

**Mapping Agricultural Research in India:
A profile based on *CAB Abstracts* 1998**

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Dedicated to

Professor M S Swaminathan
Scientist, scholar and humanist on his 76th birthday

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Abstract

India's contribution to research in agriculture and related fields in 1998 is assessed from an analysis of publications indexed in *CAB Abstracts*. There were 11,855 publications from India, including 10,412 journal articles, from more than 1,280 institutions in 531 locations, spread over 30 states/ union territories. *CAB Abstracts* has classified these papers into 21 major research fields and 243 subfields. 'Plants of economic importance' (FF) is the leading area of research in India, followed by 'Animal science' (LL). The three subfields with the largest number of papers are: 'Pests, pathogens and biogenic diseases of plants', FF600 (1,301 papers), 'Plant breeding and genetics', FF020 (1,135 papers), and 'Plant production', FF100 (786 papers). In contrast, there were only 54 papers in 'Biotechnology' (WW). Academic institutions accounted for a little over 59% of the papers in 1998, as against 63.4% in the five years 1990-94, and scientific agencies of the central government accounted for 22% of the papers. Agricultural universities had published 4039 papers and agricultural colleges 523 papers. Chaudhary Charan Singh Haryana Agricultural University (473 papers), Punjab Agricultural University (390 papers), Indian Agricultural Research Institute (378 papers) and University of Agricultural sciences, Bangalore (253 papers) were the leading publishers of papers. Indian researchers had used 854 journals. They had published over 78% of the 10,412 journal articles in 208 Indian journals, 587 papers in 180 UK journals, and 368 papers in 124 US journals. In no other field do Indian researchers publish such a large percent of papers in Indian journals. Letters journals were used only infrequently: 317 papers in 40 letters journals. More than 8060 papers were published in non-*SCI* journals, and 1,925 papers were published in journals of impact factor less than 1.0. Only 33 papers were published in journals of impact factor higher than 3.0. New Delhi, Bangalore, Hisar, Ludhiana and Coimbatore are the cities publishing large number of papers, and Uttar Pradesh, Maharashtra, Tamil Nadu and Haryana are the leading states. We have identified institutions publishing large number of papers in different subfields, in different journals, in journals of different impact factors, etc. This macroscopic analysis not only provides an inventory of India's publications but also gives an idea of endogenous research capacity. If appropriately linked with public policy, it can help restructure the nation's research priorities.

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Introduction

Ensuring food and nutrition security of more than a billion people is a great challenge for India today. It requires increased production of grains, pulses, oilseeds, vegetables, fruits, milk, poultry, fish, and meat, making the produce available to the people at affordable prices, and seeing that the food consumed is absorbed and assimilated by the population. The first step of course is to produce more food despite dwindling resources. As India has gone global, there is also the threat to Indian farmers, especially after the removal on 1 April 2001 of most of the quantitative restrictions on imports on agricultural products and consumer goods, from large-scale imports of food grains and processed foods of all kinds at prices they cannot match. Experts like Prof. M S Swaminathan argue in favour of ushering in what they call the 'evergreen revolution' to ensure food production at levels that can take care of the food and nutrition security of the growing population and adopting policies that are friendly to the local farming communities.^{1,2} Undoubtedly, India needs to strengthen both research and public policy in order to improve the productivity, profitability, stability and sustainability of the major farming systems. Research needs to be strengthened, for example, to improve rice and wheat yields from just a third of international levels. Policy should address issues such as how to help small and marginal farmers to get better yields from increasingly fragmenting landholdings, often less than an acre per farming family, how to get the food to the ultra-poor, and how to use agricultural growth to eradicate poverty.³ Look at the irony. The storehouses of the Food Corporation of India are overflowing with unsold grain, estimated between 45 and 60 million tonnes (in June 2001), a third of which is rotting in the open, and yet 250-300 million people do not have enough to eat.³ This has led to talk of grain mountains and hungry millions coexisting. Again, value added in the Indian food industry is 15-20%, compared with over 100% in some developed countries.³ There is considerable scope for research in food preservation and processing. Three decades ago when India went through difficult times, the agricultural research establishment played the role of a savior and came up with some remarkable achievements. Will India's agricultural researchers be able to meet the new challenge? It is with a view to answering this question that we have attempted not only to inventory agricultural research in India but also to provide an appreciation of endogenous research capacity in this crucial field.

Scientific literature is a mirror of scientific research around the world. Except for some classified work performed by defence research establishments and by corporate research laboratories, all scientific work ends up as publications in the open literature, most of it in refereed journals. Apart from journals, both refereed and unrefereed, new knowledge may be announced in conferences, reports, patents, books and book chapters, newsletters, etc. and of late in Open Archives. If one wants to capture all publications published from a country in a given field, ideally one has to search these varied sources. That would be pretty difficult, if not impossible. The best alternative then is to search a database dedicated to the field. If one wants to map agricultural research in India, one could look at *Current Contents – Agriculture, Biology and Environmental Science* edition, a leading current awareness tool, published weekly by the Institute for Scientific Information, Philadelphia, *AGRIS*, *AGRICOLA*, or *CAB Abstracts*. Incidentally, no database can capture everything that is published in a field. There will always be some conference held or some obscure journal or newsletter published from a remote corner of the world. Besides, databases have policies on what will be included what will not be, call it a threshold of quality if you wish. One way to overcome this problem is to search more than one database. While combining two or more databases will capture a higher proportion of the publications that one wants to capture, it would by no means ensure 100% comprehensiveness. In addition, one has to spend considerable time and energy in standardizing the different formats followed by different databases.

This report maps agricultural research in India as seen from publications that came out in 1998 and indexed in *CAB Abstracts*. A few years ago one of us had prepared a report entitled “Agricultural Research in India: A Profile Based on *CAB Abstracts* 1990-1994.”⁴ *CAB Abstracts* was preferred to the other secondary services, such as *Current Contents – Agriculture, Biology and Environmental Science* edition, *AGRIS* and *AGRICOLA*, because it covered a much larger number of primary sources than the other three databases. The report had mapped agricultural research in India based on papers with an Indian address indexed in five years of *CAB Abstracts*. Arunachalam and his colleagues have also analysed India’s contribution to other fields based on the literature indexed in major international databases such as *Medline*^{5,6}, *Biological Abstracts*⁷, *Mathsci*⁸, *Science Citation Index*⁹, *Materials Science Citation Index*¹⁰, and *Compumath Citation Index* (to be published). More recently, Arunachalam and Jayashree have mapped fish research in India and China, based on

bibliographic data collected from six databases^{11,12}. From our past experience with mapping Indian science, we know that agriculture research is performed in a larger number of institutions and locations and is published in a larger number of journals than any other field of science.

Methodology

Bibliographic information on all papers having an address in India in the byline and published in the year 1998 was downloaded from *CAB Abstracts* on CD. As papers published in 1998 will have been abstracted long after 1998 we scanned the CD-ROM discs of *CAB Abstracts* covering the whole of 1998, 1999 and the early months of 2000. The elements downloaded were: address, source (journal, volume, pages), publication year, publication type, and classification codes. Unlike ISI's citation index databases, *CAB Abstracts* gives the address of only one author even if a paper has many authors, and therefore we have missed all jointly authored papers where the Indian authors' addresses have not appeared. Another problem common to many non-ISI databases is that in many cases they do not provide the name of the country in the address field. To take care of this problem, we developed a search strategy where we had listed not only 'India' in the search based on address field, but also the names of Indian states and hundreds of Indian cities and towns where agriculture-related research could have been done. This led to capturing a few entries from outside India. For example, the search term 'Kochi' in the address field will not only capture papers from Kochi (Cochin) in Kerala but also papers from Kochi in Japan. Similarly, the search term 'Salem' will attract papers from Winston-Salem in the USA. Such non-Indian entries were removed before the data were analysed. A third problem is the non-standard rendering of names of institutions. Often agricultural universities are named 'Krishi Vishwavidyalaya' or 'Krishi Vidyapeeth' (the Hindi equivalent). Names of institutions were standardized. Occasionally, papers from some cities (or towns) which are not part of India are erroneously assigned to India by the database. These were also removed by careful manual checking. We added the country of publication of each journal from sources such as *CAB International Serials Checklist* (1995 edition), *Serial Sources for the BIOSIS Previews Database* (1993 edition), and *Publist*, a web source of information on serials. For some journals, which were not found in these three sources, we gathered information from CABI's headquarters in the UK. We found the impact factors for

journals in which Indian researchers have published their work, wherever available, from *Journal Citation Reports* 1997. The data were analysed by document type, journals used, country of publication of journals, impact factors of journals, subfields at two different levels, institution, institution type, city/town, and state. Wherever possible we have compared our results for 1998 with the results for 1990-1994.

Analysis

Distribution by journal

There were 11,855 documents in all, including 10,412 (about 88%) journal articles, 838 conference papers, and 132 books/ book chapters (Table 1). In all, Indian researchers have used in 854 journals to publish their work (Table 2). Seventeen journals have published 100 or more papers, 35 journals have published 50 or more papers but less than 100, 64 journals have published 25 or more papers but less than 50, and 96 journals have published 10 or more papers but less than 25. At the other extreme, 332 journals have published just one paper each and 117 journals two papers each. Fig. 1 is a curve of number of journals vs. cumulative number of papers. In the top 116 journals, in which Indians have published 25 or more papers, only seven are foreign journals: *International Rice Research Notes*, Philippines, 20th rank, 83 papers; *Biologia Plantarum*, Czech Republic, 63rd rank, 46 papers; *Buffalo Journal*, Thailand, 84th rank, 35 papers; *Fitoterapia*, Italy, 85th rank, 33 papers, *Cruciferae – Newsletter*, UK, (26 papers), *Phytochemistry*, UK (26 papers), and *Journal of Agronomy and Crop Science*, Germany (25 papers). Of the 854 journals, 40 are letters journals (Table 3) and these have published 317 papers from India (3% of journal articles). Clearly, unlike in physics, in agriculture research in India (and probably elsewhere in the world), there is no sense of urgency in reporting one's findings. Of the 40 letters journals, six are published in India. There are a few newsletters: *Cruciferae Newsletter*, UK, in which Indian researchers have published 26 papers; *International Chickpea and Pigeonpea Newsletter*, India, 25 papers; *International Arachis Newsletter*, India, 18 papers; *International Sorghum and Millets Newsletter*, USA, 12 papers; *MFP News*, India, 9 papers; *National Bank News Review*, Bombay, India, 9 papers; *Fertiliser Marketing News*, India, 7 papers; *Lens Newsletter*, Syria, 7 papers; *Mycorrhiza News*, India, 7 papers; *Wood News*, India, 5 papers; *Agro Chemicals News in Brief*, Thailand, 4 papers; *Camel Newsletter*, Syria, 3 papers; *Palawija News*, Indonesia, 2 papers; *ILEIA*

Newsletter, the Netherlands, 1 paper; *International Rice Commission Newsletter*, Italy, 1 paper, etc.

Distribution by journal country

Unlike in physics, chemistry, new biology, medicine and mathematics, most papers from India in agricultural research is published in Indian journals (Table 4). In 1998 Indian researchers have published 8157 papers (> 78% of all journal articles) compared to 77% in 1990-1994) in 208 Indian journals (Table 5). In the five years 1990-1994, Indian researchers have used 483 Indian journals to publish 37,175 papers (77% of their journal papers). In life sciences, as seen from *Biological Abstracts* 1998, Indian researchers had published 55.4% of papers in Indian journals [Arunachalam, S, unpublished results]. In medicine, as seen from *Medline* Nov. 1987 – Dec. 1994, 33.5% of papers from India were published in Indian journals⁵. In mathematics, as seen from *Mathsci* 1988-1998, 38.5% of all Indian papers were published in Indian journals⁸. In 1998, Indian scientists had published 587 papers in 180 British journals, 368 papers in 124 US journals and 307 papers in 77 journals published in the Netherlands (Fig. 2). In all, in 1998 Indian researchers have published in journals published in 46 countries.

