INTERNATIONAL RICE RESEARCH INSTITUTE

COPUBLICATION:
IRRI Design, Procedures, and Policies for Multilanguage Publication in Agriculture

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1983
INTERNATIONAL RICE RESEARCH INSTITUTE
LOS BANOS, LAGUNA, PHILIPPINES
P. O. BOX 933, MANILA, PHILIPPINES
The International Rice Research Institute (IRRI) was established in 1960 by the Ford and Rockefeller Foundations with the help and approval of the Government of the Philippines. Today IRRI is one of 13 nonprofit International research and training centers supported by the Consultative Group for International Agricultural Research (CGIAR). The CGIAR is sponsored by the Food and Agriculture Organization (FAO) of the United Nations, the International Bank for Reconstruction and Development (World Bank), and the United Nations Development Programme (UNDP). The CGIAR consists of 50 donor countries, International and regional organizations, and private foundations.

IRRI receives support, through the CGIAR, from a number of donors including:

the Asian Development Bank
the European Economic Community
the Ford Foundation
the International Fund for Agricultural Development
the OPEC Special Fund
the Rockefeller Foundation
the United Nations Development Programme

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The responsibility for this publication rests with the International Rice Research Institute.
Translation is an acute problem with no easy solution . . . The Centers must come to grips with the problems of translation.

That recommendation was made by participants in the first conference on the Communication Responsibilities of the International Agricultural Research Centers, held at the International Rice Research Institute (IRRI) in 1979.

IRRI publishes almost exclusively in English. Obviously, a vast number of rice workers cannot use many of our English materials.

IRRI does not have the staff, expertise, or equipment to translate and publish extensively in non-English languages. Instead, we cooperate with agricultural agencies and private publishers in developing nations in joint efforts to publish our materials in local languages.

We call such cooperative efforts copublication — a term we borrowed from Chinese publishers. Our most successful copublication efforts have been with two IRRI books that were written and designed so that other agencies can easily and cheaply adapt, translate, manufacture, and disseminate the subsequent editions. Similarly, the original publisher must have policies to encourage copublication. The waiver of royalties or fees in developing nations and provision of illustrations and use of IRRI color printing plates are examples.

We hope that this booklet will clearly emphasize the need for such interdisciplinary and international cooperation — as well as use of certain editorial and design techniques — that will encourage the systematic publication, translation, copublication, and dissemination of educational materials in the languages used by agricultural extension workers and farmers.

M. S. Swaminathan
Director General
The language problem inhibits the dissemination of improved agricultural technology in developing nations where from 2,500 to 5,000 languages are spoken. A recent survey of 10,000 subscribers to IRRI periodicals (all published in English), showed that only 24% use English as their first language.

Thus, educational materials published only in English bypass millions of farmers, extension specialists, scientists, and educators in Asia, Latin America, Africa, and the Middle East.

Hiring professional translators is a difficult solution because of:

- the problems of finding and expense of hiring translators who are proficient in agricultural and scientific terminology in two languages, particularly considering the multitude of languages used in the developing nations;
- the technical difficulties — such as typesetting, proofreading, and layout — of publishing in an unfamiliar language.

Most international agencies that use professional translators publish only in English, Spanish, and French. Few organizations have the funds, expertise, and equipment to publish in languages such as Arabic, Bengali, Chinese, and Swahili.

**Design to encourage copublication**

IRRI publishes almost exclusively in English, our working language, but we seek to overcome the language barrier mainly by **copublication** — cooperative endeavors whereby IRRI, as the original publisher, grants a second agency permission to translate, publish, and disseminate a book or document in another language.

By late 1983, more than 600,000 copies of non-English editions of IRRI books had been, or were being, printed in 32 languages.

Our most successful copublication efforts have presented simple, basic information in books designed for easy, inexpensive copublication.

Two such books, *Field Problems of Tropical Rice* and *A Farmer’s Primer on Growing Rice*, account for almost 90% of the total IRRI books published in languages other than English.

Copublication is, in itself, an effective screening mechanism; national agencies will not take the time and expense of translating and copublishing materials unless they really want that information in their language. National agencies can usually handle distribution of local-language publications better than international organizations.

