

## Discussion paper

A. Puleo, J. Watts and P. Neate

International Plant Genetic Resources Institute (IPGRI), Rome, Italy

### Summary

One of the strategic priorities of the International Plant Genetic Resources Institute (IPGRI) is to provide technical information on plant genetic resources (PGR) for programme partners and other stakeholders. The amount of information generated by IPGRI has increased substantially over the last 28 years, mostly in the form of printed publications of various types, but also, more recently, in the form of electronic publications. However, little attempt has so far been made to evaluate the impact of this material. Such information would help IPGRI to better meet the needs of its partners and improve the quality of its publications.

A pilot study was therefore conducted of the utility and impact of IPGRI's publications, focusing on six publications produced between 1996 and 2001. The publications were chosen to represent a range of types, namely:

- Conference proceedings (*Participatory approaches to conservation and use of plant genetic resources*)
- Training guides (*Training guide for in situ conservation on-farm*)
- Technical bulletins (*Core collections of plant genetic resources*)
- Technical abstracts (*PGR Abstracts*)
- Technical journals (*PGR Newsletter*)
- Policy briefing papers (*Issues and options for national genetic resources programmes*).

Information on the distribution of the publications (according to region and occupation of recipients) was obtained from an IPGRI database; the impact of the publications was then assessed by means of a questionnaire sent to recipients and through interviews conducted with the staff of several educational and research establishments in Nairobi, Kenya.

The study indicated that IPGRI publications were an important source of information on PGR and were considered beneficial to national programmes, particularly in developing countries. All six publications were ranked 'above average' in terms of their overall utility; they were also considered innovative and to occupy otherwise poorly served niches.

Survey respondents reported using the selected publications for a variety of purposes, including research, training, project planning and implementation. Individual publications were used for more purposes than the one for which they were explicitly produced. For example, technical information on genetic diversity has been adapted for use in training and raising public awareness.

The majority of respondents preferred printed material to electronic versions, and this should be borne in mind now that IPGRI is beginning to incorporate electronic publications into its portfolio. Electronic delivery must be carefully integrated with more traditional distribution mechanisms to ensure that the needs of target audiences are met. At present, 373 publications are available for downloading from the websites of IPGRI and the International Network for the Improvement of Banana and Plantain (INIBAP). In the 14 months prior to November 2002, approximately 5 500 copies of IPGRI publications were downloaded.

Most survey respondents indicated that they had become aware of IPGRI publications

---

<sup>1</sup> Editors note: This paper presents an assessment conducted for IPGRI's External Programme and Management Review, 2002. It has not been published previously.

through personal contact with IPGRI staff, implying that IPGRI could take a more strategic approach to marketing and increasing awareness of its publications. Maintaining up-to-date mailing lists and records of publication distribution would help both this endeavour and future attempts at monitoring and evaluation.

### **Introduction**

The International Plant Genetic Resources Institute (IPGRI) and its predecessor, the International Board for Plant Genetic Resources (IBPGR), have, over the past 28 years, invested considerable resources in supplying information on plant genetic resources (PGR) to individuals and institutions around the world. Between 1996 and 2001, IPGRI produced nearly 300 publications, of which approximately 485 000 copies were distributed. These publications included technical bulletins, monographs, peer-reviewed articles in research journals (such as the *Plant Genetic Resources Newsletter*) and various training materials related to the conservation and use of plant genetic resources.

IPGRI maintains directories and mailing lists of individuals and institutions receiving its publications (generally in the form of printed documents delivered by mail). More recently, electronic publications have been developed which are accessible via personal computers. Although this represents a technological advance and an opportunity to reduce production and distribution costs, care must be taken to address the 'digital divide' (in terms of access to personal computers) that currently exists between developing and developed countries.

To date, there has been little attempt to assess the impact of IPGRI's publications on target audiences, although such knowledge would allow IPGRI to better meet the evolving needs of its partners and improve the dissemination of information to the wider PGR community. This report presents the findings of a pilot study intended to address this need.

### **Methods**

The study was conducted over a four-month period during the summer and autumn of 2002 and was designed to gather information on a series of key issues affecting the utility and impact of IPGRI's publications, including:

- current distribution of publications (including any obvious gaps)
- use of information by recipients
- preferences regarding information delivery mechanisms.