Distribution by journal impact factor

More than 77.4% of the 10412 journal papers from India had appeared in 441 non-SCI journals, and 18.5% of papers were published in journals of impact factor (IF) less than 1.0 (Table 6). Only 33 papers (0.3%) have been published in journals of IF greater than 3.0 (Table 6). In contrast, about 55% of Indian papers in mathematics, as seen from *Mathsci* 1993-1998⁸, 47.8% of Indian papers in medicine, as seen from *Medline*⁵, 42.7% of Indian papers in life sciences as seen from *Biological Abstracts* 1998 [Arunachalam, S, unpublished results] and 11.5% of papers in new biology, as seen from *SCI*, *Biochemistry and Biophysics Citation Index* and *Biotechnology Citation Index* [Arunachalam, S, unpublished results] were published in non-SCI journals. In the area of new biology, only 333 of the 2,902 papers published by Indian researchers in 1995 were published in non-SCI journals, and 8.3% of papers were published in journals of IF greater than 3.0 (Arunachalam, S, unpublished results). This comparison should not be taken to mean as a reflection on agricultural research in India.

Agriculture, like mathematics and unlike new biology and to some extent physics, is a low-impact journal field. Besides, much of the research in agriculture is mainly of local relevance.

Distribution by subfield

The 11,855 India papers are classified into 244 subspecialties (Tables 7 and 7A) and 21 major areas (Table 7B). *CAB Abstracts* often classifies papers into more than one subspecialty. For the purpose of this table, we have considered only the first mentioned subspecialty. Plant related subspecialties such as 'Pests, pathogens and biogenic diseases of plants', FF600 (1301 papers), 'Plant breeding and genetics', FF020 (1135 papers), and 'Plant production', FF100 (786 papers) are popular with Indian researchers. The subfield FF (Plants of economic importance) has the most number of papers, 4855, followed by LL (Animal sciences), 1808 papers, and JJ (Soil science), 910 papers (Fig. 3). Three other subfields have 500 or more papers: KK (Forestry, forest products and agroforestry), 763; HH (Pathogen, pest and parasite management, General), 757; and VV (Human health and hygiene, General), 500. In 'Biotechnology' (WW) there were only 54 papers in 1998 and 231 papers in 1990-1994. Compared to 1990-1994, there has not been many changes. Subfield HH has moved down from rank 4 in the earlier period to rank 5 and KK has moved up from rank 5 to rank 4. There has been a considerable increase in the number of papers in the area 'Professions, education, information and training' (CC) – from 79 papers in five years to 49 in one year. Two other areas which have recorded a substantial increase are 'Aquatic science' (MM) and 'Sociology (General)' (UU). The subfield 'Medical and veterinary records' (TT) is no longer in existence.

Distribution by institution

More than 1,280 institutions are active in India and have published at least one paper in 1998 that was found worthy of being indexed in *CAB Abstracts* (Table 8). CCS Haryana Agricultural University (473 papers), Punjab Agricultural University (390 papers) and the Indian Agricultural Research Institute (378 papers) are the leading publishers of research papers in the country. These are followed by University of Agricultural Sciences, Bangalore (253 papers), Tamil Nadu Agricultural University, Coimbatore (239 papers), Assam Agricultural University, Jorhat (229 papers), and Indian Veterinary Research Institute, Izatnagar (221 papers). Twenty institutions have published 100 or more papers; 18 institutions

have published 50-99 papers; 55 institutions have published 25-49 papers; and 113 institutions have published 10-24 papers. At the extreme, 575 institutions have published just one paper, and 207 institutions have published two papers each. A plot of number of institutions vs. cumulative number of papers (Fig. 4) follows the classical sigmoidal curve. Individual units are listed separately in this table. For example, Agricultural College and Research Institute, Madurai (25 papers), is a constituent of Tamil Nadu Agricultural University, Coimbatore. These are listed separately. There have been some minor changes from the previous period. For example, Punjab Agricultural University, the leading publisher of research papers in 1990-1994, slid to rank 2 and the University of Agricultural Sciences, Bangalore, moved up from rank 7 to rank 4. Fig. 2 is a curve of number of institutions vs. the cumulative number of papers.

Distribution by institution type

Academic institutions (including universities and colleges) have accounted for 7011 papers or 59.1% of the 11,855 papers (Table 9 and Fig. 5). In the earlier period, academic institutions accounted for 63.4%. Central government research agencies (such as ICAR and CSIR) have raised their share from 21.2% in 1990-1994 to 22% in 1998. The share of ICAR institutes is a little over 17%, marginally higher than the 15.2% in the five years 1990-94. We have included Indian Agricultural Research Institute under ICAR, although it also has the status of a university. As expected, agricultural universities (4039 papers) and colleges (523 papers) have published the largest number of papers. It is significant that general (arts and science) colleges have published 510 papers and general universities 1744 papers. More than 190 papers have come from medical colleges and universities. This is not surprising as *CAB Abstracts* does cover health-related research to some extent.

Distribution by state and city/town

Uttar Pradesh is the state accounting for the largest number of papers (1661), followed by Karnataka (1117), Tamil Nadu (1047), Maharashtra (851) and Delhi (807) (Table 10). Compared to 1990-94, Karnataka has moved up from the fifth position to the second and Maharashtra has slid from the second to the fourth. Delhi has overtaken Haryana, and Madhya Pradesh and West Bengal have overtaken Punjab. Among cities, New Delhi leads with 800

papers, followed by Bangalore (590), Hisar (482), Ludhiana (394), Coimbatore (346), and Hyderabad (307). Thirty-one cities have published more than 100 papers, and 18 cities have published 50–99 papers; at the other extreme, 196 cities have published just one paper each (Table 11). There have been some minor changes in the ranks of cities/ towns: Karnal has slipped from the eighth position in 1990-94 to 13th in 1998, and Mohanpur from the ninth to the 18th (Table 11A).

Distribution of papers by institution and by subfield, journal and journal impact factor - Table 12A gives the numbers of papers published by selected institutions in different subfields. Notice that there is hardly any paper in plant-related areas from the Indian Veterinary Research Institute (Column G) and National Dairy Research Institute (Column K). We have also constructed similar matrices on the numbers of papers published by selected institutions in different major areas (Table 12B) and on the use of Indian and foreign journals by selected institutions (Tables 13 and 13A). University of Agricultural Sciences, Bangalore, and Dr Panjabrao Deshmukh Krishi Vidyapeeth publish many papers in local/ in-house journals. Table 14 lists the numbers of papers published by selected institutions in journals of different impact factor ranges up to IF = 3.5. Indian Agricultural Research Institute, Banaras Hindu University and Jawaharlal Nehru Krishi Vishwavidyalaya have published a few papers in medium impact journals. The institutions that have published papers in journals of IF > 3.5 are listed in Table 15. Indian Institute of Science has published seven papers in journals of IF higher than 3.5; International Centre for Genetic Engineering and Biotechnology has four papers, Jawaharlal Nehru University, New Delhi, and National Institute of Immunology, New Delhi, three papers each and Delhi University two papers in journals of impact factor higher than 3.5. These papers in high impact journals are mostly papers in new biology and not agricultural research per se. Table 16 is a matrix of selected subfields and journals used to publish papers in those subfields by Indian researchers.

Conclusion

Agriculture, encompassing crop and animal husbandry, horticulture, forestry and agro-forestry, inland and marine fisheries and agro-processing, is the major determinant of the livelihood destiny of nearly 700 million people of India, and the farm sector still employs 60% of the

nation's workforce, despite a dip of 4% during 1993-99.³ Agricultural progress holds the key to the nation's economic and political future. Indian agriculture is now at the crossroads, says Swaminathan². On the one hand, the nation's capability in frontier areas of science and technology, as for example in biotechnology, information, communication and space technologies, nuclear and renewable energy technologies and in management science, has opened up uncommon opportunities for achieving an evergreen revolution in most farming systems based on knowledge and biological inputs rather than on chemical and capital intensive production methods². There are, on the other hand, both internal and external threats to our agricultural progress. The most important among the internal threats is the damage to the ecological foundations essential for sustained agricultural advance, such as land, water, forests and biodiversity. Prime farmland is all the time going out of agriculture and groundwater depletion is proceeding at an alarming rate. The other major internal weakness is the mismatch between production and post-harvest technologies and between production and market demand¹³, and the consequent need for the Government of India to undertake "trade relief" operations such as cyclone, flood and drought relief. The external threats include the unequal trade bargain inherent in the WTO agreement of 1994, and potential adverse changes in temperature, precipitation, sea level and ultraviolet B-radiation. Added to this is President Bush's reluctance, if not refusal, to honour the Kyoto protocol on climate change.

India can face the internal threats only through integrated attention to regulation, education and social mobilisation through panchayati raj institutions. Also, there is need to restructure research strategies in a manner that strategic, anticipatory and participatory (i.e. with farm families) research all received adequate attention. Participatory research is essential for developing location-specific technologies. Similarly, extension services should become farmer owned and controlled and should become capable of converting generic into location specific knowledge essential for taking to precision farming methods. The rural knowledge centres should provide computer aided and internet connected information services, so that farm families have timely and relevant meteorological, management and marketing information². Agriculture, which accounts for a quarter of India's economic output, not only remains tied to the whims of the monsoon rains but also increasingly to the vagaries of the market.

The future of Indian agriculture depends on three factors, viz. research, public policy and the farming community's cooperative action. The greater the synergy among these three factors the better it would be for India. This has been emphasized in the Chennai Declaration of the MSSRF-FAO Expert Consultation,¹⁴ which has three sections devoted to priority research areas, contributions of science, and the science – policy link. Research does not mean merely laboratory research; it includes research that would inform policy in all its aspects. Scientific organizations need to work with farmers and fishers to move food security and nutrition higher up the political agenda. Much of life science and agricultural research is coming under proprietary science and unless India gears up publicly funded agricultural research, there is the imminent danger of long-term dependence on multinational corporations for knowledge when agriculture is increasingly becoming knowledge intensive. In the late sixties and seventies, Indian agriculture research was able to tide over a major crisis through introduction of the Green Revolution that eventually transformed India from a basket case to a food surplus country. Will it be able to do yet another rescue act? Lester Brown of the World Resource Institute has warned that by 2030 both China and India may have to import quantities of food unheard of in history – 240 million tonnes for China and 40 million tonnes for India¹⁵. Can the Indian agricultural research establishment prove him wrong? Fortunately for India, there is great opportunity to raise productivity because of the gap between potential and actual yields. Unfortunately, India is investing less than 0.5% of agricultural GDP on research, says Dr S Balaravi, Assistant Director General of the Indian Council of Agricultural Research, New Delhi.

This macroscopic analysis of agricultural research and related publications does not cover public policy and the collective action of farming communities. It is restricted to analyzing the research output over a one-year period – in the form of published literature – of Indian agricultural researchers as a whole. This paper has identified the institutions that are active, the areas in which they are active and the journals in which they publish their work. While there has been much activity in the areas of plants of economic importance and animal science, there were only 54 papers in the area of 'biotechnology'. There were only 231 papers in this area in the five years 1990-1994⁴. Clearly, India appears to be slow in catching up in this rather important area, where companies like Aventis and Monsanto are doing pretty well. What is more, most of these papers in biotechnology have come from life science schools of

higher educational institutions other than agricultural universities. We wish to reiterate that it would be beneficial if researchers from centers of agricultural research and centers of biotechnology and new biology research in the university and national laboratory sectors could come together and work on joint projects.