IRRI’s copublication strategy depends on:

- cooperation with national agencies and publishers that translate and publish in local languages;
- content appropriateness to a wide range of users;
- publication design to facilitate easy, low-cost copublication (i.e., highly illustrated, minimal text, adequate white space, color photos on single flats without text);
- policies to encourage copublication (transfer of rights, no royalty payments, etc.);
- publicizing designs and policies that encourage copublication (articles and announcements in IRRI publications and those of other international agencies, direct mail to national and international agencies, etc.).

This manual was written for two primary audiences:

- agencies that wish to design their own publications to facilitate copublication.

Although we discuss certain IRRI English-language copublications that were designed to facilitate their publication in other languages, the concepts described are universal.
The same procedures can be used to publish first in Chinese or German, for example, with subsequent copublication in English or Bengali. This manual itself is designed to facilitate easy and inexpensive copublication. The design is similar to that of *A Farmer’s Primer on Growing Rice*.

**Copublication in black-and-white (B&W)**

*A Farmer’s Primer on Growing Rice*, a highly illustrated 221-page book by Dr. Benito S. Vergara, IRRI plant physiologist, is being copublished in about 30 languages.

A description of the *Farmer’s Primer* concept and design, and instructions for copublishing local editions, follows:

1. The author saw a need for a simple, easily readable book for extension agents or progressive farmers that explains how and why to use improved production techniques such as proper timing of transplanting and how and when to incorporate fertilizer.
2. Dr. Vergara used minimal text and worked closely with IRRI artists to make B&W illustrations convey as much of his message as possible.

3. Ample “white space” was left around the illustrations because translated text is often longer than the original English text.

4. IRRI typeset the captions, stripped or pasted them onto the illustrations, and published the book in English.
5. IRRI then blocked off the text portion on the page negatives . . .
6. . . . and printed sets of the illustrations, including a B&W cover . . .
7. . . . and artwork for printing of a color or B&W cover, if desired.

To copublish a local edition of *A Farmer's Primer* or IRRI publications that were designed similarly:

1. The local publisher arranges the translation into the desired language.
2. The publisher submits a letter to IRRI, signed by a respected rice scientist who is proficient in that language, certifying that the translation is accurate.
3. IRRI sends the publisher a complimentary set of the B&W illustrations.
4. The publisher typesets the translated text to a similar size and line length as the English text . . .
5. . . . pastes the typeset text onto the illustrations . . .
6. . . . and prints the local edition on arty press.

*Blocking off (opaquing) the English text*

Sets of printed illustrations.

*Line illustration for color cover. Half-tone illustration for B&W cover.*
The Illustrated Guide to Integrated Pest Management in Rice in Tropical Asia was designed similarly to A farmer's Primer. Integrated Pest Management contains more than 2,000 B&W illustrations.

National agencies may request illustrations for copublication of the entire manual... or may copublish individual sections such as those on management of riceland rats, insects, or diseases; or on pesticide safety.
Copublication in color
Field Problems of Tropical Rice (FPTR), by Dr. K. E. Mueller, former IRRI consultant, was copublished in 10 nonEnglish languages. About 30 national agricultural improvement agencies and private publishers are now copublishing local editions of the Revised Edition of Field Problems, released in August 1983.

The shirt pocket-sized (10.2- x 17.8-cm) booklet was written to help rice workers and farmers identify common rice production problems such as insects, diseases, weeds, and problem soils.

Accurate identification of such problems requires color photographs.

Field Problems is produced by offset printing.

In offset printing, the plate that carries the image does not come in direct contact with the paper. The image is transferred on to a rubber cylinder that then prints the image.
Like all offset color printing, the color photos are reproduced by photographing the transparencies through four color filters to produce negatives for the yellow, blue, red, and black plates. Printing the images from these four plates one on top of another gives a full-color reproduction of the original photograph.
The negatives representing the different pages are taped into position on a sheet of clear plastic. This group of pages forms a **printing flat**. The flat is then exposed onto a printing plate.

The authors worked with IRRI designers and graphics specialists to prepare the booklet so that the English edition could be published cheaply — and so other agencies could copublish local-language editions at about the same production costs as reprinting the English edition:

1. The text and color photos of FPTR are always on facing pages. *The pages with color have no text.*
B&W layout of Field Problems printing flats.

