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Dear Professor Camus,

On behalf of the IRRI Board of Trustees, I wish to thank you and the other members of TAC for arranging to get a thorough review of our research and training programs made by a distinguished panel of experts headed by Sir Ralph Riley. IRRI Trustees met from 12 to 15 May to receive the report and discuss the recommendations.

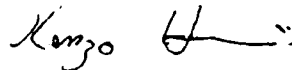
I have great pleasure in enclosing the EPR Report and the comments of the IRRI Board on the recommendations of the EPR Panel. We shall look forward to discussing this further with TAC at Nairobi next month.

I also enclose a copy of the report of the EMR headed by Dr. Lowell Hardin together with a copy of our response.

I once again thank you personally for the deep interest you have always taken in the work of IRRI as well as all other IARCs.

With warm personal regards.

Yours sincerely,



Kenzo Hemmi
Chairman, IRRI Board

Prof. Guy Camus
Chairman, Technical
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Enclosures: 1) EPR Report
2) comments on the EPR Report
3) EMR Report
4) Response to EMR Report

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IRRI RESPONSE TO THE EPR

1. The IRRI Board of Trustees and staff are most grateful to the EPR Panel for their thoughtful and thought-provoking review, and for their evident concern that IRRI's past achievements must not get in the way of its future effectiveness. We are also grateful to the review team for emphasizing to TAC and our donors the continuing importance of many IRRI activities and features -- such as the strength to be gained from grouping staff by discipline and the necessity for maintenance research -- that may be endangered by an apparently irresistible urge for change. The review team has recognized the great efforts made by IRRI to reshape its research programs to meet the intents of the TAC priorities paper and the CGIAR goal statement. We also appreciate their recognition of the dilemmas posed for IRRI in its attempts to raise productivity at the same time that sustainability and equity of impact are achieved.

2. IRRI accepts the thrust of many of the recommendations in the review and will proceed to implement them. A sample of those we accept includes placing greater emphasis on utilizing more durable partial resistance to pests and diseases, expanded use of genetic engineering, more research on raising yield potential, increased attention to the impact of new technologies on the role of women in rice production, further innovative agricultural engineering, intensified emphasis on wild species in the collection of genetic resources, deeper analysis of IRTP yield trial results, and relocation of some staff and research programs to a small number of key environmental sites outside the Philippines.

However, in the response we shall focus on those recommendations about which we have reservations. The doubts we express about some recommendations should be seen against the background of our substantial acceptance of many them.

3. We accept the general theme of the report, that several existing activities may have to be curtailed in order to increase our efforts in other areas, and will explore all opportunities for redeployment of our existing resources. Naturally, we welcome the panel's recommendations for two additional positions, for a Computer Center Manager specializing in main frame software and for a Social Anthropologist, although we consider that the latter position should have a wider brief than exclusive association with the Asian Rice Farming Systems Network.

4. Just as successive reviews of other Centers (such as ICRISAT) have produced conflicting recommendations, so have the last two reviews of IRRI -- on several major issues. For example, the 1982 review emphasized the global role of IRRI, the present one recommends a focus on Asia;

the earlier review propounded strong emphasis on farming systems research, the present one retreats a long way from that view. The same dilemma is faced for biological nitrogen fixation. The relative emphasis given the various rice environments is also quite different in the two reviews. Other contrasts could be added, but these suffice to highlight the question: Is the Center supposed to veer so sharply in its research emphasis from one review to the next? This would be both wasteful and demoralizing; we believe the Board must steer a steadier course. It is in this context that we propose to follow an evolutionary approach toward implementing some of the recommendations of the EPR.

5. Moreover, the commendable brevity of the EPR report also creates a problem: the information and logic which led to some of the recommendations are not always clear. We are perplexed in several instances by quite striking inconsistencies in the text. If macroeconomics analysis is to be phased out, how is the economics department to keep adequately abreast of global and regional developments in rice production and publish an annual report on the rice situation? If work on legumes is to be discontinued, how is the sustainability question to be addressed, or research to be carried out on the problems of alternating anaerobic and aerobic situations (as is suggested on p. 35). If farming systems research is to be severely curtailed, how can IRRI hope to fulfill the comprehensive concerns for equity, sustainability, and environmental quality so eloquently expressed in the finale to the review (8.14) -- to which we wholly subscribe?