To be of greater value to policymakers, we should refine this research programme to look at research at the level of individual crops. For example, what is being done to increase the production of under-utilised or minor crops and to use them in processed food? Other questions that would enhance the value of this research are: Is research being carried out to make agricultural production environmentally safe, economically viable and socially sustainable? If so, has it been successful? Have there been efforts to integrate research, priority setting, public policy and the farming community's action? What is the status of research in the area of agricultural extension services? Are there efforts to use new information and communication technologies and locally generated databases and make the farm families the central focus of these services?

Or are men like Swaminathan crying in the wilderness?

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References

- [1] Swaminathan, M S., For an evergreen revolution, *The Hindu Survey of Indian Agriculture 2000*, The Hindu, Chennai, 9-15.
- [2] Swaminathan, M S., Indian agriculture at the crossroads, plenary lecture, 81st Congress of The Indian Science Congress Association, New Delhi, 2001.
- [3] Grim reapers. A survey of India's economy, pp. 14-16, *Economist*, 2 June 2001.
- [4] Arunachalam, S., Agricultural research in India – A profile based on *CAB Abstracts* 1990-1994, report submitted to NISSAT, DSIR, New Delhi, July 1998.
- [5] Arunachalam, S., How relevant is medical research done in India? A study based on *Medline. Curr Sci*, 1997, 72, 912- 922.

- [6] Arunachalam, S., Mapping medical research in India: An analysis based on *Medline* Nov. 1987 – Dec. 1994, report submitted to NSTMIS Division, Department of Science and Technology, New Delhi, March 1998.
- [7] Arunachalam, S., Mapping life sciences research in India: A profile based on *BIOSIS* 1992-1994. *Curr Sci*, 1999, 76, 1191-1203.
- [8] Arunachalam, S., Mathematics research in India today: What does the literature reveal? accepted for publication in *Scientometrics*, 2001.
- [9] Arunachalam, S., Srinivasan, R., and Raman, V., Science in India-a profile based on India's publications as covered by *Science Citation Index* 1989-1992. *Curr Sci*, 1998, 74, 433-441,
- [10] Arunachalam, S., Meyyappan, N and Sridhar, G S, India's contribution to the literature of materials science and related fields: An analysis based on *Materials Science Citation Index* 1991-1994, report submitted to NSTMIS Division, Department of Science and Technology, New Delhi, March 1998.
- [11] Jayashree, B. and Arunachalam, S., Mapping fish research in India. *Curr Sci*, 2000, 79, 613-620.
- [12] Arunachalam, S. and Jayashree, B., Fish science research in China: How does it compare with fish research in India? *Scientometrics*, 2001, 52, 13-28.
- [13] Swaminathan, M. S., An evergreen revolution. *Biologist*, 2000, 47 (2): 85-89.
- [14] Chennai Declaration, MSSRF-FAO Expert Consultation on Science for Sustainable Food Security, Nutritional Adequacy and Poverty Alleviation in the Asia-Pacific Region, held at M S Swaminathan Research Foundation, Chennai, India, 25-28 June 2001.
- [15] Brown, L., *Who will feed China? Wake-up call for a small planet* (W W Norton, New York), 1995.

TABLES

Table 1: Indian research papers calssified by Document type as seen from *CAB Abstracts* 1998

Document type *	Number of Papers
Journal - article	10412
Conference-paper	838
Miscellaneous	368
Book-chapter	132
Conference-	80
Correspondence	12
Annual-report	5
Thesis	4
Standard	3
Patent	1
Total	11855

* As given in the database

Table 2: Indian research papers classified by journal as seen from CAB Abstracts 1998

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
1	Indian-Veterinary-Journal.	0.000	India	355
2	Indian-Journal-of-Agricultural-Sciences.	0.043	India	207
3	Environment-and-Ecology.	0.000	India	195
4	Karnataka-Journal-of-Agricultural-Sciences.	0.000	India	191
5	Indian-Journal-of-Animal-Sciences.	0.080	India	179
6	Insect-Environment.	0.000	India	167
7	Journal-of-the-Indian-Society-of-Soil-Science.	0.000	India	167
8	Indian-Journal-of-Agronomy.	0.020	India	160
9	Crop-Research-Hisar.	0.000	India	150
10	Current-Science.	0.376	India	147
11	Indian-Journal-of-Experimental-Biology.	0.000	India	142
12	Indian-Forester.	0.000	India	141
13	Annals-of-Agricultural-Research.	0.000	India	134
14	Madras-Agricultural-Journal.	0.000	India	122
15	Advances-in-Plant-Sciences.	0.000	India	118
16	Journal-of-Maharashtra-Agricultural-Universities.	0.000	India	112
17	Indian-Phytopathology.	0.000	India	100
18	Agricultural-Science-Digest-Karnal.	0.000	India	88
19	Economic-and-Political-Weekly.	0.000	India	86
20	International-Rice-Research-Notes.	0.000	Philippines	83
21	Indian-Journal-of-Dairy-Science.	0.000	India	80
22	Journal-of-Medicinal-and-Aromatic-Plant-Sciences.	0.000	India	79
23	PKV-Research-Journal.	0.000	India	78
24	Indian-Journal-of-Genetics-and-Plant-Breeding.	0.000	India	77
25	Indian-Journal-of-Forestry.	0.000	India	75
26	Indian-Journal-of-Plant-Physiology.	0.000	India	75
27	Indian-Journal-of-Animal-Nutrition.	0.000	India	74
28	Current-Research -University-of-Agricultural-Sciences-Bangalore.	0.000	India	71
29	Indian-Journal-of-Poultry-Science.	0.000	India	69
30	Journal-of-Soils-and-Crops.	0.000	India	69
31	Indian-Journal-of-Animal-Reproduction.	0.000	India	66
32	Journal-of-Food-Science-and-Technology-Mysore	0.113	India	66
33	Indian-Journal-of-Weed-Science.	0.000	India	65
34	Journal-of-the-Agricultural-Science-Society-of-North-East-India.	0.000	India	65

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
35	Annals-of-Plant-Protection-Sciences.	0.000	India	61
36	Journal-of-Economic-and-Taxonomic-Botany.	0.000	India	61
37	Journal-of-Applied-Biology.	0.000	India	59
38	Indian-Dairyman.	0.000	India	58
39	Indian-Sugar.	0.000	India	58
40	Journal-of-Entomological-Research.	0.000	India	57
41	Indian-Coconut-Journal-Cochin.	0.000	India	56
42	Journal-of-Research, -Birsa-Agricultural-University	0.000	India	56
43	Crop-Improvement.	0.000	India	55
44	Indian-Journal-of-Animal-Production-and-Management.	0.000	India	54
45	Indian-Journal-of-Agricultural-Research.	0.000	India	52
46	Orissa-Journal-of-Horticulture.	0.000	India	52
47	Plant-Disease-Research.	0.000	India	52
48	Indian-Journal-of-Nematology.	0.000	India	51
49	Indian-Journal-of-Soil-Conservation.	0.000	India	51
50	Journal-of-Interacademia.	0.000	India	51
51	Legume-Research.	0.000	India	51
52	Oryza.	0.000	India	50
53	Cooperative-Sugar.	0.000	India	49
54	Journal-of-Hill-Research.	0.000	India	49
55	Journal-of-Research-ANGRAU.	0.000	India	49
56	Annals-of-Agri-Bio-Research.	0.000	India	48
57	Forage-Research.	0.000	India	48
58	Seed-Research.	0.000	India	48
59	Annals-of-Biology-Ludhiana.	0.494	India	47
60	Annals-of-Plant-Physiology.	0.000	India	47
61	Indian-Journal-of-Comparative-Microbiology	0.000	India	47
62	Journal-of-Rural-Development-Hyderabad.	0.000	India	47
63	Biologia-Plantarum.	0.393	Czech Republic	46
64	Entomon.	0.000	India	46
65	Indian-Journal-of-Chemistry.-Section B	0.000	India	46
66	Journal-of-Oilseeds-Research.	0.000	India	46
67	Journal-of-Mycology-and-Plant-Pathology.	0.000	India	45
68	Pesticide-Research-Journal.	0.000	India	44
69	Shashpa.	0.000	India	44
70	Journal-of-Phytological-Research.	0.000	India	43
71	Journal-of-Veterinary-Parasitology.	0.000	India	43
72	Indian-Journal-of-Veterinary-Pathology.	0.000	India	42
73	Indian-Journal-of-Sericulture.	0.000	India	41
74	Bhartiya-Krishi-Anusandhan-Patrika.	0.000	India	40
75	Cheiron.	0.000	India	40
76	Journal-of-Nuclear-Agriculture-and-Biology.	0.000	India	40

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
77	Mysore-Journal-of-Agricultural-Sciences.	0.000	India	40
78	Indian-Journal-of-Nutrition-and-DieteticsI.	0.000	India	38
79	Journal-of-Dairying,-Foods-and-Home-Sciences.	0.000	India	38
80	International-Journal-of-Animal-Sciences.	0.000	India	36
81	Journal-of-Ecobiology.	0.000	India	36
82	Journal-of-Environmental-Biology.	0.061	India	36
83	Range-Management-and-Agroforestry.	0.000	India	36
84	Buffalo-Journal.	0.000	Thailand	35
85	Fitoterapia.	0.000	Italy	33
86	Pest-Management-in-Horticultural-Ecosystems.	0.000	India	33
87	South-Indian-Horticulture.	0.000	India	33
88	Indian-Journal-of-Pharmaceutical-Sciences.	0.000	India	32
89	Journal-of-the-Indian-Potato-Association.	0.000	India	32
90	Agricultural-Reviews-Karnal.	0.000	India	31
91	Horticultural-Journal.	0.000	India	31
92	Indian-Journal-of-Microbiology.	0.000	India	31
93	Indian-Journal-of-Virology.	0.000	India	31
94	Advances-in-Agricultural-Research-in-India.	0.000	India	30
95	Annals-of-Forestry.	0.494	India	30
96	Indian-Journal-of-Animal-Research.	0.000	India	30
97	Indian-Journal-of-Ecology.	0.000	India	30
98	Journal-of-the-Andaman-Science-Association.	0.000	India	30
99	Phytomorphology.	0.000	India	30
100	Proceedings-of-the-National-Academy-of-Sciences-India.-Section B	0.000	India	30
101	Journal-of-Communicable-Diseases.	0.000	India	29
102	Journal-of-Ecotoxicology-and-Environmental-Monitoring.	0.000	India	29
103	Van-Vigyan.	0.000	India	29
104	Journal-of-Biological-Control.	0.000	India	28
105	Indian-Cooperative-Review.	0.000	India	27
106	Indian-Journal-of-Environment-and-Toxicology.	0.000	India	27
107	Journal-of-Spices-and-Aromatic-Crops.	0.000	India	27
108	Cruciferae-Newsletter.	0.000	UK	26
109	Indian-Journal-of-Medical-Research.	0.318	India	26
110	Journal-of-Plantation-Crops.	0.000	India	26
111	Phytochemistry.	1.165	UK	26
112	Indian-Journal-of-Animal-Health.	0.000	India	25