The assessment was based on information obtained from three principal sources:

1. Database records, which were used to determine the distribution of IPGRI publications according to region and occupation of recipients.
2. An Internet-based questionnaire, which was targeted at known recipients of IPGRI documents. This questionnaire was linked directly to a Microsoft Access® database that allowed immediate compilation and analysis of the data. As such, it represented a new approach to data collection that was tested to assess its potential for other assessments within IPGRI.
3. Interviews conducted with 22 senior staff from several educational and research organisations in Nairobi, Kenya (including the University of Nairobi, Jomo Kenyatta University of Agriculture and Technology, the National Museum of Kenya, and the Kenya Agricultural Research Institute), all of which had been identified as key contacts by IPGRI's sub-Saharan Africa office.

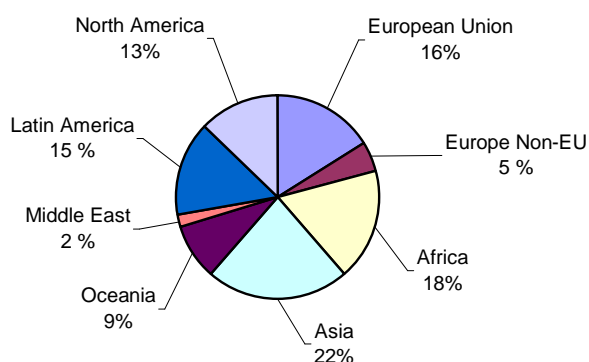
The study focused on six publications selected to represent the full range of material produced by IPGRI between 1996 and 2001 (Table 1).

**Table 1.** IPGRI publications included in the survey

<b>Subject</b>	<b>Title</b>	<b>Publication type</b>
Plant genetic	<i>Participatory approaches to conservation and use of plant</i>	Conference

resource use	<i>genetic resources</i> . (Editors: E. Friis-Hansen and B. Sthapit)	proceedings
<i>In situ</i> plant conservation	<i>Training guide for in situ conservation on-farm</i> . (Authors: D. I. Jarvis, L. Meyer, H. Klemick, L. Guarino, M. Smale, A.H.D. Brown, M. Sadiki, B. Sthapit and T. Hodgkin)	Training materials
<i>Ex situ</i> plant conservation	<i>Core collections of plant genetic resources</i> . (Authors: T.J.L. van Hintum, A.H.D. Brown, C. Spillane and T. Hodgkin)	Technical bulletin
Various	<i>PGR Abstracts</i>	Technical abstracts
Various	<i>PGR Newsletter</i>	Technical journal
PGR policy issues	<i>Issues and options for national plant genetic resources programmes</i>	Briefing paper

Since IPGRI's publications database does not record the distribution of each individual publication, it was not possible to identify the recipients of all of the publications included in the study. However, detailed distribution records are kept for the *PGR Newsletter* and the IPGRI technical bulletins, so that the questionnaire was targeted at the recipients of these two publications. The *PGR Newsletter* is sent to over 4 000 addresses in 169 countries, while the IPGRI technical bulletins are distributed to 1 462 addresses in 157 countries. These two publications have broadly comparable geographical distributions, with approximately 70% being distributed to developing countries and 30% to developed countries. Questionnaires were sent to 633 recipients for whom electronic addresses were available, and of these, 178 replied, giving an overall response rate of 27%. The geographical distribution of the respondents largely followed that of the two publications (Figure 1), so that the sample could be considered broadly representative of the target audience.



**Figure 1.** Regional distribution of survey respondents

The majority of the 178 respondents were educated to postgraduate level: 98 held doctorates, 47 master's degrees and 18 bachelor's degrees. Fifty-seven per cent of the respondents categorized themselves as researchers, 13% as managers and 10% as librarians. Most respondents worked in one or more areas of plant science, with particular emphasis on PGR conservation, agriculture and plant breeding.

## **Results and discussion**

### **Perceived value of IPGRI publications**

Survey respondents were asked to score the value of various sources of information on PGR from 1 (low) to 5 (high). Overall, IPGRI publications were ranked highest (Table 2), and were

viewed as important sources of information of direct benefit to national programmes for research and project planning. The IPGRI publications were also considered to cover topics poorly served by other sources of information. The interviews held in Nairobi largely confirmed the findings of the questionnaire, with the majority of interviewees viewing IPGRI as an important source of information.