6. Concentration of effort. One of the guiding principles of the EPR is the virtue of greater concentration of effort, and therefore the need to reduce the range of IRRI's research. In general we agree, but as a guiding principle it may have less force for an IARC than for a research institute in a developed country. Although some national research systems are now much stronger, many others still need and want help and collaboration over a wide array of rice-related problems that require a wide range of expertise at IRRI. Concentration of effort is a guideline that needs to be considered carefully, in the context of the complementary role of the international centers.

7. Farming Systems. IRRI agrees with the EPR comments that farming systems research (FSR) could become too all-encompassing and diffuse, that the designing of farming systems is best done by the NARS because of the strongly location-specific effects in many instances, and that IRRI's focus should be on component research, particularly where it is conducted on-farm. The recommendation that IRRI cease its farming systems research program implies that IRRI does a significant amount of FSR as opposed to component research.

Most of IRRI's FSR is, in fact, component research. Three projects may be considered FSR per se, namely Women in Rice Farming Systems, some aspects of simulation methodologies, and analysis of systems at the farm and village level. These activities received positive recommendations by the EPR. We therefore, consider that, by and large, IRRI's FSR is meeting the criteria suggested by the review team. Every effort will be made to continue to meet those criteria in the future.

8. Asian Rice Farming Systems Research Network. IRRI accepts the recommendation by the panel in regard to ARFSN, including the need for a social anthropology component, the need for IRRI involvement in fewer sites, and more sparing use of tours and workshops. But, to avoid misunderstanding, we wish to emphasize that the network activities involving fish, farm animals, and several other non-rice components are included in Network activities at the request of the NARS and on the specific recommendation of the second QQR Panel. The NARS conduct the research, sometimes in collaboration with other IARCs. The research does not involve IRRI personnel directly.

9. Farm Level Hydrology. We agree with the EPR that IRRI should not be working on major irrigation structures or drainage problems, but should work at the farm level, where our comparative advantage lies. Consequently, IRRI is not sure what the panel is referring to in its suggestion (pp. 25,41) that surface and flood water hydrology is outside IRRI's mandate and should be dropped. IRRI's research in this general area was considered by the Board in 1985 and substantially restructured to deal with several problems that we and the national systems regard as extremely important to rice production. As indicated in the SPC report (p. 109), one objective of this program is to "identify technically feasible and economical ways of alleviating drainage and water logging problems in rice producing areas." We stand by our earlier judgment that this is an important problem area at the on-farm level and that opportunities to alleviate the problem must be explored. Simply to label it as related to surface and floodwater hydrology, or to argue that soil and water must be considered together -- as of course, they must -- is not a sufficient justification for abandoning work on an urgent problem, and one for which the NARS want help. Many other important water management problems go beyond those of water movement in soil. Moreover, this area of work interacts with and complements that of IIMI, an institution with whom IRRI has developed close collaboration.

10. Biological nitrogen fixation. This area of research is undertaken at IRRI entirely within the context of concern for the disadvantaged rice grower, of low input cropping, and of sustainability. As such, we do not believe

it should be described as "peripheral" (EPR, p. 90). Several most promising avenues of nitrogen fixation are being studied, and the IRRI Board is acutely aware of the desirability of determining priorities among them. But, as our own report on this year's program review concluded, while the comparative significance and practicality of the various options is becoming clearer, we believe it is still too early to eliminate certain approaches. The use of stem nodulating and other species of Sesbania as green manure seems highly promising and valuable in a farming systems context. We agree with the EPR (p. 25) that full assessment of the costs of these practices must be made, but consider it is still too early to do so. At least the most promising lines of work must be continued beyond the life of the present restricted core project. (cf p. 41).

11. Biofertilizer Germplasm Laboratory. In our view, the panel has underestimated the extent of work that needs to be done in typing and conserving Azolla cultures -- as well as the biotechnological possibilities for Azolla in the light of achievements in protoplast fusion. The conservation of a representative collection of Azolla species and strains and of seeds of green manure crops is only a small component of the Biofertilizer Germplasm Laboratory. In addition to providing facilities for microbiological research (this additional laboratory space was recommended by TAC in 1985), the building will house the Computer Center.