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
113	International-Chickpea-and-Pigeonpea-Newsletter.	0.000	India	25
114	Journal-of-Agronomy-and-Crop-Science.	0.000	Germany	25
115	World-Weeds.	0.000	India	25
116	Indian-Pediatrics.	0.000	India	25
117	Indian-Journal-of-Dairy-and-Biosciences.	0.000	India	24
118	International-Journal-of-Tropical-Agriculture.	0.000	India	24
119	Journal-of-Bombay-Veterinary-College.	0.000	India	24
120	Journal-of-Ethnopharmacology.	0.578	Irish Republic	24
121	Journal-of-Mycopathological-Research.	0.000	India	24
122	Phytotherapy-Research.	0.525	UK	24
123	Plant-Cell-Reports.	0.967	Germany	24
124	Agricultural-Marketing.	0.000	India	23
125	Annals-of-Arid-Zone.	0.027	India	23
126	Haryana-Agricultural-University-Journal-of-Research.	0.000	India	23
127	Indian-Journal-of-Marine-Sciences.	0.099	India	23
128	Gujarat-Agricultural-University-Research-Journal.	0.000	India	22
129	Tobacco-Research.	0.000	India	22
130	Indian-Journal-of-Small-Ruminants.	0.000	India	21
131	Indian-Journal-of-Veterinary-Research.	0.000	India	21
132	Journal-of-Plant-Biochemistry-and-Biotechnology.	0.136	India	21
133	Asian-Australasian-Journal-of-Animal-Sciences.	0.000	Korea	20
134	Bulletin-of-Environmental-Contamination-and-Toxicology.	0.635	USA	20
135	Crop-Science.	0.801	USA	20
136	Indian-Textile-Journal.	0.000	India	20
137	Uttar-Pradesh-Journal-of-Zoology.	0.000	India	20
138	World-Journal-of-Microbiology-and-Biotechnology.	0.746	Netherlands	20
139	Biochemistry-and-Molecular-Biology-International.	0.578	Australia	19
140	Centaur-Mylapore.	0.000	India	19
141	Indian-Journal-of-Entomology.	0.000	India	19
142	Journal-of-Biosciences.	0.435	India	19
143	Journal-of-Ornamental-Horticulture-New-Series.	0.000	India	19
144	Journal-of-Research,-Punjab-Agricultural-University.	0.000	India	19
145	National-Academy-Science-Letters.	0.078	India	19
146	Planters'-Chronicle.	0.000	India	19
147	Tropical-Ecology.	0.000	India	19
148	Bioresource-Technology.	0.632	UK	18
149	International-Arachis-Newsletter.	0.000	India	18

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
150	Indian-Journal-of-Veterinary-Anatomy.	0.000	India	17
151	Journal-of-Advanced-Zoology.	0.057	India	17
152	Sugar-Cane.	0.000	UK	17
153	Current-Agriculture.	0.000	India	16
154	Euphytica.	0.768	Netherlands	16
155	Focus on wildlife. Indian-Forester.	0.000	India	16
156	Indian-Agriculturist.	0.000	India	16
157	Indian-Coffee.	0.000	India	16
158	Journal-of-Essential-Oil-Research.	0.000	USA	16
159	Journal-of-Parasitic-Diseases.	0.000	India	16
160	Journal-of-Parasitology-and-Applied-Animal-Biology.	0.000	India	16
161	Nematologia-Mediterranea.	0.000	Italy	16
162	Pest-Management-and-Economic-Zoology.	0.000	India	16
163	Plant-Science-Limerick.	1.274	Irish Republic	16
164	Vaniki-Sandesh.	0.000	India	16
165	Acta-Physiologiae-Plantarum.	0.444	Poland	16
166	Advances-in-Forestry-Research-in-India.	0.000	India	15
167	Food-Chemistry.	0.812	UK	15
168	Indian-Journal-of-Malariology.	0.000	India	15
169	International-Journal-of-Nematology.	0.000	India	15
170	Journal-of-Aquaculture-in-the-Tropics.	0.000	India	15
171	Journal-of-Living-World.	0.000	India	15
172	Medical-Journal-Armed-Forces-India.	0.000	India	15
173	Photosynthetica.	0.941	Czech Republic	15
174	Agricultural-Water-Management.	0.320	Netherlands	14
175	Cytobios.	0.000	UK	14
176	Indian-Journal-of-Agricultural-Economics.	0.000	India	14
177	Indian-Journal-of-Toxicology.	0.000	India	14
178	Journal-of-Scientific-and-Industrial-Research.	0.000	India	14
179	Tropical-Animal-Health-and-Production.	0.150	UK	14
180	Cashew.	0.000	India	13
181	Small-Ruminant-Research.	0.306	Netherlands	13
182	Theoretical-and-Applied-Genetics.	2.040	Germany	13
183	Veterinary-Research-Communications.	0.613	Netherlands	13
184	Bihar-Journal-of-Agricultural-Marketing.	0.000	India	12
185	Biochemical-and-Biophysical-Research-Communications.	2.671	USA	12
186	Fresenius-Environmental-Bulletin.	0.257	Switzerland	12
187	Hamdard-Medicus.	0.000	Pakistan	12
188	International-Sorghum-and-Millet-Newsletter.	0.000	USA	12
189	Journal-of-Clinical-Biochemistry-and-Nutrition.	0.234	Japan	12

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
190	Journal-of-the-Orchid-Society-of-India.	0.000	India	12
191	Journal-of-the-Science-of-Food-and-Agriculture.	0.895	UK	12
192	Pashudhan.	0.000	India	12
193	Acta-Agronomica-Hungarica.	0.000	Hungary	11
194	Animal-Feed-Science-and-Technology.	0.587	Netherlands	11
195	Journal-of-the-Timber-Development-Association-of-India.	0.000	India	11
196	Plant-and-Soil.	1.193	Netherlands	11
197	Plant-Physiology-and-Biochemistry-New-Delhi.	1.613	India	11
198	Proceedings-of-the-Indian-National-Science-Academy.-Part B	0.000	India	11
199	Recent-Horticulture.	0.000	India	11
200	Soybean-Genetics-Newsletter.	0.000	USA	11
201	ACIAR-Proceedings-Series.	0.000	Australia	10
202	Biomedicine.	0.000	France	10
203	Cytologia.	0.000	Japan	10
204	Economic-Affairs-Calcutta.	0.000	India	10
205	International-Journal-of-Remote-Sensing.	0.771	UK	10
206	Journal-of-Agricultural-and-Food-Chemistry.	1.502	USA	10
207	Journal-of-Camel-Practice-and-Research.	0.000	India	10
208	Journal-of-Genetics-and-Breeding.	0.000	Italy	10
209	Journal-of-the-Oil-Technologists'-Association-of-India.	0.000	India	10
210	Journal-of-Tropical-Forest-Science.	0.000	Malaysia	10
211	Natural-Product-Sciences.	0.000	Korea	10
212	Plant-Disease.	0.717	USA	10
213	Agroforestry-Systems.	0.559	Netherlands	9
214	Annals-of-Tropical-Medicine-and-Parasitology.	0.901	UK	9
215	Biological-Trace-Element-Research.	0.745	USA	9
216	International-Journal-of-Food-Sciences-and-Nutrition.	0.506	UK	9
217	Journal-of-Plant-Physiology.	1.179	Germany	9
218	Journal-of-the-Indian-Medical-Association.	0.000	India	9
219	MFP-News.	0.000	India	9
220	Mycopathologia.	0.525	Netherlands	9
221	National-Bank-News-Review-Bombay.	0.000	India	9
222	Philippine-Journal-of-Science.	0.000	Philippines	9
223	Punjab-Vegetable-Grower.	0.000	India	9
224	Soil-Biology-and-Biochemistry.	1.326	UK	9
225	Annals-of-Applied-Biology.	0.494	UK	8
226	Aquaculture-Research.	0.000	UK	8
227	Capsicum-and-Eggplant-Newsletter.	0.000	Italy	8

No.	Journal title	Impact factor - JCR 1997	Journal country	No.of papers
228	Clay-Research.	0.000	India	8
229	Forest-Ecology-and-Management.	0.000	Netherlands	8
230	Genetic-Resources-and-Crop-Evolution.	0.432	Netherlands	8
231	Indian-Journal-of-Gastroenterology.	0.000	India	8
232	Insect-Science-and-its-Application.	0.000	Kenya	8
233	In-Vitro-Cellular-and-Developmental-Biology -Plant.	0.000	USA	8
234	Nutrition-Research.	0.627	USA	8
235	Pharmaceutical-Biology.	0.000	Netherlands	8
236	Plant-Cell,-Tissue-and-Organ-Culture.	0.540	Netherlands	8
237	Rice-Biotechnology-Quarterly.	0.000	USA	8
238	Sylva-Plus.	0.000	UK	8
239	Talanta-Oxford.	1.149	UK	8
240	Tests-of-Agrochemicals-and-Cultivars.	0.000	UK	8
241	Biochimica-et-Biophysica-Acta,-General-Subjects	2.411	Netherlands	7
242	Biotechnology-Letters.	0.848	UK	7
243	Fertiliser-Marketing-News.	0.000	India	7
244	Hydrological-Sciences-Journal.	0.381	UK	7
245	Journal-of-Agricultural-Science.	0.000	UK	7
246	Journal-of-Applied-Animal-Research.	0.000	India	7
247	Journal-of-Herbs,-Spices-and-Medicinal-Plants	0.000	UK	7
248	Journal-of-the-American-Mosquito-Control-Association.	0.421	USA	7
249	Journal-of-Tropical-Pediatrics.	0.288	UK	7
250	Lens-Newsletter.	0.000	Syria	7
251	Mycorrhiza-News.	0.000	India	7
252	Mycoses.	0.524	Germany	7
253	National-Medical-Journal-of-India.	0.000	India	7
254	Oriental-Insects.	0.133	USA	7
255	Plant-Breeding.	0.675	Germany	7
256	Plant-Foods-for-Human-Nutrition.	0.310	Netherlands	7
257	Plant-Genetic-Resources-Newsletter.	0.000	Italy	7
258	Plant-Growth-Regulation.	0.000	Netherlands	7
259	State-Bank-of-India-Monthly-Review.	0.000	India	7
260	Tropical-Agricultural-Research-and-Extension.	0.000	Sri Lanka	7
261	Water-Resources-Management.	0.000	Netherlands	7
262	Acta-Cytologica.	1.425	USA	6
263	Asia-Pacific-Journal-of-Rural-Development.	0.000	Bangladesh	6
264	Better-Crops-International.	0.000	USA	6
265	Biology-and-Fertility-of-Soils.	1.003	Germany	6
266	Crop-Protection.	0.000	UK	6
267	Energy-Conversion-and-Management.	0.366	UK	6
268	FEMS-Microbiology-Letters.	1.560	Netherlands	6

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
269	Folia-Microbiologica.	0.312	Czech Republic	6
270	Forest, -Farm, -and-Community-Tree-Research-Report	0.000	Czech Republic	6
271	Helia.	0.000	Romania	6
272	Indian-Journal-of-Biochemistry-and-Biophysics.	0.335	India	6
273	Indian-Journal-of-Hill-Farming.	0.000	India	6
274	Journal-of-Essential-Oil-Bearing-Plants.	0.000	USA	6
275	Mycological-Research.	1.099	UK	6
276	Mycotaxon.	0.405	USA	6
277	Pesticide-Science.	0.798	UK	6
278	Postgraduate-Medical-Journal.	0.496	UK	6
279	Southeast-Asian-Journal-of-Tropical-Medicine-and-Public-Health.	0.000	Thailand	6
280	Tropical-Agriculture.	0.031	Thailand	6
281	Tropical-Medicine-and-International-Health.	0.980	UK	6
282	Veterinary-Record.	1.081	UK	6
283	Water, -Air, -and-Soil-Pollution.	0.964	Netherlands	6
284	Zeitschrift-fur-Pflanzenkrankheiten-und-Pflanzenschutz.	0.442	Germany	6
285	ACIAR-Food-Legume-Newsletter.	0.000	Australia	5
286	Acta-Tropica.	0.891	Netherlands	5
287	Acta-Virologica.	0.454	Slovakia	5
288	Arid-Soil-Research-and-Rehabilitation.	0.299	UK	5
289	Asian-Profile.	0.000	Hong Kong	5
290	Biomedical-and-Environmental-Sciences.	0.000	USA	5
291	Caryologia.	0.221	Italy	5
292	Chemosphere.	1.145	UK	5
293	Egyptian-Journal-of-Dairy-Science.	0.000	Egypt	5
294	FEBS-Letters.	3.504	Netherlands	5
295	Grana.	0.523	Sweden	5
296	Indian-Journal-of-Natural-Products.	0.000	India	5
297	Indian-Journal-of-Regional-Science.	0.000	India	5
298	International-Journal-of-Pest-Management.	0.162	UK	5
299	International-Sugar-Journal-Cane-Sugar-Edition.	0.000	UK	5
300	Journal-of-Applied-Entomology.	0.366	Germany	5
301	Journal-of-Irrigation-and-Drainag-Engin.	0.259	USA	5
302	Journal-of-Plant-Nutrition.	0.385	USA	5
303	Journal-of-Tropical-Forest-Products.	0.000	Malaysia	5
304	Microbiologie, -Aliments, -Nutrition.	0.000	France	5
305	Mutation-Research, -Fundamental-and-Molecular-Mechanisms-of-Mutagenesis	0.000	Netherlands	5
306	Naga.	0.000	Philippines	5

