

PAGE 1

PROJECT APPRAISAL REPORT (PAR)

1. PROJECT NO. <u>367-11-110-054</u>	2. PAR FOR PERIOD: <u>3/71</u> TO <u>6/74</u>	3. COUNTRY <u>NEPAL</u>	4. PAR SERIAL NO. <u>74-3</u>
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5. PROJECT TITLE

Foodgrain Technology Project

6. PROJECT DURATION: Began FY <u>1957</u> Ends FY <u>1974</u>	7. DATE LATEST PROP <u>Oct. 12, 1970</u>	8. DATE LATEST PIP <u>Sept. 1971</u>	9. DATE PRIOR PAR <u>June 5, 1972</u>
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10. U.S. \$ Only FUNDING	a. Cumulative Obligation Thru Prior FY: \$ <u>3,686,000</u>	b. Current FY Estimated Budget: \$ <u>520,000</u>	c. Estimated Budget to completion After Current FY: \$ <u>4,206,000</u>
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11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

a. NAME

b. CONTRACT, PASA OR VOL. AG. NO.

Direct Hire AID Staff

CIMMYT

PSC

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		
X			1. Monitor construction activities at research farms/stations after formal termination of project (especially levelling & irrigation).	Continuing
X			2. Consider ways in which B.Sc.(Agric) training in India can be continued -- either through USAID local currency program or through Indian aid program.	June 1974
X			3. Consider ways in which impact of research stations on farmers and on production can be measured. USAID needs better knowledge of linkages between research and farmers.	Continuing
		X	4. Placement of <u>permanently</u> assigned personnel at research stations.	June 30, 1974
		X	5. Creation of central coordinator for ag. research -- to coordinate priorities for different crops and the activities of different stations/farms.	January 1975
X			6. CIMMYT contract should add an experienced maize advisor who can assume the project administrative responsibilities as Chief-of-Party. (Note: This should occur as part of new High Lysine Maize Project).	July 1974

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"/> FIO/T	<input type="checkbox"/> FIO/C	<input type="checkbox"/> FIO/P	April 10, 1974
PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE				MISSION DIRECTOR: TYPED NAME, SIGNED INITIALS AND DATE			
Philip D. Smith				William C. Ide			

Program Office: Carol Peasley

**II. PERFORMANCE OF KEY INPUTS AND ACTION AGENTS**

A. INPUT OR ACTION AGENT	B. PERFORMANCE AGAINST PLAN							C. IMPORTANCE FOR ACHIEVING PROJECT PURPOSE (X)				
	UNSATISFACTORY		SATISFACTORY			OUTSTANDING		LOW		MEDIUM		HIGH
	1	2	3	4	5	6	7	1	2	3	4	5
1. Direct Hire Staff						X						X
2. PSC Bio-Chemist					X						X	
Extension Training					X						X	
3. CIMMYT Contract			X								X	

Comment on key factors determining rating - USAID/N Agriculture Division has had a unique situation, in that for the life of the Foodgrain Technology Project, it has primarily maintained a direct hire staff which was operating under some adverse conditions. Technicians have been able to complete almost 100% of the project activities within the time span of the agreements. Contracts and PASA personnel have played a less important role in the existing program. With regard to the CIMMYT Contract, there is a need for an additional person under the contract so that the technical expertise of the resident plant breeder can be used more efficiently.

4. PARTICIPANT TRAINING	1	2	3	4	5	6	7	1	2	3	4	5
							X					X

Comment on key factors determining rating Training has played an important role in this project and in the overall development of HMG's agricultural infrastructure. Related to this project was the local currency funded training of B.Sc. agriculturalists in India -- approximately 378 have graduated (or will do so soon). The only real problem with the training program has been to ensure that people return to jobs for which they were trained -- e.g., 50% of the ag engineers trained as part of this project are not working as ag engineers at this time. They are working in ag facilities, but not necessarily as ag engineers.

