

## Discussion paper

*S. Prasannalakshmi and P. Neate*

*IPGRI, Rome, Italy*

### **Introduction and methods**

In 2002, a consultant hired by the International Plant Genetic Resources Institute (IPGRI) created a database of all publications produced by IPGRI between 1996 and 2001. A total of 563 publications produced by staff, interns, honorary research fellows, consultants and commissioned authors were recorded. This report summarizes the data collected and discusses its implications.

The objective of study was to assess the publications output of IPGRI staff and partners between 1996 and 2001, with a focus on technical papers produced by staff or their partners as a result of IPGRI sponsored research.

Because of IPGRI's partnership approach, five categories of authorship were expected: IPGRI staff as lead author; IPGRI partner as lead author with IPGRI as co-author; IPGRI partner as author with IPGRI related or sponsored work; IPGRI as editor of multi-authored publication; or IPGRI editor of monographs with single authors. The following key questions guided the research:

How many publications have been created between 1996–2001?

Who has published?

Where have they been published?

What types of publications have been produced?

To what extent have IPGRI partners published results from joint work?

To what extent has IPGRI staff published with partners?

What kinds of topics have been published as a result of IPGRI's work?

What gaps exist in the range of topics covered, *vis-a-vis* IPGRI's programme priorities?

Who were the intended audiences for the IPGRI publications?

To what extent were IPGRI publications produced jointly with partners e.g. CAB International or the Food and Agriculture Organization of the United Nations (FAO)?

In which languages did IPGRI publish?

To answer these questions, the consultant first worked with IPGRI's Human Resources office to identify IPGRI staff employed by the institute during the years under review. Searches were then performed for publications by these staff in the IPGRI publications catalogue and on the CABI, AGRIS, AGRICOLA and TROPAG databases, using both individual names and corporate affiliation criteria. In addition, the consultant catalogued publications that were reported in IPGRI Annual Project Reports for the period in question, and compared these with the findings of the database searches. From these searches, a master database was developed. Lists of publications were then circulated to staff still in the employ of IPGRI for their review and to add any publications that were missing.

### **Results**

---

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

### Types of publications

The 563 publications include conference proceedings, workshop reports, books, technical and training manuals, descriptor lists, fact sheets, directories, bibliographies and reviews. Table 1 illustrates the publication output by year and by category of publication.

**Table 1.** IPGRI publications by type

Publication type	1996	1997	1998	1999	2000	2001	Total 1996–2001
Journal articles	39	60	59	58	48	47	311
Books	29	33	17	17	18	15	129
Conference proceedings and workshop reports	26	18	27	21	19	12	123
<b>Total</b>	<b>94</b>	<b>111</b>	<b>103</b>	<b>96</b>	<b>85</b>	<b>74</b>	<b>563</b>

While journal articles have widespread interest, books and conference proceedings provide information for particular target audiences, for example, plant genetic resources research scientists and managers in developing countries. Conference proceedings keep people up-to-date, encourage exchange of views and foster collaboration in addition to providing research information—hence they are ‘rich’ but their ‘reach’ is limited. On the other hand, journal articles have a wide ‘reach’ but are not as ‘rich’. Books provide accumulated knowledge that can be stored for later use. All these types of publications are equally important in the advancement of science. The assessment found that IPGRI has a good balance between publication types when comparing journal articles (311 produced for both refereed and non-refereed journals) with books and proceedings (252 produced). Most of the publications are aimed at the scientific community and disseminate research results. During the period of review, 22 technical guidelines or bulletins, 21 descriptor lists and one training guide were produced.

The publication of articles in peer-reviewed journals is a general indicator of the quality of science and its impact in reaching a wide audience, as well as being a permanent record. Table 2 lists the journals in which IPGRI has published more than one article during the review period. The total of 217 journal articles published in 98 refereed journals represents an average of 36 articles per year. While this may not be high by the standards of institutes that focus on conducting research, it is high for an institute that operates as a facilitator.

**Table 2.** Articles published in peer-reviewed journals

Journal title	No. of articles
Acta Horticulturae	38
Plant Genetic Resources Newsletter	20
Cryo-Letters	19
Seed Science Research	7
Euphytica	6
Genetic Resources and Crop Evolution	5
Economic Botany	4
Experimental Agriculture	4
Israel Journal of Plant Sciences	3
Medical Faculty of Landbouw University	3
Plant Breeding	3
Proceedings of the Interamerican Society for Tropical Agriculture	3
Theoretical and Applied Genetics	3
Acta Genetica Sinica	2
Allegeimeine Forst und Jagdzeitung	2
Archives of Virology	2
Australian Journal of Botany	2
BASE	2
Cahieres Agricultures	2
Conservation Biology	2

Crop Science	2
Forest Genetics	2
Heredity	2
International Journal of Pest Management	2
Nematropica	2
Proceedings of the American Peanut Research and Education Society	2
Proceedings of the National Academy of Sciences, USA	2
71 journals with single articles	71
<b>Total: 98</b>	<b>217</b>

A relatively large proportion (>9%) of the articles in refereed journals were published in *Plant Genetic Resources Newsletter*, a peer-reviewed journal co-published by IPGRI and FAO. This journal is an important source of technical information for plant genetic resources scientists. The *Plant Genetic Resources Newsletter* is published four times a year and is available free of charge to interested genebanks, university and government departments, research institutions and others. Articles are considered by an editorial committee for scope and suitability and then assessed by an expert referee for scientific content and validity.