Steam borers do not always complete their development of the corn, the borers may scatter and not completely cut the culm off before the plant matures. Photo 3 shows a live attack where feeding by the boring was restricted to leaf sheaths and a small portion of the ear at ground level. Some8 spiders on the lower portion of the plant are more noticeable because of damage, but the head does not show typical white head damage (5.4).

Definite indications of stem borer damage are in ears within the stalk (photo 5), signs of stem being cut by leaf feeding, or several signs of damage to the leaf sheath and ears such as discolored, cut portions, and rot holes (photo 4).

There are several important species of stem borers. Larvae found in the plant usually can be identified by appearance (5.8).

Iron toxicity is primarily caused by high iron content in the soil solution under reduced conditions in acid soil (photo 87). Affected plants have small brown spots on the green leaves, starting near the tip (photo 88). Severe iron toxicity makes the leaves turn brown and eventually the lower leaves die (photo 89).

Iron toxicity, or high iron content in the plant, is often associated with deficiency of elements such as potassium or phosphorus.

Applying time on certain soils, using area in place of peatmoss culture, and applying potassium or phosphorus may alleviate the problem. Roots at soil that was thoroughly dined before being flooded for the rice clip on fresh plants show normal root development. But the toxicity decreases after a period of submergence during which the pH rises.

The symptoms of iron toxicity differ among varieties. Some varieties show low brown spots while others just show yellowing (photo 90). Some varieties may be tolerant to iron toxicity.
Layout of “typical” color and B&W printing flats (color and text are side-by-side).
The color pages of Field Problems must run through the press four times, but the B&W pages (the words) only once.

3. Keeping color photos and text on separate printing flats reduces printing costs, regardless of language. In color printing the paper passes through four sets of printing rollers with yellow, blue, red, and black inks.

If the text pages were on the same printing flat as the color, all 172 pages of the book would have to pass through the press four times.

By separating the colored pages from the text, only half of the 172-page booklet must run through the press four times. The other half, which contains only the black text (the words, regardless of language) requires only one press run.

Thus, Field Problems is essentially an 84-page color booklet “folded in” with an 84-page B&W booklet. Printing costs are about 60% those if Field Problems had been designed in the traditional manner.

4. Text is minimal and ample white space is left for more lengthy translations.

Field Problems is 84 color pages folded in with 84 B&W pages.

Procedures for copublication of Field Problems, or any similarly designed IRRI publication, are:

1. The publisher has the book translated, then submits a letter to IRRI asserting its accuracy.
2. The text is typeset locally, using an English-language Field Problems as a guide.
3. The line length of the translated copy should not exceed that of the English version.
4. The total amount of translated copy per page of English must not exceed the amount that fits one page of the English *Field Problems*.
5. Paste a photocopy of the typeset material over the English text on the corresponding page of the English edition. Maintain the arabic page numbers (1, 2, 3, etc.). This minimizes the chances of printer error (the printer probably will not be able to read the translation).
6. Mail the original typeset copy and the paste-up copy to the IRRI Communication and Publications Department.
7. IRRI reviews these materials, then forwards them to the printer who handled the English edition along with authorization to use IRRI's color plates.
8. Because IRRI absorbed the cost of color separations, negatives, and flat composition for the English edition, subsequent editions in other languages are relatively inexpensive — only slightly more than reprinting the original edition.
9. IRRI arranges for the copublisher to pay only actual printing, paper, and shipping costs.

The Revised Edition (1983) of *Field Problems of Tropical Rice* is now available for copublication. The 172-page booklet includes 158 color plates. About 30 national agencies are copublishing the new *Field Problems*. IRRI can arrange the printing of non-English editions for about US$1/copy (price reflects conditions of December 1983 and may change).

Note: Currency restrictions may prohibit the foreign printing and importation of materials into some countries. In such cases, IRRI can arrange for duplication of the color separations for local printing.
Ganging press runs to cut costs of multilanguage publishing in color

Printing in full color is more expensive than printing in one or two colors because of the cost of four-color separations, negatives, and plates for the yellow, blue, red, and black plates; plus the separate press runs required for each color.

IRRI has cooperated with the Food and Agriculture Organization (FAO) of the United Nations to design color posters to help farmers and rice workers identify beneficial ricefield insects.