5. COMMODITIES	1	2	3	4	5	6	7	1	2	3	4	5
							X					X

Comment on key factors determining rating  
 Much of the equipment for this project was purchased in India, thereby easing some of the problem of securing spare parts. Delivery time has been long -- e.g., hydraulic equipment ordered in FY 71 has just arrived, as the project nears termination.

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

Comment on key factors determining rating  
 Personnel problems were almost continual during the course of the project. In FY 69-70, the research farms with which USAID technicians were working were very inadequately staffed. After several years of trying via ProAgs, the Public Service Commission created the posts necessary to staff fully the farms. Then began the problems of filling them -- most are not filled by persons in "permanent capacity", but rather by those "acting".

Another problem has been competition for scarce manpower within the agricultural sector -- especially because of special incentives offered by various other donors to HMG personnel assigned to their projects. Regular USAID/HMG projects find it difficult to compete since no special bonuses or incentives are offered.

7. OTHER DONORS	NA	1	2	3	4	5	6	7	1	2	3	4	5
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2

AID 1020-25(10-70) PAGE 3 PAR	PROJECT NO. 367-11-110-054	PAR FOR PERIOD: 3/71 to 6/74	COUNTRY NEPAL	PAR SERIAL NO. 74-3
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II. 7. Continued: Comment on key factors determining rating of Other Donors

Other donors have not been active at the research farms being supported by USAID. However, other donors have created some operating difficulties for USAID & HMG -- see II. 6 above.

### III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS		TARGETS (Percentage/Rate/Amount)					
		CUMU- LATIVE PRIOR FY	CURRENT FY 74		FY ____	FY ____	END OF PROJECT
			TO DATE	TO END			
Trials/Experiments on major crops conducted annually (5 farms)	PLANNED	227	342	115			342
	ACTUAL PERFORM- ANCE		430				
	REPLANNED						
New proven varieties to be released annually	PLANNED	30	8	10			8
	ACTUAL PERFORM- ANCE		8				
	REPLANNED						
Trained personnel B.Sc. India	PLANNED	277		101			378
	ACTUAL PERFORM- ANCE						
	REPLANNED						
Foundation seed produced for distribution to private farmers	PLANNED	SEE #2	BELOW				444 M/T
	ACTUAL PERFORM- ANCE						
	REPLANNED						
B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS		COMMENT:					
1. Improved research stations/ farms to carry out high quality adoptive research as major crops		5 stations/farms located in 5 typical agricultural regions. Farms still in need of additional work to complete irrigation systems and levelling.					
2. Foundation Seed		COMMENT: Difficult to quantify because of differences in definition of foundation seed, etc. However, advisors at farms feel that targets were surpassed.					
3.		COMMENT:					

APD 1020-25(10-70)	PROJECT NO. 367-11-110-054	PAR FOR PERIOD: 3/74 to 6/74	COUNTRY NEPAL	PAR SERIAL NO. 74-3
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II. 7. Continued: Comment on key factors determining rating of Other Donors

III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS		TARGETS (Percentage/Rate/Amount)					
		CUMU- LATIVE PRIOR FY	CURRENT FY 74		FY ____	FY ____	END OF PROJECT.
			TO DATE	TO END			
Package of practices for each of major crops (5 x 3)	PLANNED			15			15
	ACTUAL PERFORM- ANCE		15				
	REPLANNED						
Farmer Field Days	PLANNED	30	10	10			40
	ACTUAL PERFORM- ANCE	30	10				
	REPLANNED						
Training Sessions for JTA's	PLANNED	45		15			60
	ACTUAL PERFORM- ANCE	45	60				
	REPLANNED						
Buildings constructed (District Offices)	PLANNED	13	11	5			18
	ACTUAL PERFORM- ANCE	13	11				
	REPLANNED						
B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS		COMMENT:					
1.							
2.		COMMENT:					
3.		COMMENT:					

4

AID 1020-25 (110-70)	PROJECT NO. 367-11-110-054	PAR FOR PERIOD: 3/71 to 6/74	CCOUNTRY NEPAL	PAR SERIAL NO. 74-3
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IV. PROJECT PURPOSE

- A. 1. Statement of purpose as currently envisaged.
- (A) To improve HMG's research capability in foodgrains (especially paddy, maize, and wheat) and
2. Same as in PROP?  YES  NO
- (B) To develop the HMG Extension Service into an effective organization for identifying problems which can be resolved through research and for transferring the results of applied research to the farm family.

