by the studies.</li> <li>As above.</li> <li>It is assumed that: a. producers can and will produce and sell more advantageously if they know what current and projected market prices are apt to be; and b. minimum prices are consistently set so as to be competitive with other production alternatives.</li> </ol>

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude of Outputs:		Assumptions for achieving outputs:
<b>A. Crop Research:</b>			
1. Rice			
a. Several hundred varieties and strains tested and HYV's identified.	a. Select 6 HYV's from several hundred strains and varieties available for testing.	a. Research reports.	1. That improved varieties of rice combining high yield, disease and insect resistance will be available for testing.
b. Optimum rate of seeding determined.	b. One or more experiments using high, medium and low rates of seeding conducted.	b. Technicians reports.	2. That official inspection services will be available to insure compliance with a seed certification program.
c. Fertilizer recommendations developed.	c. Experiments conducted to test response to 3 different levels of N, P and K and combinations of major fertilizer elements, response to form of N applied and response to time of fertilizer application.	c. Research reports.	3. That demand for improved seeds will be adequate to utilize, fully, foundation seed produced by the project.
d. Pure seed production and multiplication program established.	d. (1) 500 panicles from each of 6 HYV's selected and planted to individual head rows. HYV	d. Technicians reports.	4. That 2 normal crops of rice will be produced annually in the seed program.
	e. 2500 tons <del>available</del> seed made available from (1) above for planting to produce milling rice.	e. Technician reports and producer surveys.	

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Inputs:	Implementation Target (Type and Quantity)		Assumptions for providing inputs:
<p>2. Grain Sorghum and Forage Crops</p> <p>a. High yielding varieties of grain sorghums identified.</p> <p>b. Optimum row spacing and seeding rates for sorghum determined.</p> <p>c. Adaptability of improved pasture grasses tested.</p>	<p>a. 100 + strains and varieties screened and tested, and 5 highest yielding varieties selected.</p> <p>b. 4 experiments conducted in each of 4 geographic areas of the country.</p> <p>c. Adaptability of 5 pasture grasses tested in 4 geographic locations.</p>	<p>a. Research reports.</p> <p>b. Technician reports, visual inspection of test areas.</p> <p>c. Technician reports and visual inspection of test areas.</p>	<p>a. That seed of improved high yielding, insect and disease resistant varieties will be available for testing.</p> <p>b. That suitable cooperators may be located in desired testing areas.</p>
B. <u>Animal Nutrition</u>			
<p>1. Determination of the comparative value of locally produced feed ingredients for the formulation of cattle and swine rations.</p>	<p>1. Relative values of 12 locally produced feed ingredients determined for swine and cattle feeding.</p>	<p>1. Research reports</p>	<p>1. That it will be more profitable to feed livestock than to export the feed ingredient</p>
<p>2. Economic feasibility of feeding molasses and urea fortified molasses to livestock determined</p>	<p>2. Two experiments conducted with swine and two with cattle.</p>	<p>2. Research reports.</p>	<p>2. That the domestic and export markets can readily absorb the increased production of livestock and livestock products.</p>
C. <u>Agricultural Marketing</u>			
<p>1. Recommendations to improve marketing of livestock products developed.</p>	<p>1. (a) A survey of milk market structure conducted and recommendations developed for pricing policy, including margins to producers, processors and distributors.</p>	<p>1. (a) Survey report published.</p>	<p>1. That a more equitable pricing policy will contribute increased production and market expansion.</p>

(b). Development of classification grading and packaging requirements to meet export demands.

(b) Packaging labels approved by USDA and export shipments made under approved labels.

2. Recommendations to improve marketing of livestock.

2. An evaluation of existing market system conducted and recommendations for establishment of at least 3 livestock markets and improved marketing methods developed.

2. Evaluation report.

2. That the existing system of marketing is inefficient and costly to producers.

3. Pre-feasibility study for establishment of a modern fresh produce market in Managua.

3. Interview approximately 100 operators of food handling firms, tabulate and analyze results.

3. Pre-feasibility report.

3. That existing market facilities are inadequate to adequately serve the needs of a rapidly expanding urban population.

4. Market news service for agricultural products organized.

4. Market news reports published on a daily basis with weekly radio reports.

4. Publications and broadcast reports.

4. That timely price information will contribute to alleviating gluts and shortages in market produce and enable producers to adjust production and market locations more efficiently.

5. Crop forecasting and reporting service organized.

5. Periodic surveys of intentions to plant, crops planted and anticipated yields, analysis and dissemination of survey results.

5. Same as No. 4 above.

6. Grain price stabilization staff trained.

6. More than 200 persons provided on-the-job training.

6. On site inspection.

FD-204 (7-71)  
 ELEMENT 1

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 LOGICAL FRAMEWORK

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 Date Prepared: 10/13/71

Project Title & Number: Agric. Production and Diversification - 524-11-110-073

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS		MEANS OF VERIFICATION		IMPORTANT ASSUMPTIONS
	Implementation Target (Type and Quantity)				Assumptions for providing inputs:
	Planned Obligations (\$ 000's)				
	<u>FY 70</u>	<u>FY 71</u>	<u>FY 72</u>	<u>FY 73</u>	<u>Cum. Total Life of Project</u>
Inputs:					
Contract Services	140	237	395	430	1,202
Participant Training	19	21	50	50	140
Other Costs	3	-	25	25	53
	<u>162</u>	<u>258</u>	<u>470</u>	<u>505</u>	<u>1,395</u>