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
307	Planta-Medica.	1.430	Germany	5
308	Plant-Physiology.	4.311	USA	5
309	Process-Biochemistry.	0.782	UK	5
310	Rachis.	0.000	Syria	5
311	Seed-Science-and-Technology.	0.224	Switzerland	5
312	Soil-and-Tillage-Research.	0.610	Netherlands	5
313	South-Asian-Anthropologist.	0.000	India	5
314	Theriogenology.	1.727	USA	5
315	Transactions-of-the-Royal-Society-of-Tropical-Medicine-and-Hygiene.	0.000	UK	5
316	Wood-News.	0.000	India	5
317	Agro-Chemicals-News-in-Brief.	0.000	Thailand	4
318	American-Journal-of-Tropical-Medicine-and-Hygiene.	1.964	USA	4
319	Annals-of-Botany.	1.301	UK	4
320	Applied-Botany-Abstracts.	0.000	India	4
321	Aquaculture.	0.000	Netherlands	4
322	Archives-of-Phytopathology-and-Plant-Protection.	0.000	UK	4
323	Asia-Pacific-Journal-of-Clinical-Nutrition.	0.000	UK	4
324	Communications-in-Soil-Science-and-Plant-Analysis.	0.430	USA	4
325	Current-Microbiology.	1.011	USA	4
326	Document -International-Research-Group-on-Wood-Preservation.	0.000	Sweden	4
327	Environmental-Conservation.	0.610	Switzerland	4
328	Field-Crops-Research.	0.687	Netherlands	4
329	Food-and-Chemical-Toxicology.	1.217	UK	4
330	Hydrological-Processes.	0.940	UK	4
331	International-Agricultural-Engineering-Journal.	0.000	Thailand	4
332	International-Tree-Crops-Journal.	0.000	UK	4
333	Journal-of-Applied-Microbiology.	0.000	UK	4
334	Journal-of-Chemical-Technology-and-Biotechnology.	0.766	UK	4
335	Journal-of-Environmental-Science-and-Health.-Part B	0.612	USA	4
336	Journal-of-Plant-Growth-Regulation.	0.887	USA	4
337	Journal-of-Water-Resources-Planning-and-Management.	0.523	USA	4
338	Lancet-British-edition.	0.000	UK	4
339	News-Letter -National-Horticultural-Research-and-Development-Foundation.	0.000	India	4
340	NFI-Bulletin.	0.000	USA	4
341	Nutrient-Cycling-in-Agroecosystems.	0.000	Netherlands	4
342	Phytomedicine.	0.000	Germany	4

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
343	Planter.	0.000	Malaysia	4
344	Reproduction, -Fertility-and-Development	1.055	Australia	4
345	RIS-Biotechnology-and-Development-Review.	0.000	India	4
346	Tropical-Science.	0.000	UK	4
347	Veterinarski-Arhiv.	0.000	Croatia	4
348	Veterinary-Parasitology.	1.147	Netherlands	4
349	World-Agricultural-Production.	0.000	USA	4
350	Acta-Paediatrica.	0.810	Sweden	3
351	Acta-Parasitologica.	0.000	Poland	3
352	Acta-Phytopathologica-et-Entomologica-Hungarica.	0.000	Hungary	3
353	Advances-in-Horticultural-Science.	0.000	Italy	3
354	Agriculture, -Ecosystems-and-Environment.	0.661	Netherlands	3
355	Agroforestry-Today.	0.000	Kenya	3
356	Animal-Reproduction-Science.	0.930	Netherlands	3
357	Applied-Soil-Ecology.	1.127	Netherlands	3
358	Archives-of-Virology.	1.479	Austria	3
359	Bacterial-Wilt-Newsletter.	0.000	Australia	3
360	Biochemical-Systematics-and-Ecology.	0.568	UK	3
361	Biologia-Bratislava.	0.000	Slovakia	3
362	Biomedical-Letters.	0.000	UK	3
363	Biotechnology-and-Development-Monitor.	0.000	Netherlands	3
364	Biotechnology-Techniques.	0.534	UK	3
365	British-Poultry-Science.	0.796	UK	3
366	Bubalus-Bubalis.	0.000	Italy	3
367	Camel-Newsletter.	0.000	Syria	3
368	Carbohydrate-Research.	1.437	UK	3
369	Cell-Biology-International.	1.124	UK	3
370	Development-Policy-Review.	0.000	UK	3
371	Ecology-of-Food-and-Nutrition.	0.455	UK	3
372	Economic-Botany.	0.592	USA	3
373	Energy-Oxford.	0.000	UK	3
374	Entomologia-Generalis.	0.283	Germany	3
375	European-Journal-of-Biochemistry.	3.136	Germany	3
376	FABIS-Newsletter.	0.000	Syria	3
377	Feddes-Repertorium.	0.000	Germany	3
378	Flavour-and-Fragrance-Journal.	0.000	UK	3
379	Fundamental-and-Applied-Nematology.	0.589	France	3
380	Geoderma.	0.839	Netherlands	3
381	Indian-Journal-of-Pediatrics.	0.000	India	3
382	Journal-of-Antibiotics.	1.523	Japan	3
383	Journal-of-Invertebrate-Pathology.	1.069	USA	3
384	Journal-of-Natural-Products.	1.432	USA	3
385	Journal-of-Parasitology.	1.188	USA	3
386	Journal-of-the-American-Oil-Chemists'-Society.	1.203	USA	3
387	Land-Degradation-and-Development.	0.574	UK	3

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
388	Letters-in-Applied-Microbiology.	1.008	UK	3
389	Microbiological-Research.	0.544	Germany	3
390	Milchwissenschaft.	0.626	Germany	3
391	Molecular-and-Cellular-Biochemistry.	1.345	Netherlands	3
392	Mycorrhiza.	0.683	Germany	3
393	New-Forests.	0.000	Netherlands	3
394	Pacific-and-Asian-Journal-of-Energy.	0.000	India	3
395	People-and-the-Planet.	0.000	UK	3
396	Phyton-Horn.	0.000	Austria	3
397	Phytoparasitica.	1.000	Israel	3
398	Plant-Molecular-Biology.	2.852	Netherlands	3
399	Plant-Physiology-and-Biochemistry-Paris.	0.000	France	3
400	Potato-Research.	0.236	Netherlands	3
401	Sarvekshana.	0.000	India	3
402	Scientia-Horticulturae.	0.000	Netherlands	3
403	Symbiosis-Rehovot.	0.918	Israel	3
404	Wood-Science-and-Technology.	0.598	Germany	3
405	Acta-Veterinaria-Hungarica.	0.321	Hungary	3
406	Agricultural-and-Forest-Meteorology.	1.570	Netherlands	2
407	Agrochimica.	0.132	Italy	2
408	Allelopathy-Journal.	0.000	India	2
409	Analyst.	1.614	UK	2
410	Analytical-Letters.	1.000	USA	2
411	Annals-of-Agricultural-and-Environmental-Medicine.	0.000	Poland	2
412	Anticancer-Research.	1.045	Greece	2
413	Applied-Animal-Behavior-Science.	0.920	Netherlands	2
414	Applied-Microbiology-and-Biotechnology.	1.331	Germany	2
415	Aquaculture-Nutrition.	0.000	UK	2
416	Archives-of-Environmental-Contamination-and-Toxicology.	1.102	USA	2
417	Archives-of-Insect-Biochemistry-and-Physiology.	1.246	USA	2
418	Artha-Vijnana.	0.000	India	2
419	Artha-vikas.	0.000	India	2
420	Bangladesh-Journal-of-Zoology.	0.000	Bangladesh	2
421	Biochemical-Journal-London.	0.000	UK	2
422	Biocontrol-Science-and-Technology.	1.255	UK	2
423	Biological-Agriculture-and-Horticulture.	0.325	UK	2
424	Biomass-and-Bioenergy.	0.163	UK	2
425	Biotechnology-Progress.	1.431	USA	2
426	Boundary-Layer-Meteorology.	1.161	Netherlands	2
427	Brain-Research-Bulletin.	1.708	USA	2
428	British-Medical-Journal-Clinical-Research-edition.	0.000	UK	2
429	Bulletin -Postgraduate-Institute-of-Medical-Education-and- Research,- Chandigarh.	0.000	India	2

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
430	Cancer-Letters.	1.440	Ireland	2
431	Cereal-Research-Communications.	0.207	Hungary	2
432	Chemical-Speciatiion-and-Bioavailability.	0.429	UK	2
433	Comparative-Biochemistry-and-Physiology	0.000	UK	2
434	Contraception-Stoneham.	0.000	USA	2
435	Cornea.	1.056	USA	2
436	Critical-Reviews-in-Plant-Sciences.	4.606	USA	2
437	Diseases-of-Aquatic-Organisms.	1.183	Germany	2
438	Entwicklung-+-Landlicher-Raum.	0.000	Germany	2
439	Environmental-Technology.	0.670	UK	2
440	Environment-and-Development-Economics.	0.000	UK	2
441	Enzyme-and-Microbial-Technology.	1.223	USA	2
442	European-Journal-of-Agronomy.	0.513	France	2
443	Experimental-Agriculture.	0.538	UK	2
444	F.O.-Licht-International-Sugar-and-Sweetener-Report.	0.000	Germany	2
445	Feed-Compounder.	0.000	UK	2
446	Food-Microbiology.	1.085	UK	2
447	Forests,-Trees-and-People-Newsletter.	0.000	Sweden	2
448	General-Pharmacology.	1.056	UK	2
449	Hereditas-Landskrona.	0.000	Sweden	2
450	Holzforschung.	0.928	Germany	2
451	Human-and-Experimental-Toxicology.	0.716	UK	2
452	Hydrology,-water-resources-and-ecology-in-headwaters	0.000	Netherlands	2
453	Hydrobiologia.	0.000	Netherlands	2
454	Indian-Journal-of-Leprosy.	0.000	India	2
455	Infection-and-Immunity.	3.713	USA	2
456	INFOFISH-International.	0.000	Malaysia	2
457	International-Journal-of-Dairy-Technology.	0.000	UK	2
458	International-Journal-of-Environment-and-Pollution.	0.336	Switzerland	2
459	International-Journal-of-Food-Microbiology.	1.160	UK	2
460	International-Journal-of-Sustainable-Development-and-World-Ecology.	0.476	UK	2
461	International-Journal-of-Water-Resources-Development.	0.000	UK	2
462	Irrigation-and-Drainage-Systems.	0.000	Netherlands	2
463	Israel-Journal-of-Plant-Sciences.	0.441	Israel	2
464	Japanese-Journal-of-Tropical-Medicine-and-Hygiene.	0.000	Japan	2
465	Journal-de-Mycologie-Medicale.	0.000	France	2
466	Journal-of-Agricultural-Engineering-Research.	0.469	UK	2
467	Journal-of-Applied-Aquaculture.	0.000	USA	2
468	Journal-of-Biological-Chemistry.	6.963	USA	2
469	Journal-of-Clinical-Microbiology.	3.783	USA	2