B. 1. Conditions which will exist when above purpose is achieved.	2. Evidence to date of progress toward these conditions.																					
1. Agricultural research stations/farms adequately staffed with trained people.	1. With the exception of Nepalgunj, each of the farms has personnel posted in most of the necessary positions:																					
	<table border="1"> <thead> <tr> <th></th> <th>Gazetted</th> <th>Non-Gazetted</th> </tr> </thead> <tbody> <tr> <td>Janakpur</td> <td>66% filled</td> <td>77% filled</td> </tr> <tr> <td>Parwanipur</td> <td>78% filled</td> <td>95% filled</td> </tr> <tr> <td>Rampur</td> <td>85% filled</td> <td>100% filled</td> </tr> <tr> <td>Bhairawa</td> <td>80% filled</td> <td>55% filled</td> </tr> <tr> <td>Nepalgunj</td> <td>40% filled</td> <td>57% filled</td> </tr> <tr> <td></td> <td>(plus 2 slots not planned)</td> <td></td> </tr> </tbody> </table>		Gazetted	Non-Gazetted	Janakpur	66% filled	77% filled	Parwanipur	78% filled	95% filled	Rampur	85% filled	100% filled	Bhairawa	80% filled	55% filled	Nepalgunj	40% filled	57% filled		(plus 2 slots not planned)	
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	(plus 2 slots not planned)																					
2. Farms/stations conducting experiments and trials (at least at FY 71-74 levels) independent of U.S. assistance.	2. Trials & experiments taking place on continuing basis at all farms. For example, at Bhairawa, there were the following number of research trials:																					
	<table border="1"> <thead> <tr> <th>Year</th> <th>Wheat</th> <th>Rice</th> </tr> </thead> <tbody> <tr> <td>FY 70</td> <td>3</td> <td>N/A</td> </tr> <tr> <td>71</td> <td>4</td> <td>5</td> </tr> <tr> <td>72</td> <td>8</td> <td>5</td> </tr> <tr> <td>73</td> <td>10</td> <td>8</td> </tr> <tr> <td>74</td> <td>12</td> <td>12</td> </tr> </tbody> </table>	Year	Wheat	Rice	FY 70	3	N/A	71	4	5	72	8	5	73	10	8	74	12	12			
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74	12	12																				
(Contd)	(Contd)																					

V. PROGRAMMING GOAL

A. Statement of Programming Goal

To increase foodgrain production by 3% during the period FY 70-74.

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

The above indicates that the project purpose has been satisfactorily achieved — i.e., the research farms/stations have been institutionalized and are in the process of conducting adaptive research. The second part of the project purpose (development of HMG Extension Service) forms the major linkage between research and the project's overall long-term Goal of increased foodgrain production. The original logical framework set this goal at 3% p.a. for the period FY 70-74. However, since FY 70 national foodgrain production has increased at less than 2% p.a. This originally stated Goal has therefore not been achieved. One major reason for this is that it was an overly ambitious goal. USAID's project efforts were limited to the Terai, and more specifically to those areas surrounding the five research farms/stations with resident USAID advisors. Therefore, the measure for goal achievement should not be national production figures. While agricultural statistics are very tentative in Nepal, there are indications of significant changes in agricultural production in those areas

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AID 1020-25 (10-70) PAGE 4 PAR	PROJECT NO. 367-11-110-054	PAR FOR PERIOD: 3/71 to 6/74	CCOUNTRY NEPAL	PAR SERIAL NO. 74-3
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IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged.