**Table 2.** Perceived value of various sources of information on PGR

Sources of information on PGR	Score (%)					Mean score
	1	2	3	4	5	
IPGRI publications	1.3	5.6	17.5	22.5	53.1	4.2
Printed journals	5.8	3.2	16.7	22.4	51.9	4.1
Books	2.6	10.8	22.3	21.0	43.3	3.9
Internet	2.1	11.1	24.3	33.3	29.2	3.8
E-mail	10.8	20.2	24.0	21.7	23.3	3.3
Journal abstracts	14.3	20.7	25.0	14.3	25.7	3.2
Meetings	12.5	14.7	30.9	19.8	22.1	3.2
Electronic journals	21.5	17.8	20.7	17.8	22.2	3.0
Bibliographic databases	18.0	19.5	26.6	10.9	25.0	3.1
Discussions	15.0	14.2	33.3	16.7	20.8	3.1
Unpublished hard-copy material	44.2	20.8	19.2	10.0	5.8	2.1
Postal correspondence	30.3	20.2	27.7	15.1	6.7	2.5

### Utility of IPGRI publications

Survey respondents were asked to rank the usefulness of each publication for various purposes, using a scale of 1 to 5 (with 5 being 'very useful' and 1 'not at all useful'). All of the publications were ranked above average in terms of their overall utility, and all were considered at least somewhat useful for almost all categories of potential use (Table 3). For example, although the *PGR Newsletter* provides technical information primarily related to fieldwork and research, it was also considered a useful source of information for training, planning and policy-making.

The personal interviews suggested that the information provided by IPGRI was mainly used for research and reference, although more than half of the interviewees also used it for teaching. There was a general consensus that IPGRI publications are well-focused and comprehensive.

**Table 3.** Usefulness of IPGRI publications for various purposes<sup>†</sup>

Publication	Overall usefulness rating	Rating by field of use						
		Project / programme planning	Project / programme implementation	Project/ programme evaluation	Field work	Research	Preparing policy advice	Teaching & training
Core collections...	4.0	3.7	3.6	3.5	3.5	4.0	2.9	3.6
Participatory approach...	3.9	3.7	2.1	3.4	3.8	4.0	3.2	3.8
PGR Abstracts	3.9	3.6	3.4	2.9	3.7	4.3	3.2	3.6
PGR Newsletter	3.8	3.3	3.2	3.1	3.3	3.9	3.1	3.6
Issues and options...	3.7	3.7	3.5	3.2	3.1	3.3	3.7	4.0
Training guide...	3.4	3.5	3.0	2.9	3.4	3.6	2.7	3.7

<sup>†</sup> Average rankings on a scale of 1 to 5, with 5 being 'very useful' and 1 being 'not at all useful'.

### Innovation

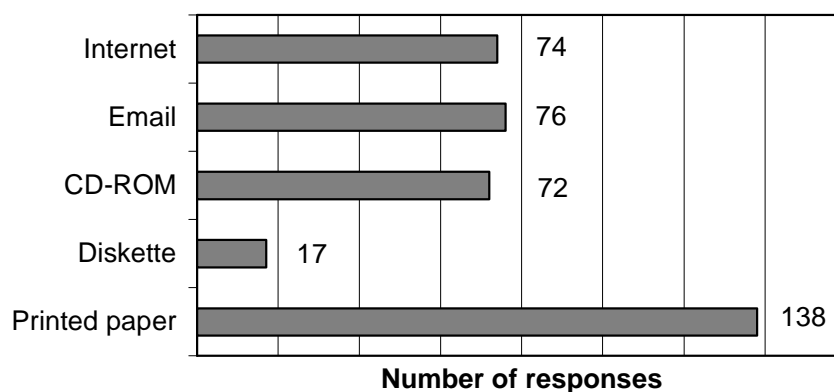
Most of the survey respondents viewed IPGRI publications as new and innovative, or, if similar to material provided by other sources, more effective (Table 4). Very few respondents considered IPGRI publications to be less effective than other materials.

**Table 4.** Perceived degree of innovation of IPGRI publications

Publication	New and innovative (%)	Similar to other materials but more effective (%)	Same as other materials (%)	Less effective than other materials (%)	No response (%)
Participatory approaches...	41	35	9	0	15
Training guide...	66	17	7	0	10
Core collections...	49	40	2	2	7
PGR Abstracts	41	42	14	3	0
PGR Newsletter	40	40	9	2	9
Issues and options...	41	12	12	0	35

### Information delivery mechanisms

Printed paper was the most popular format for publications (Figure 2), despite widespread and regular use of the Internet by most respondents.