12. Socio-Economics. Both the Economics Department and the Board are acutely aware of the diverse, excessive demands being placed on the small staff in this department, and we agree that their efforts are spread too thinly, particularly because of their active involvement in the preparation of material for the CGIAR Impact Study and IRRI's strategic planning exercise. But the demands for help with socio-economic analysis of many components of IRRI's research portfolio are valid (even the EPR could not resist adding to them). We accept that the major emphasis should be on micro-economic analyses, but some capacity for macro-economic and policy analysis is essential. Indeed, the EPR recommendation that an annual survey of the global rice situation be published would require it. On the other hand, the major project analyzing the differential impact of the new technologies on rice-farming families in favorable and unfavorable environments, which promises to shed considerable light on the overall question of equity of benefits, is definitely in the micro-economic category, not macro-economic as is indicated in the EPR (p. 41). We cannot agree that it should be phased out.

13. Plant Breeding. We are entirely in agreement with the panel that the plant breeding enterprise at IRRI should move progressively upstream in recognition of the increasing

strength of the NARS. Indeed, with the encouragement of the present Director General, such a move has been notable. Nevertheless, we consider that IRRI must continue to produce homozygous lines. They are needed by the weaker NARS -- and even by the stronger systems for particular soil, climate, and pest environments. They provide the ultimate assurance that IRRI's breeding programs are moving in the right direction and their success is encouraging to donors and the public. The CGIAR Impact report surely made that clear.

14. IRTP. The International Rice Testing Program seems to have been seriously misunderstood. It was established in 1975, not just to distribute the products of IRRI's breeding program (EPR, p. 68), but to foster the exchange of genetic materials among rice countries for the evaluation of those materials over a wide range of environments. As the EPR notes, only 40% of the entries are provided by IRRI. The IRTP also embodies an important step by the CGIAR toward fostering genuine international cooperation in plant breeding. Despite a contrary impression (pp. 69-70), it has involved many disciplines in addition to plant breeding, particularly in the work of the observational nurseries.

Although there are an apparently large number of sites (p. 69), the number which can be used for genotype x environment analysis is quite small. The IRRI Coordinator does not decide either the entries or the number of test sites. It is the NARS scientists who determine those and manage the network, and considerable effort has been spent to reduce the workload of cooperating scientists.

The EPR recommends that the IRRI IRTP staff posted in Latin America and Africa should be made members of CIAT and IITA, but under the Memoranda of Agreement between IRRI and those Centers, the IRRI coordinators already function as integral members of those institutes. The present arrangement surely fosters inter-center interaction and cooperation more effectively than if these links between the centers were broken, as was recommended by the review panel.

Moreover, as will be evident from IRTP annual reports, in an increasing number of instances, African or Latin American-bred lines are proving valuable in Asia, and vice versa, thanks to the truly international coverage by IRTP.

Finally, participation by NARS in IRTP is not merely voluntary, it is positive and challenging. They derive great stimulus from the success of their varieties in the international league. IRTP also acts as a catalyst for other collaborative efforts with the NARS. However, we agree with the panel (p. 69) that every effort must be made to utilize IRTP for the analysis and identification of specific adaptation, as well as of broad adaptability.

15. INSFFER. The EPR (p. 68) suggests that leadership of INSFFER could now be transferred to one of the advanced NARS. IRRI would not be averse to this, but our impression is that it is often difficult for a hard-pressed NARS to undertake such tasks and to guarantee their longterm operation. Coordinating such networks is a proper function of an IARC. We propose to extend the present joint involvement of IRRI and IFDC in this activity to IBSRAM, thereby fostering closer interaction and cooperation among centers and between Centers and NARS.

16. The Rice Environments. The EPR comments on IRRI's role in research on the various rice environments are constructive and helpful, and we take their point that, while great effort has gone into determining the appropriate scale of IRRI's efforts among the various environments, too little attention has been paid to establishing priorities for work within some environments. The panel expresses doubts (p. 30) about the value of efforts for tidal wetlands, yet several Asian countries have already begun to develop large areas of these lands. Breeding varieties adapted to adverse soil conditions, which apply to more than 50 million hectares, is becoming urgent in the densely populated countries of Asia.