2. Same as in PROP?  YES  NO

B. 1. Conditions which will exist when above purpose is achieved.	2. Evidence to date of progress toward these conditions.																
<p>(Contd)</p> <p>5. Research results are systematically transmitted to agencies charged with dissemination of latest technology to farmers.</p>	<p>(Contd)</p> <p>support of the Extension Service.</p> <p>5. In the areas around the farms, there has been increased production and increased use of fertilizers, seeds and institutional credit. Indicative of the fact that research results are being transmitted are the following data from Bhairawa:</p> <p>a. AMC Fertilizer Sales</p> <table> <tr><td>FY 70</td><td>239 MT</td></tr> <tr><td>71</td><td>363 MT</td></tr> <tr><td>72</td><td>699 MT</td></tr> <tr><td>73</td><td>1,311 MT</td></tr> <tr><td>74</td><td>1,855 MT (8 mos. only)</td></tr> </table> <p>b. ADB Loans</p> <table> <tr><td>FY 72</td><td>Rs 10,70,232</td></tr> <tr><td>73</td><td>Rs 31,39,081</td></tr> <tr><td>74</td><td>Rs 31,35,180 (6 mos. only)</td></tr> </table>	FY 70	239 MT	71	363 MT	72	699 MT	73	1,311 MT	74	1,855 MT (8 mos. only)	FY 72	Rs 10,70,232	73	Rs 31,39,081	74	Rs 31,35,180 (6 mos. only)
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V. PROGRAMMING GOAL

A. Statement of Programming Goal

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.

AID 1Q20-25 (10-70)	PROJECT NO. 367-11-110-054	PAR FOR PERIOD: 3/71 to 6/74	COUNTRY NEPAL	SERIAL NO. 74-3
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IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged.

2. Same as in PROP?  YES  NO

<p>B. 1. Conditions which will exist when above purpose is achieved.</p>	<p>2. Evidence to date of progress toward these conditions.</p>
<p>(Contd)</p> <p>3. Accurate reports of both positive and negative findings regularly reported by farms/stations to Dept. of Research.</p> <p>4. Stations/farms are focal points for area farmers to learn best production techniques.</p>	<p>(Contd)</p> <p>3. Reports are regularly forwarded. In early FY 70, much of final data collected was not accurate and was in many cases falsified by the Farm Managers. Reports are now accurate and scientific in nature.</p> <p>4. a. Farmer Field Trials and Farmer Field Days take place regularly. For example, in Bhairawa and Janakpur, 2 field days take place annually with attendance ranging from 200 to 500. Farmers use this opportunity to see research results at first hand.</p> <p>b. Increased training of farmers directly by the stations/farms has been taking place. The Central Development Region has recently conducted two farmer training courses, with another planned in the near future. Initial results have been encouraging and there are plans to develop these trainees into para-professionals (with nominal monthly stipends) reaching out to other farmers with the</p> <p>(Contd)</p>

V. PROGRAMMING GOAL

A. Statement of Programming Goal

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. (Contd)

surrounding the research farms. Data show increased area under cultivation, increased use of improved varieties, and increased use of fertilizers. Because no rigorous analysis has been done, it is difficult to attribute increased production in these areas to the research farms. Sensitivity analysis needs to be done to determine the relative impact of irrigation, improved transport, etc. on production. However, one can say that the research results of the farms/stations were pre-conditions for many of the changes in agricultural technology.

I have enjoyed my two year tour in Janakpur very much. I feel a great sense of accomplishment for the people I have had to work with. As I look back over the past two years, I can see progress. In two years we have been able to build an agricultural team qualified and dedicated enough to carry on programs that will continue to service the farmers in the Janakpur area. I am looking forward to my next tour in Janakpur. Hopefully, my next two years will be concentrated more on strengthening the agricultural extension program in the area.

CC: LAISE