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
470	Journal-of-Environmental-Engineering-New-York.	1.249	USA	2
471	Journal-of-Experimental-Botany.	1.948	UK	2
472	Journal-of-Fish-Biology.	0.918	UK	2
473	Journal-of-Industrial-Microbiology-and-Biotechnology.	1.199	UK	2
474	Journal-of-Infection.	1.437	UK	2
475	Journal-of-Nutritional-Biochemistry.	1.337	USA	2
476	Journal-of-Nutritional-Science-and-Vitaminology.	0.680	Japan	2
477	Journal-of-Peasant-Studies.	0.000	UK	2
478	Journal-of-Pediatric-Gastroenterology-and-Nutrition.	1.294	USA	2
479	Journal-of-Pharmacy-and-Pharmacology.	0.771	UK	2
480	Journal-of-Phytopathology.	0.000	Germany	2
481	Journal-of-Sustainable-Forestry.	0.000	USA	2
482	Journal-of-the-American-College-of-Nutrition.	1.466	USA	2
483	Journal-of-the-Neurological-Sciences.	1.453	Netherlands	2
484	Journal-of-Veterinary-Medicine.-Series-B.	0.662	Germany	2
485	Life-Sciences.	2.275	UK	2
486	Lipids.	1.947	USA	2
487	Modern-Asian-Studies.	0.000	UK	2
488	Molecular-and-General-Genetics.	2.749	Germany	2
489	Molecular-Breeding.	2.819	Netherlands	2
490	Molecular-Reproduction-and-Development.	2.189	USA	2
491	Mountain-Research-and-Development.	0.000	USA	2
492	Nahrung.	0.449	Germany	2
493	Natural-Toxins.	0.000	USA	2
494	Nematologica.	0.537	Netherlands	2
495	Nephrology-Dialysis-Transplantation.	1.682	UK	2
496	Nutrition-and-Health.	0.000	UK	2
497	Pakistan-Veterinary-Journal.	0.000	Pakistan	2
498	Palawija-News.	0.000	Indonesia	2
499	Parasitologia-Hungarica.	0.000	Hungary	2
500	Parasitology.	2.206	UK	2
501	Parasitology-Today.	5.189	UK	2
502	Partners-in-Research-for-Development.	0.000	Australia	2
503	Pesticide-Biochemistry-and-Physiology.	1.058	USA	2
504	Phytopathology.	2.365	USA	2
505	Plant-Ecology.	0.000	Netherlands	2
506	Plant-Molecular-Biology-Reporter.	0.000	USA	2
507	Proceedings-of-the-Indian-Academy-of-Sciences,-Earth-and-Planetary-Sciences.	0.130	India	2
508	Research-in-Veterinary-Science.	0.983	UK	2
509	Science-of-the-Total-Environment.	0.947	Netherlands	2
510	Soil-Use-and-Management.	0.595	Bangladesh	2