**Figure 2:** Acceptable forms of delivery for IPGRI publications

Interviewees reiterated the usefulness of the printed format, although they also expressed growing interest in electronic forms of communication. Journals, the Internet, and publications from regional institutions were all identified as important sources of information on PGR, although access to computers was an evident constraint on the use of electronic sources of information. Considering that the interviewees were based in Nairobi (which should be relatively well-served by electronic communications), access to computers would probably be a much greater constraint for more rural recipients.

Despite the popularity of printed materials, compact disks (CDs), the Internet and information delivered by e-mail were also acceptable to many respondents. Compact disks have the advantage over other electronic information sources of not requiring Internet access and they are becoming increasingly popular in developing countries. Survey respondents generally indicated that they had no major concerns regarding the reliability of postal services (which could influence the delivery of both printed material and CDs).

Since IPGRI is now publishing materials on its website, information on preferred delivery mechanisms is particularly relevant. At present, 373 publications are available for downloading from the IPGRI and INIBAP web sites, and in the 14 months prior to November 2002, approximately 5 500 copies were downloaded. IPGRI is also beginning to utilize electronic marketing and sales mechanisms. For example, 334 IPGRI and INIBAP publications are listed for Internet sales through the agent Earthprint.com, which targets

universities, libraries and research institutions in developed countries. Nevertheless, given the factors mentioned above, the production and marketing of electronic publications should be carefully monitored to ensure that target audiences are kept informed and made aware of new delivery mechanisms.

### **Awareness and marketing**

Most respondents reported having become aware of IPGRI publications through personal contact with IPGRI staff, a process which has probably been facilitated by IPGRI's decentralized structure, with various regional and subregional offices. Although publications are regularly posted on IPGRI's website, they may be difficult to download, or otherwise inaccessible to some of the Institute's target audiences. There is thus considerable scope for improving the marketing and distribution of IPGRI's publications, with the Institute adopting a more pro-active approach.

Some survey respondents and interviewees did not appreciate that IPGRI's journal (*The PGR Newsletter*) is a peer-reviewed scientific journal. This confusion may have arisen from the title, since a 'newsletter' is often perceived to be a more informal publication than a journal. The extent of this perception should be investigated further and, if necessary, a strategy developed to address the problem. Some respondents were also unaware that *The PGR Newsletter* is produced in electronic format and is available via the IPGRI web site.

### **Assessment of evaluation methods**

The web-based survey was a convenient and useful method of gathering information on the utility and impact of IPGRI publications. Future questionnaires of this type should build on the experiences gained in this study: with further development, the method could become a standard mechanism for future investigations of this kind.

The personal interviews were a valuable adjunct to the questionnaire, since their greater flexibility allowed particular issues to be examined in more depth. It might be useful to expand this approach by identifying key questions and conducting more interviews on a regional basis, possibly through the staff of IPGRI's local offices. However, the qualitative data obtained in this way is difficult to analyse, and if interviews are to be used in the future, then extra time should be allowed for analysis of the data.

### **Future considerations**

IPGRI publications are generally considered useful and appear to fill a need that is largely not being met by other sources of information. Each of IPGRI's publications can serve several purposes, from planning and research to teaching and informing policy. In future, the various possible uses and audiences for individual publications should be carefully considered, since it may be possible to use scientific and technical information to produce secondary publications specifically intended to inform policy or to serve as training materials.

The study highlighted the importance of recording the recipients of individual publications and maintaining accurate, up-to-date mailing lists. IPGRI has not been as efficient as it might have been in this respect. It was also apparent that IPGRI has not made full use of its database for promoting its publications: a more effective approach to marketing would increase the distribution of IPGRI's publications and enhance the Institute's profile.

New technologies offer opportunities for reducing the costs of producing and delivering publications, but IPGRI must balance the use of electronic methods with traditional printed output to ensure effective delivery to all target audiences. In this respect, it was notable that a strong preference for printed materials was expressed even by those who had good access to electronic information technologies.

Finally, IPGRI should develop an effective monitoring and evaluation system for its publications. Feedback of this type should help IPGRI maintain its position as a leading

source of information on PGR and ensure that it is well-placed to meet the constantly evolving requirements of its partner organizations.