Another important journal is *Cryo-Letters*, which published 19 IPGRI articles during the period of review. This reflects the work done with *Musa* conservation by the International Network for the Improvement of Banana and Plantain (INIBAP) and the cryopreservation work on other species that are difficult to conserve through traditional approaches. This technical area is conducive to publishing because of the nature of the science. The cryopreservation work promoted by IPGRI is laboratory science carried out under controlled conditions, and it is likely to yield publishable results in the short term. Other technical areas, such as information technology, socioeconomic research or crop management can yield less definitive results and results can take longer to achieve. Thus, these topics may be inherently more difficult to translate into scientific journal articles.

Individual conference papers and book chapters, though important, were not catalogued because of lack of time and the difficulty of collecting data. However, an informal check on some of the books and conference proceedings included in this report revealed that this category could be significant. For example, the landmark publication *Managing Plant Genetic Diversity*, the proceedings from the International Conference on Science and Technology for Managing Plant Genetic Resources in the 21<sup>st</sup> Century, held in Malaysia in 2000, included IPGRI staff among the editorial team and 13 chapters were authored or co-authored by IPGRI staff. Table 3 gives a further indication of outputs in the form of book chapters and conference papers.

**Table 3.** IPGRI papers or chapters in recent proceedings and books

<b>Title of proceedings/book</b>	<b>Number of IPGRI authored papers/chapters</b>
Cryopreservation of tropical plant germplasm. Current research progress and application. Edited by F. Engelmann and H. Takagi 2000	13
Participatory approaches to the conservation and use of plant genetic resources. Edited by E. Friis-Hansen and B. Sthapit 2000	12
Towards sustainable national plant genetic resources programmes – policy, planning and coordination issues. Edited by J.M.M. Engels, R. Vodouhe, J. Thompson, A. Zannou, E. Hehne and M. Grum 2001	8
Broadening the genetic base of crop production. Edited by H.D. Cooper, C. Spillane and T. Hodgkin 2001	2

### **Group performance**

The performance of IPGRI thematic and regional groups can be measured by the number of publications they produce (see Table 4). These data should be considered indicative

rather than absolute because, in some cases, authors from different groups collaborated to produce a publication. The analysis listed the publications by lead author's group. The Genetic Resources Science and Technology Group was the lead performer (31% of publications) followed by INIBAP (22%). Regional offices produced 38% of the publications. All scientific groups published something during the period of study, even those with a limited publication mandate such as Documentation, Information and Training, which takes the lead in editing, layout and publishing but has a limited role in researching and writing articles and books.

**Table 4.** Publications by IPGRI thematic and regional groups

Publisher	1996	1997	1998	1999	2000	2001	Total 1996–2001	%
Americas	4	7	8	4	9	9	41	7
Asia, Pacific and Oceania	11	9	12	11	9	5	57	10
Central and West Asia and North Africa	6	6	2	5	1		20	3
Europe	19	14	16	8	8	7	72	13
Sub-Saharan Africa	2	7	6	6	2	3	26	5
Headquarters Offices of Director General/Deputy Director General for Programmes	14	8	1	2	4	4	33	6
Documentation, Information and Training Group	3	4	1	1			9	2
Genetic Resources Science and Technology Group	25	38	30	30	29	22	174	31
System-wide Genetic Resources Programme	1	1	2				4	1
International Network for the Improvement of Banana and Plantain (INIBAP)	9	17	25	29	23	24	127	22

### Programme priorities

To assess how well its publications relate to IPGRI's priorities, publications were categorized by theme (Table 5). Most publications addressed the broad theme of 'conservation and use' (42%), with 31% related to 'conservation and use of specific crops'. All IPGRI's themes were addressed to some extent, but fewer publications addressed socioeconomic and policy issues, information management and forestry. Publishing in these areas is important as genetic resources conservation and use is increasingly being linked with social, economic, cultural and political contexts.

**Table 5.** Publications by IPGRI's programme priorities

Program priorities	1996	1997	1998	1999	2000	2001	Total 1996–2001	%
Conservation and use	33	45	45	43	38	32	236	42
Managing and communicating information	5	10	3	6	4	4	32	6
Socio-economic and policy issues	8	10	3	4	8	7	40	7
Conservation and use of specific crops	27	32	38	30	27	20	174	31
Forest genetic resources	7	10	10	9	4	9	49	9
Others	14	4	4	4	4	2	32	5

### IPGRI's publishing role

As shown in Table 6, IPGRI plays several roles, including authoring and co-authoring, editing and publishing. For approximately 60% of the publications produced, IPGRI

personnel were authors or co-authors. The remaining publications were edited or published by IPGRI. The data confirmed IPGRI's effective partnership approach—an equal number of publications were published with IPGRI staff as partners rather than as senior authors. This is considered a good measure of collaboration.