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
511	South-Asia.	0.000	***	2
512	Spinal-Cord.	0.330	UK	2
513	Sugar-Journal.	0.000	USA	2
514	Systematic-Parasitology.	0.645	Netherlands	2
515	Taiwania.	0.000	Taiwan	2
516	Thai-Journal-of-Agricultural-Science.	0.000	Thailand	2
517	Tigerpaper.	0.000	Thailand	2
518	Trees:-Structure-and-Function.	0.863	Germany	2
519	Tropical-Grasslands.	0.157	Australia	2
520	Veterinary-Immunology-and-Immunopathology.	0.867	Netherlands	2
521	Waterlines.	0.000	UK	2
522	World-Rabbit-Science.	0.000	France	2
523	Acarologia.	0.178	France	1
524	Acta-Alimentaria-Budapest.	0.220	Hungary	1
525	Acta-Biologica-Hungarica.	0.000	Hungary	1
526	Acta-Biotechnologica.	0.463	Germany	1
527	Acta-Crystallographica.-Section-D,-Biological-Crystallography.	2.118	Denmark	1
528	Acta-Dermato-Venereologica.	1.091	Sweden	1
529	Acta-Hydrochimica-et-Hydrobiologica.	0.000	Germany	1
530	Acta-Ichthyologica-et-Piscatoria.	0.000	Poland	1
531	Acta-Microbiologica-Polonica.	0.000	Poland	1
532	Acta-Neurologica-Scandinavica.	0.902	Denmark	1
533	Acta-Oecologica.	0.564	France	1
534	Acta-Physiologica-Hungarica.	0.000	Hungary	1
535	Acta-Protozoologica.	0.500	Poland	1
536	African-Farming-and-Food-Processing.	0.000	UK	1
537	AgBiotech-News-and-Information.	0.000	UK	1
538	Agricultural-Systems.	0.475	UK	1
539	Agronomie.	0.325	France	1
540	Agronomy-Journal.	0.818	USA	1
541	AIDS.	5.050	USA	1
542	Alimentaria.	0.000	Spain	1
543	Allergy-Copenhagen.	0.000	Denmark	1
544	American-Journal-of-Botany.	1.715	USA	1
545	American-Journal-of-Clinical-Nutrition.	3.980	USA	1
546	American-Rhododendron-Society-Journal.	0.000	USA	1
547	Anaesthesia-and-Intensive-Care.	0.000	Australia	1
548	Analisis.	0.439	France	1
549	Analytica-Chimica-Acta.	1.778	Netherlands	1
550	Analytical-Chemistry-Washington.	4.743	USA	1
551	Animal-Behaviour.	1.897	UK	1
552	Animal-Biotechnology.	1.148	USA	1
553	Annales-Botanici-Fennici.	0.393	Finland	1
554	Annals-of-Agricultural-Science-Cairo.	0.494	Egypt	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
555	Annals-of-Allergy, -Asthma, -and-Immunology.	1.546	USA	1
556	Annals-of-Nutrition-and-Metabolism.	0.750	Switzerland	1
557	Annals-of-Plastic-Surgery.	0.659	USA	1
558	Annals-of-the-Entomological-Society-of-America.	0.686	USA	1
559	Applied-and-Environmental-Microbiology.	3.336	USA	1
560	Applied-Engineering-in-Agriculture.	0.000	USA	1
561	Appropriate-Technology.	0.012	UK	1
562	Aquaculture-International.	0.000	UK	1
563	Archives-of-Animal-Nutrition.	0.513	UK	1
564	Archives-of-Microbiology.	2.351	Germany	1
565	Archives-of-Pharmaceutical-Research.	0.254	Korea	1
566	Archiv-fur-Geflugelkunde.	0.265	Germany	1
567	Arzneimittel-Forschung.	0.627	Germany	1
568	Asian-Pacific-Journal-of-Allergy-and-Immunology.	0.100	Thailand	1
569	Asian-Survey.	0.000	USA	1
570	Asia-Pacific-Population-Journal.	0.000	Thailand	1
571	Assiut-Veterinary-Medical-Journal.	0.000	Egypt	1
572	Atmospheric-Environment.	1.535	UK	1
573	Australian-Journal-of-Agricultural-Research.	0.851	Australia	1
574	Avian-Diseases.	0.848	USA	1
575	Avian-Pathology.	0.769	UK	1
576	Bangladesh-Journal-of-Botany.	0.035	Bangladesh	1
577	Behavioral-Ecology-and-Sociobiology.	2.327	Germany	1
578	Beitrage-zur-Biologie-der-Pflanzen.	0.000	Germany	1
579	Biochemical-Pharmacology.	2.443	UK	1
580	BioControl.	0.000	Peru	1
581	Biodegradation.	1.571	Netherlands	1
582	Biodiversity-and-Conservation.	1.091	UK	1
583	Biological-Control.	1.075	USA	1
584	BioMetals.	0.854	UK	1
585	Bioorganic-and-Medicinal-Chemistry-Letters.	1.628	UK	1
586	Bioscience, -Biotechnology-and-Biochemistry.	0.919	Japan	1
587	Bioscience-Reports.	1.057	USA	1
588	BioSystems.	0.591	Ireland	1
589	Bone-Marrow-Transplantation.	2.184	UK	1
590	Botanica-Acta.	1.821	Germany	1
591	Breeding-Science.	0.358	Japan	1
592	Bulletin -Office-International-des-Epizooties.	0.000	France	1
593	Bulletin-OEPP.	0.000	UK	1
594	Bulletin-of-the-British-Museum-Natural-History, -Entomology-Series.	0.000	UK	1
595	Candollea.	0.000	Switzerland	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
596	Cardiovascular-Drugs-and-Therapy.	1.098	Netherlands	1
597	Catena.	0.639	Netherlands	1
598	Cell-and-Tissue-Research.	1.740	Germany	1
599	Cell-Biology-and-Toxicology.	0.492	USA	1
600	Chemical-and-Pharmaceutical-Bulletin.	1.156	Japan	1
601	CIRDAP-Development-Digest-CDD.	0.000	Bangladesh	1
602	Clays-and-Clay-Minerals.	1.206	USA	1
603	Clinical-and-Experimental-Allergy.	2.559	UK	1
604	Clinical-Infectious-Diseases.	2.803	USA	1
605	Commonwealth-Forestry-Review.	0.000	UK	1
606	Community-Eye-Health.	0.000	UK	1
607	Comparative-Immunology	0.000	UK	1
608	Conservation-Biology.	1.832	USA	1
609	Contact-Geneva.	0.000	Switzerland	1
610	Contributions-to-Indian-Sociology.	0.000	India	1
611	Coton-et-Developpement.	0.000	France	1
612	CRC-Critical-Reviews-in-Food-Science-and-Nutrition.	0.000	USA	1
613	Current-Genetics.	1.924	Germany	1
614	Dairy-Industries-International.	0.112	UK	1
615	Development-Bulletin.	5.289	Czech Republic	1
616	Development-in-Practice:-an-Oxfam-Journal.	0.000	UK	1
617	Development-Issues-Canberra.	0.000	Australia	1
618	Development-Southern-Africa.	0.000	South Africa	1
619	Diabetes,-Nutrition-and-Metabolism	0.821	Italy	1
620	Eastern-Mediterranean-Health-Journal.	0.000	Egypt	1
621	Ecological-Applications.	2.180	USA	1
622	Ecological-Entomology.	1.200	UK	1
623	Ecological-Modelling.	0.668	Netherlands	1
624	Ecologist.	0.000	India	1
625	Ecosystem-Health.	0.000	USA	1
626	Endoscopy.	1.380	Germany	1
627	Entomologia-Experimentalis-et-Applicata.	0.847	Netherlands	1
628	Environmental-and-Experimental-Botany.	0.545	UK	1
629	Environmental-Geology.	0.325	USA	1
630	Environmental-Pollution.	1.267	UK	1
631	Ethology,-Ecology-and-Evolution.	0.651	Italy	1
632	European-Journal-of-Endocrinology.	1.968	UK	1
633	European-Journal-of-Plant-Pathology.	1.027	Netherlands	1
634	European-Journal-of-Plastic-Surgery.	0.201	Germany	1
635	Evergreen-Trichur.	0.000	India	1
636	Evolution.	2.715	USA	1
637	Experimental-Parasitology.	1.526	USA	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
638	FAO-Aquaculture-Newsletter.	0.000	Italy	1
639	FEMS-Immunology-and-Medical-Microbiology.	1.096	Netherlands	1
640	FEMS-Microbiology-Ecology.	2.266	UK	1
641	Fett-Lipid.	0.465	Germany	1
642	Fisheries-Science.	0.000	Japan	1
643	Fish-Physiology-and-Biochemistry.	0.000	Netherlands	1
644	FloraCulture-International.	0.000	USA	1
645	Food-and-Agricultural-Immunology.	0.966	UK	1
646	Food-and-Nutrition-Bulletin.	0.000	Japan	1
647	Forum-for-Development-Studies.	0.000	Netherlands	1
648	Fresenius'-Journal-of-Analytical-Chemistry.	1.398	Germany	1
649	Freshwater-Biology.	1.392	UK	1
650	Fruit-Varieties-Journal.	0.233	USA	1
651	Functional-Ecology.	1.818	UK	1
652	Gartenbauwissenschaft.	0.245	Germany	1
653	Gene.	1.838	Netherlands	1
654	General-and-Comparative-Endocrinology.	1.550	USA	1
655	Genetical-Research.	1.818	UK	1
656	Gyobyo-Kenkyu--Fish-Pathology.	0.667	Japan	1
657	Heart.	1.443	UK	1
658	Helminthologia.	0.447	Slovakia	1
659	Horticultural-Reviews.	0.000	USA	1
660	Human-Organization.	0.000	USA	1
661	ICID-Journal.	0.000	India	1
662	ICIMOD,-Newsletter-of-the-International-Centre-for-Integrated-Mountain-Development.	0.000	India	1
663	ILEIA-Newsletter.	0.000	Netherlands	1
664	Immunology-and-Cell-Biology.	0.909	Netherlands	1
665	Indian-Cashew-Journal.	0.000	India	1
666	Indian-Economic-Review.	0.000	India	1
667	Indian-Journal-of-Gender-Studies.	0.000	India	1
668	Indian-Journal-of-Tuberculosis.	0.000	India	1
669	Indigenous-Knowledge-and-Development-Monitor.	0.000	Netherlands	1
670	Indonesian-Journal-of-Crop-Science.	0.000	Indonesia	1
671	Insect-Biochemistry-and-Molecular-Biology.	2.094	UK	1
672	Insectes-Sociaux.	0.759	Switzerland	1
673	International-Agricultural-Development.	0.000	UK	1
674	International-Archives-of-Allergy-and-Immunology.	1.721	Switzerland	1
675	International-Journal-for-Parasitology.	1.415	UK	1
676	International-Journal-for-Vitamin-and-Nutrition-Research.	0.594	Switzerland	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
677	International-Journal-of-Acarology.	0.000	USA	1
678	International-Journal-of-Biometeorology.	0.609	Germany	1
679	International-Journal-of-Climatology.	1.157	UK	1
680	International-Journal-of-Food-Science-and-Technology.	0.545	UK	1
681	International-Journal-of-Health-Planning-and-Management.	0.000	UK	1
682	International-Journal-of-Immunopharmacology.	1.053	UK	1
683	International-Journal-of-Insect-Morphology-and-Embryology.	0.400	UK	1
684	International-Journal-of-Pharmaceutics.	0.000	Netherlands	1
685	International-Journal-of-STD-and-AIDS.	0.724	UK	1
686	International-Journal-of-Tuberculosis-and-Lung-Disease.	0.000	France	1
687	International-Pest-Control.	0.000	UK	1
688	International-Rice-Commission-Newsletter.	0.000	Italy	1
689	International-Sugar-Journal-Worldwide-Sugar-Edition.	0.000	UK	1
690	International-Water-and-Irrigation-Review.	0.000	Israel	1
691	Invertebrate-Reproduction-and-Development.	0.000	Israel	1
692	IPGRI-Newsletter-for-Asia,-the-Pacific-and-Oceania.	0.000	India	1
693	Iranian-Journal-of-Botany.	0.000	Iran	1
694	Irrigation-Science.	0.000	Germany	1
695	Israel-Journal-of-Veterinary-Medicine.	0.000	Israel	1
696	Italian-Journal-of-Zoology.	0.232	Italy	1
697	ITC-Journal.	0.000	Netherlands	1
698	Japanese-Journal-of-Pharmacology.	1.201	Japan	1
699	Journal-of-Animal-Breeding-and-Genetics.	0.437	Germany	1
700	Journal-of-AOAC-International.	1.138	USA	1
701	Journal-of-Applied-Ecology.	1.335	Germany	1
702	Journal-of-Applied-Ichthyology.	0.477	Germany	1
703	Journal-of-Applied-Toxicology.	0.487	UK	1
704	Journal-of-Arid-Environments.	0.570	UK	1
705	Journal-of-Biochemistry-Tokyo.	1.875	Japan	1
706	Journal-of-Biomolecular-Structure-and-Dynamics.	1.283	USA	1
707	Journal-of-Biotechnology.	1.111	Netherlands	1
708	Journal-of-Bone-and-Joint-Surgery,-British-volume.	2.190	USA	1
709	Journal-of-Chemical-Ecology.	1.284	USA	1
710	Journal-of-Clinical-Immunology.	2.078	USA	1
711	Journal-of-Colloid-and-Interface-Science.	1.646	USA	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
712	Journal-of-Contemporary-Asia.	0.000	Philippines	1
713	Journal-of-Endocrinology.	2.250	UK	1
714	Journal-of-Enzyme-Inhibition.	0.727	Switzerland	1
715	Journal-of-Epidemiology-and-Community-Health.	1.531	UK	1
716	Journal-of-Fish-Diseases.	1.158	UK	1
717	Journal-of-Food-Engineering.	0.697	UK	1
718	Journal-of-Food-Safety.	0.690	USA	1
719	Journal-of-Gastroenterology-and-Hepatology.	0.954	Australia	1
720	Journal-of-General-Virology.	2.863	UK	1
721	Journal-of-Genetics.	0.317	India	1
722	Journal-of-Helminthology.	0.559	UK	1
723	Journal-of-Horticultural-Science-and-Biotechnology.	0.416	UK	1
724	Journal-of-Hydrology-Amsterdam.	0.000	Netherlands	1
725	Journal-of-Insect-Physiology.	1.662	UK	1
726	Journal-of-International-Development.	0.000	Italy	1
727	Journal-of-Medical-Microbiology.	1.525	UK	1
728	Journal-of-Microbiological-Methods.	0.958	Netherlands	1
729	Journal-of-Molecular-Biology.	5.673	UK	1
730	Journal-of-Nematode-Morphology-and-Systematics.	0.000	Spain	1
731	Journal-of-Oil-Palm-Research.	0.000	Italy	1
732	Journal-of-Pediatrics.	2.836	USA	1
733	Journal-of-Pharmaceutical-and-Biomedical-Analysis.	1.046	UK	1
734	Journal-of-Plant-Pathology.	0.000	Italy	1
735	Journal-of-Reproduction-and-Fertility.	2.038	UK	1
736	Journal-of-Rubber-Research.	0.000	Malaysia	1
737	Journal-of-Soil-and-Water-Conservation.	0.617	USA	1
738	Journal-of-Sustainable-Agriculture.	0.000	USA	1
739	Journal-of-the-Indian-Institute-of-Science.	0.000	India	1
740	Journal-of-the-Taiwan-Museum.	0.000	Taiwan	1
741	Journal-of-the-World-Aquaculture-Society.	0.000	USA	1
742	Journal-of-Trace-Elements-in-Experimental-Medicine.	0.658	USA	1
743	Journal-of-Tropical-Ecology.	1.034	UK	1
744	Journal-of-Veterinary-Medicine.-Series-A.	0.408	Germany	1
745	Journal-of-Veterinary-Pharmacology-and-Therapeutics.	0.756	UK	1
746	Journal-of-Virological-Methods.	1.623	Netherlands	1
747	Journal-of-Zoological-Systematics-and-Evolutionary-Research.	0.682	Germany	1
748	Journal-of-Zoology.	0.852	UK	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
749	Korean-Journal-of-Veterinary-Clinical-Medicine.	0.000	Korea	1
750	Marine-and-Freshwater-Research.	0.617	Australia	1
751	Material-und-Organismen.	0.280	Germany	1
752	Maydica.	0.512	Italy	1
753	Medical-Microbiology-and-Immunology.	2.000	Germany	1
754	Medical-Mycology.	0.000	UK	1
755	Medical-Science-Research.	0.367	UK	1
756	Microbial-Pathogenesis.	1.307	UK	1
757	Microbiology-and-Immunology.	1.083	Japan	1
758	Molecular-and-Biochemical-Parasitology.	2.123	Netherlands	1
759	Molecular-Biology-Reports.	1.565	Netherlands	1
760	Molecular-Ecology.	3.086	UK	1
761	Molecular-Pharmacology.	4.921	USA	1
762	Mutagenesis.	1.802	UK	1
763	Mycologia.	1.175	USA	1
764	Mycologist.	0.000	UK	1
765	Natural-Resources-Forum.	0.000	UK	1
766	Naturwissenschaften.	1.171	Germany	1
767	Newsletter -Agricultural-Research-and-Extension-Network.	0.000	UK	1
768	Newsletter -International-Herbage-Seed-Production-Research	0.000	New Zealand	1
769	New-Zealand-Journal-of-Crop-and-Horticultural-Science.	0.297	New Zealand	1
770	Nitrogen-and-Methanol.	0.000	UK	1
771	Nordic-Journal-of-Botany.	0.148	Denmark	1
772	Noticiario-de-Historia-Agraria.	0.000	Spain	1
773	Nucleic-Acids-Research.	0.000	UK	1
774	Nutrition.	0.832	USA	1
775	Oecologia.	1.854	Germany	1
776	Oryx.	0.000	UK	1
777	Outlook-on-Agriculture.	0.266	UK	1
778	Oxford-Development-Studies.	0.000	UK	1
779	Pakistan-Journal-of-Nematology.	0.000	Pakistan	1
780	Bulletin-of-the-UPASI-Tea-Research-Department.	0.000	India	1
781	Parasitology-International.	0.000	Netherlands	1
782	Parasitology-Research.	0.948	Germany	1
783	Pediatric-Infectious-Disease-Journal.	1.866	USA	1
784	Pediatrics.	2.748	USA	1
785	Pediatric-Surgery-International.	0.290	Germany	1
786	Pharmacy-and-Pharmacology-Communications.	0.000	UK	1
787	Pharmazie.	0.504	Germany	1
788	Physiologia-Plantarum.	0.000	Denmark	1
789	Phytochemical-Analysis.	0.000	UK	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
790	Phyton-Buenos-Aires.	0.000	Argentina	1
791	Plant-and-Cell-Physiology.	0.000	Japan	1
792	Plantations, -Recherche, -Developpement.	0.000	France	1
793	Plant-Pathology.	1.070	UK	1
794	Polish-Journal-of-Food-and-Nutrition-Sciences.	0.000	Poland	1
795	Postharvest-Biology-and-Technology.	0.818	Netherlands	1
796	Public-Health.	0.582	USA	1
797	Quarterly-Journal-of-International-Agriculture.	0.000	Germany	1
798	Journal-of-Protozoology-Research.	0.000	France	1
799	Renal-Failure.	0.387	USA	1
800	Reproduction-in-Domestic-Animals.	0.357	Germany	1
801	Reproductive-Health-Matters.	0.000	UK	1
802	Reproductive-Toxicology.	0.829	UK	1
803	Resistant-Pest-Management.	0.000	USA	1
804	Revista-Argentina-de-Microbiologia.	0.000	Argentina	1
805	Revista-Iberoamericana-de-Micologia.	0.000	Spain	1
806	Revue-Scientifique-et-Technique -Office-International-des-Epizooties.	0.327	France	1
807	Russian-Entomological-Journal.	0.000	Russia	1
808	Savings-and-Development.	0.000	Italy	1
809	Scandinavian-Journal-of-Gastroenterology.	1.641	Norway	1
810	Science, -Technology-and-Development.	0.000	UK	1
811	Silvae-Genetica.	0.463	Germany	1
812	Skeletal-Radiology.	0.717	USA	1
813	Soil-Survey-Horizons.	0.000	USA	1
814	South-African-Journal-of-Botany.	0.000	South-Africa	1
815	South-African-Journal-of-Science.	0.000	South-Africa	1
816	Pharmacopsychiatry.	2.053	Germany	1
817	Studies-in-Family-Planning.	0.000	USA	1
818	Surgery-Today.	0.233	Japan	1
819	Surgical-Laparoscopy-and-Endoscopy.	0.955	USA	1
820	Sydowia.	0.000	Austria	1
821	Taxon.	1.149	Germany	1
822	Tea.	0.000	Kenya	1
823	Tourism-Recreation-Research.	0.000	India	1
824	Toxicon-Oxford.	1.150	UK	1
825	Travel-and-Tourism-Analyst.	0.000	UK	1
826	Trends-in-Ecology-and-Evolution.	6.678	UK	1
827	Tropenlandwirt.	0.025	Germany	1
828	Tropical-Agricultural-Research.	0.000	Sri Lanka	1
829	Turkiye-Entomoloji-Dergisi.	0.000	Turkey	1
830	Two-and-a-Bud.	0.000	India	1
831	Vaccine.	1.949	UK	1