One point in the discussion of priorities should be clarified. The panel reasons that, because there is a very large yield gap between attainable and average yields, IRRI could reduce its efforts on irrigated rice (p. 25, 4.2.3). But one of the major conclusions of IRRI's earlier comprehensive work on constraints was that, when the realities of water supply, fertilizer availability and price, pest control, and other factors were taken into account, this apparent yield gap was greatly diminished. Indeed, in some places (e.g. Indonesia) there was no yield gap. Barker, Herdt, and Rose, in Rice Economy of Asia, 1985, concluded that, in spite of the large apparent yield gap, there is an urgent need for new technology for irrigated rice. That view was recently emphasized to the CGIAR by John Mellor in his presentation at ICW, 1986. In the face of this evidence, and of the crucial need to defend past gains, we agree with IRRI's Strategic Planning Committee's assessment that work on irrigated rice should not be reduced any further than that indicated in the SPC report.

We strongly agree with the EPR recommendation on the need to explore every avenue to increase yield potential. In this connection, we would also point out that IRRI's involvement with the high yield situation in Egypt and Korea makes considerable sense in relation to the need to raise yield potential still further, while at the same time enhancing stability.

17. The move upstream. This is a frequent theme in the EPR, in many contexts: biotechnology, pathology, pest management, training, germplasm enhancement. We entirely agree with the thrust of these suggestions, but with one important reservation. In many cases, increased effort upstream can be accommodated by less downstream effort. This is clearly so in the Philippines, for example, now that PhilRice has been established. But in some cases this may not be desirable because it could leave the less developed NARS in even weaker situations, relatively speaking, as was mentioned under Plant Breeding. While we shall continue to move upstream in relevant areas of research through our strategic research cooperatives, we shall plan our withdrawal from some aspects of downstream work in a manner that does not result in any harm to rice production in the short term.

18. Asian focus or global involvement. IRRI's mandate refers twice to "Asia and other major rice-growing areas." The 1982 QQR encouraged IRRI to adopt a more global perspective in its work; the current EPR emphasizes an Asian focus in several places, and recommends that IRRI should concentrate its research and training in Asia and only work elsewhere at the request of, and in collaboration with, the other CGIAR centers with regional responsibilities for rice (p. 71). (In passing, we note some conflict between this recommendation and the discussion on training for African scholars on p. 64).

We accept the panel's general proposition that IRRI's advantage lies in Asia, along with the working principles outlined in the Executive Summary, that IRRI's world wide responsibilities are in the areas of (1) rice germplasm conservation and enhancement; (2) library and information services; (3) network coordination; and (4) improving the knowledge base for tropical rice. IRRI's large effort to increase its training of African rice scientists with support from our donors would, we believe, be approved by TAC and the CGIAR. The additional IRTP coordinators for Latin America and Africa are, as already explained, part of an effort to make rice improvement a truly international cooperation.

Thus, the issue to be resolved is really whether IRRI should accede to requests from NARS in Latin America and Africa for cooperative programs with special project funding. IRRI is willing to confine such projects to Asia if so requested by TAC. The need in Asia is surely great enough. But in spite of the many requests to help out in Africa, IRRI has accepted only two special projects (Egypt and Madagascar) there; in neither case did IRRI bypass the IARCs located in Africa.

We agree with the EPR that we may need to expand our criteria for becoming involved in such special projects, and are grateful for their suggested additions. But we now await from TAC an indication of whether, and under what conditions, cooperative projects outside Asia should be undertaken, as was indicated in Sir Ralph Riley's covering letter to Professor Camus. Naturally, we were pleased to see the favorable assessment by both the external program and management review teams of the way in which IRRI conducts its collaborative programs.

19. We appreciate the pressures and time constraints under which the EPR had to produce its report, and realize those conditions are responsible for any ambiguities and inconsistencies that have crept in. However, in several cases, where they left us unclear as to the intent of the panel's comments, we have had to mention the ambiguity. But we are genuinely grateful to the review panel for its probing, challenging report, for its many creative and constructive suggestions for improving IRRI's work, and for focussing on IRRI's future, as we are, and as the EMR Panel put it, "reaching for tomorrow, today."

We have no doubts that, while we may differ on several matters, we are united in trying to maximize IRRI's beneficial role in addressing the problems of the future for growers and consumers of rice throughout the world. When TAC and CGIAR have completed their evaluations of IRRI's role, the Board will reformulate its strategy and priorities for IRRI for the remainder of the present millenium, using the Strategic Planning Report prepared by IRRI scientists as the basic planning document.