**Table 6.** IPGRI's authorship role

Authorship status	1996	1997	1998	1999	2000	2001	Total 1996–2001
Lead author	37	35	27	23	25	21	168
Co-author	9	28	37	39	27	28	168
Editor	21	20	25	23	23	13	125
Publisher only	27	28	14	11	10	12	102

IPGRI's *modus operandi* is characterized by a number of different collaborative arrangements and partnerships. The study therefore also assessed the extent to which IPGRI's publications are produced in a partnership manner. The results of this analysis are shown in Table 7. Overall, 72% of IPGRI's publications were prepared with one or more external partners, reflecting a high degree of collaboration. IPGRI's main partners are national programmes, universities, FAO, other international institutes and donors such as the Technical Centre for Agricultural and Rural Co-operation (CTA) and Canada's International Development Research Centre (IDRC).

**Table 7.** IPGRI's publications with partners

Partners	1996	1997	1998	1999	2000	2001	Total 1996–2001
National institutes	15	17	22	11	21	10	96
Universities and advanced research institutes	15	21	9	9	6	4	64
Consultative Group on International Agricultural Research (CGIAR)	0	8	4	2	6	2	22
FAO and other international institutes	14	7	6	2	6	3	38
Unspecified	16	25	43	41	29	35	189
<b>Total</b>	<b>60</b>	<b>78</b>	<b>84</b>	<b>65</b>	<b>68</b>	<b>54</b>	<b>409</b>

### Language

IPGRI has published in eight languages (Table 8). However, there were very few publications in languages other than English, despite the fact that IPGRI aims to address a global audience. It would have been expected to find more publications originating in or translated into French and Spanish for partners in Latin America and Africa. However, it is possible that the publications produced in other languages are of a more informal nature, and were not included in this study, or that publications were translated by partners.

**Table 8.** Language of publications

Language	No. of publications	%
English	528	84.2
French	44	7.0
Spanish	39	6.1
German	4	0.7
Italian	4	0.7
Arabic	4	0.7
Chinese	2	0.3
Portuguese	2	0.3

### Conclusions

Assessing the publications produced by a research institute is a useful way to evaluate its effectiveness. IPGRI's reputation as a centre of excellence for plant genetic resources

depends partly on how widely it is known and how well it is respected in the plant genetic resources and broader scientific and development communities. A good publication output helps maintain and enhance that reputation.

The study has many positive findings. IPGRI produced a significant number of publications during the period assessed, and a relatively high number of articles appeared in peer-reviewed journals. This has been accomplished despite the fact that IPGRI conducts little basic research itself, but concentrates on facilitating the research of others. The effectiveness of the partnership approach taken by IPGRI is confirmed by the data showing that IPGRI publishes almost three-quarters of its publications in collaboration with partners. All sections of IPGRI produce publications, with over a third produced by IPGRI's regional groups. This indicates effective performance by the different sections and effective decentralization of the institute.

However, the study also raised some issues that should be further considered by IPGRI management. The overall number of publications appears to have declined during the period of study. Several important topics, such as socioeconomics, policy and information management, have not been addressed to a significant degree. IPGRI has produced few training materials or practical handbooks, but has focused more on academic publications, such as journal articles, books and conference proceedings.

IPGRI operates in a partnership mode and conducts little basic research alone. Instead, it promotes and facilitates the research and development activities of others, particularly research institutes in developing countries. Since most of IPGRI's research is conducted through partners, an assessment of its publications has to consider the publishing rationale rather than just a quantitative assessment of outputs.

IPGRI established a publications policy in 1995 and set up a publications committee to oversee its outputs and to ensure they are produced in an 'integrated, efficient and effective manner'. However, the publications committee has tended to focus on the publications clearance process. The committee might now consider taking on a more advisory role, for example, providing guidance on the extent to which IPGRI staff should be publishing, the priority for publishing versus other responsibilities related to project management, and the identification of publishing priorities. The results of this study should be considered and addressed by the publications committee, which could focus on the following specific issues:

Is IPGRI publishing enough and to what extent should IPGRI be aiming to publish given its *modus operandi*?

Does publishing detract from other less tangible but equally important work such as network coordination, project management etc.?

Does IPGRI have the necessary mechanisms in place to encourage staff to publish?

The data appear to show a decline in overall publishing during the period of analysis.

What explains this decline? Is the decline being offset by partner publishing?

Should greater attention be paid to publishing in priority areas such as policy, information management and the social sciences? If so, what mechanisms could be put in place to encourage more publishing in these areas?

The study assessed to some extent the number and character of publications developed in partnership, but it was not possible to assess the extent to which IPGRI facilitates the publication of others, since this would have required in-depth review of records, project reports and letters of agreement. IPGRI may wish to consider establishing a system to track publications that do not carry its name as author or publisher.

Prior to the study, there was no systematic publications tracking system. IPGRI should ensure that the database constructed during this study is maintained and the records are analysed periodically, so that future assessments can focus more on data analysis than on data collection. Periodic tracking and assessment would also help IPGRI make decisions about publication priorities and staff engagement in publishing activities.