FAO published 50,000 copies of the poster in 14 languages — at a cost only slightly higher than that of printing 50,000 copies in English. The poster was designed so the first three colors — yellow, blue, and red — were printed on a combined press run of 50,000 posters.
The total cost of printing 50,000 copies of the poster in 14 languages goes down significantly when the first 3 colors of a 4-color job are "ganged".

Grid for poster layout. Note the extra "white space."

Only the black plates (which carry both the translated text and the black for the last run of the four-color process) must go through the press on 14 individual press runs. Individual printing of the 14 language editions would require 56 different press runs. This method reduced the number of plates and press runs to 17.
The procedure follows:
1. FAO provided the color photos and the English text describing each insect.
2. IRRI helped design a layout that allowed adequate space for the longer text of some translations.
3. FAO had the text translated into 14 languages.
4. The text for each language was typeset in the same line length as the English text. The typeset copy was then positioned on the spaces provided on the text layout. A pasteup was done for each of the 14 languages.
The yellow, blue, and red press runs were “ganged” for all 50,000 posters.

5. Plates for the first three colors — yellow, blue, and red — were made and 50,000 copies were run.

6. For the last press run of black, 14 plates — each carrying the text for a different language edition, plus the final black required for the color photos — were printed consecutively on the sheets previously printed with the first three colors.

Policies to encourage copublication

Mechanical techniques and design alone will not ensure copublication, or the continued availability of translated materials.

IRRI has formulated the following policies to encourage copublication.

1. IRRI does not charge royalties or payments for nonEnglish editions of its educational materials copublished for developing nations.

2. IRRI retains the authority to grant publication rights to national agricultural improvement programs and/or publishers, and to authorize multiple editions of copublished materials if the first copublisher:
   - does not assure that the nonEnglish editions are widely and continuously available to local users at a reasonable price;
   - offers the copublished material commercially to booksellers or...
distributors in a highly developed country:
• fails to meet other IRRI policies on copublication.

3. IRRI will grant first copublication rights to national agricultural improvement programs. If national programs do not wish to copublish a particular IRRI book, IRRI welcomes offers from commercial publishers.

4. The copublisher must submit to IRRI, on letterhead stationery, a written statement by a respected rice scientist known to IRRI who is fluent in the language, attesting to the accuracy of the translation. If the above requirement is not feasible, the copublisher must submit to IRRI a preliminary copy of the translation. Before releasing rights, IRRI will arrange for review by a rice scientist fluent in the language of the copublished material. When possible, IRRI prefers that rice workers in national agricultural improvement programs translate the materials.

5. The copublisher will not normally charge local consumers a price higher than the converted U.S. dollar price of the IRRI English edition in that country. The converted price can include the cost of airmail postage of the book from the Philippines.

6. The copublisher will inform IRRI of the number of copies printed, prices, and other data important for monitoring the flow of IRRI information. A form with such specifications will be mailed to the copublisher when each copublication agreement is completed. The copublisher will provide IRRI similar data on reprints.

7. IRRI will assist the copublisher to promote the nonEnglish editions, including:
• Announcement of the copublished edition in the International Rice Research Newsletter (IRRN). (The copublisher must submit an announcement in English of no more than one typewritten, double-spaced page to IRRI’s Communication and Publications Department.)
• If the nonEnglish edition can be used in several countries, and the copublisher does not have international distribution channels, IRRI may purchase and distribute. In such cases:
  — IRRI and the copublisher will share publication costs, determined by the actual percentage of the press run that each party takes.
  — IRRI is free to market the copublished edition worldwide.
  — IRRI will not market the copublished edition in the copublisher’s area of distribution.

8. If a nonprofit agency translates and copublishes an IRRI book in a local language, it must consider, upon consultation with IRRI, making that translation available to agencies in other countries who use the same language. If the translation is copublished in another country, the second copublisher must recognize, in print, the role of the original translator and copublisher.

9. The copublisher must indicate on the cover or title page that the copublished edition is a joint venture between IRRI and that publisher. The words International Rice Research Institute must appear in English on the citation page, the title page, or the cover.

10. The copublisher may not authorize other local editions without written permission from IRRI.

11. To reduce copublication costs, IRRI will provide, when possible, illustrations or color separations or figures, or will arrange inexpensive printing using IRRI’s plates.