No.	Journal title	Impact factor - JCR 1997	Journal country	No. of papers
832	Veterinary-Journal.	0.000	UK	1
833	Veterinary-Review-Kathmandu.	0.000	Nepal	1
834	Vetiver-Newsletter.	0.000	USA	1
835	Virology-New-York.	3.540	USA	1
836	Virus-Genes.	1.159	Netherlands	1
837	Virus-Research.	1.757	Netherlands	1
838	Vitis.	0.683	Germany	1
839	Water-Resources-Research.	0.000	USA	1
840	Weed-Technology.	0.588	USA	1
841	Wheat-Information-Service.	0.000	Japan	1
842	World-Animal-Review.	0.000	Italy	1
843	World-Development-Oxford.	0.000	UK	1
844	World-Health.	0.000	Switzerland	1
845	World-Health-Forum.	0.000	Switzerland	1
846	World-Horticultural-Trade-and-US-Export-Opportunities.	0.000	USA	1
847	World-Poultry.	0.000	Netherlands	1
848	World's-Poultry-Science-Journal.	0.929	UK	1
849	Yojana.	0.000	India	1
850	Zeitschrift-fur-Lebensmittel-Untersuchung-und -Forschung.	0.967	Germany	1
851	Zeitschrift-fur-Naturforschung.-Section-C,-Biosciences.	0.904	Germany	1
852	Zeitschrift-fur-Pflanzenernahrung-und-Bodenkunde.	0.514	Germany	1
853	Zoological-Science.	0.754	Japan	1
854	Zootechnica-International.	0.000	Italy	1
Total				10412

Table 3. Letters journals and newsletters used by Indian agricultural researchers as seen from *CAB Abstracts* 1998

No.	Journal title	Journal country	No. of papers
1	International-Rice-Research-Notes.	Philippines	83
2	Cruciferae-Newsletter.	UK	26
3	International-Chickpea-and-Pigeonpea-Newsletter.	India	25
4	National-Academy-Science-Letters.	India	19
5	International-Arachis-Newsletter.	India	18
6	International-Sorghum-and-Millet-Newsletter.	USA	12
7	Soybean-Genetics-Newsletter.	USA	11
8	MFP-News.	India	9
9	National-Bank-News-Review-Bombay.	India	9
10	Capsicum-and-Eggplant-Newsletter.	Italy	8
11	Fertiliser-Marketing-News.	India	7
12	Lens-Newsletter.	Syria	7
13	Mycorrhiza-News.	India	7
14	Plant-Genetic-Resources-Newsletter.	Italy	7
15	Biotechnology-Letters.	UK	7
16	FEMS-Microbiology-Letters.	Netherlands	6
17	ACIAR-Food-Legume-Newsletter.	Australia	5
18	FEBS-Letters.	Netherlands	5
19	Wood-News.	India	5
20	Agro-Chemicals-News-in-Brief.	Thailand	4
21	News-Letter -National-Horticultural-Research-and-Development-Foundation.	India	4
22	Bacterial-Wilt-Newsletter.	Australia	3
23	Camel-Newsletter.	Syria	3
24	FABIS-Newsletter.	Syria	3
25	Biomedical-Letters.	UK	3
26	Letters-in-Applied-Microbiology.	UK	3
27	Forests,-Trees-and-People-Newsletter.	Sweden	2
28	Analytical-Letters.	USA	2
29	Cancer-Letters.	Ireland	2
30	Palawija-News.	Indonesia	2
31	FAO-Aquaculture-Newsletter.	Italy	1
32	AgBiotech-News-and-Information.	UK	1

No.	Journal title	Journal country	No. of papers
33	ICIMOD, -Newsletter-of-the-International-Centre-for-Integrated-Mountain-Development.	India	1
34	ILEIA-Newsletter.	Netherlands	1
35	International-Rice-Commission-Newsletter.	Italy	1
36	IPGRI-Newsletter-for-Asia,-the-Pacific-and-Oceania.	India	1
37	Newsletter -Agricultural-Research-and-Extension-Network.	UK	1
38	Newsletter -International-Herbage-Seed-Production-Research.	New Zealand	1
39	Vetiver-Newsletter.	USA	1
40	Bioorganic-and-Medicinal-Chemistry-Letters.	UK	1
Total			317

Table 4: Country of publication of the journals used by Indian researchers as seen from *CAB Abstracts* 1990-94 & 1998

No.	Publication Country	1998		% of papers in world journals	1990-94		% of papers in world journals
		Number of journals	Number of papers		Number of journals	Number of papers	
1	India	208	8157	78.34	483	37178	76.96
2	UK	180	587	5.64	357	2742	5.68
3	USA	124	368	3.53	352	1888	3.91
4	Netherlands	77	307	2.95	127	1245	2.58
5	Germany	67	191	1.83	124	1100	2.28
6	Italy	21	99	0.95	43	667	1.38
7	Philippines	4	98		12	468	
8	Czech Republic	5	74		5	123	
9	Thailand	9	61		15	172	
10	Australia	12	50		27	171	
11	Ireland	4	43		14	176	
12	Japan	18	42		36	427	
13	France	17	37		42	240	
14	Switzerland	13	32		27	150	
15	Korea	4	32		2	12	
16	Poland	7	24		19	94	
17	Hungary	8	23		14	112	
18	Malaysia	5	22		10	76	
19	Syria	4	18		4	43	
20	Sweden	6	17		9	30	
21	Pakistan	3	15		14	73	
22	Kenya	3	12		6	115	
23	Bangladesh	5	12		12	36	
24	Israel	6	11		6	29	
25	Slovakia	3	9		3	30	
26	Egypt	4	8		6	28	
27	Sri Lanka	2	8		5	12	
28	Austria	3	7		7	49	
29	Romania	1	6		3	14	
30	Denmark	5	5		16	53	
31	Hong Kong	1	5		4	15	
32	Spain	4	4		4	11	
33	Croatia	1	4		1	7	
34	Taiwan	2	3		7	68	

No.	Publication Country	1998		% of papers in world journals	1990-94		% of papers in world journals
		Number of journals	Number papers		Number of journals	Number of papers	
35	South-Africa	3	3		6	20	
36	Indonesia	2	3		1	2	
37	New Zealand	2	2		6	7	
38	Argentina	2	2		1	1	
39	Greece	1	2		1	1	
40	Norway	1	1		3	11	
41	Turkey	1	1		1	7	
42	Nepal	1	1		3	6	
43	Russia	1	1		3	4	
44	Iran	1	1		1	1	
45	Finland	1	1		-	-	
46	Peru	1	1		-	-	
47	Belgium	-	-		9	193	
48	Trinidad & Tobago	-	-		1	90	
49	Canada	-	-		23	87	
50	Czechoslovakia	-	-		7	37	
51	Brazil	-	-		12	30	
52	Yugoslavia	-	-		3	22	
53	China	-	-		5	7	
54	Singapore	-	-		4	7	
55	Slovenia	-	-		1	7	
56	Chile	-	-		1	6	
57	Mexico	-	-		4	6	
58	Costa Rica	-	-		2	4	
59	Nigeria	-	-		3	4	
60	Zimbabwe	-	-		2	4	
61	Bhutan	-	-		1	3	
62	Colombia	-	-		2	3	
63	Venezuela	-	-		1	2	
64	Zaire	-	-		1	2	
65	Ethiopia	-	-		1	1	
66	Jordan	-	-		1	1	
67	Lebanon	-	-		1	1	
68	Namibia	-	-		1	1	
69	Sultanate of Oman	-	-		1	1	
70	Unknown	1	2		24	68	
Total		854	10412		1953	48301	

Table 5: Indian journals covered by *CAB Abstracts* 1998

No.	Journal title	No. of Indian papers
1	Indian-Veterinary-Journal.	355
2	Indian-Journal-of-Agricultural-Sciences.	207
3	Environment-and-Ecology.	195
4	Karnataka-Journal-of-Agricultural-Sciences.	191
5	Indian-Journal-of-Animal-Sciences.	179
6	Insect-Environment.	167
7	Journal-of-the-Indian-Society-of-Soil-Science.	167
8	Indian-Journal-of-Agronomy.	160
9	Crop-Research-Hisar.	150
10	Current-Science.	147
11	Indian-Journal-of-Experimental-Biology.	142
12	Indian-Forester.	141
13	Annals-of-Agricultural-Research.	134
14	Madras-Agricultural-Journal.	122
15	Advances-in-Plant-Sciences.	118
16	Journal-of-Maharashtra-Agricultural-Universities.	112
17	Indian-Phytopathology.	100
18	Agricultural-Science-Digest-Karnal.	88
19	Economic-and-Political-Weekly.	86
20	Indian-Journal-of-Dairy-Science.	80
21	Journal-of-Medicinal-and-Aromatic-Plant-Sciences.	79
22	PKV-Research-Journal.	78
23	Indian-Journal-of-Genetics-and-Plant-Breeding.	77
24	Indian-Journal-of-Forestry.	75
25	Indian-Journal-of-Plant-Physiology.	75
26	Indian-Journal-of-Animal-Nutrition.	74
27	Current-Research -University-of-Agricultural-Sciences-Bangalore.	71
28	Indian-Journal-of-Poultry-Science.	69
29	Journal-of-Soils-and-Crops.	69
30	Indian-Journal-of-Animal-Reproduction.	66
31	Journal-of-Food-Science-and-Technology-Mysore.	66
32	Indian-Journal-of-Weed-Science.	65
33	Journal-of-the-Agricultural-Science-Society-of-North-East-India.	65
34	Annals-of-Plant-Protection-Sciences.	61

No.	Journal title	No. of Indian papers
35	Journal-of-Economic-and-Taxonomic-Botany.	61
36	Journal-of-Applied-Biology.	59
37	Indian-Dairyman.	58
38	Indian-Sugar.	58
39	Journal-of-Entomological-Research.	57
40	Indian-Coconut-Journal-Cochin.	56
41	Journal-of-Research,-Birsa-Agricultural-University	56
42	Crop-Improvement.	55
43	Indian-Journal-of-Animal-Production-and-Management.	54
44	Indian-Journal-of-Agricultural-Research.	52
45	Orissa-Journal-of-Horticulture.	52
46	Plant-Disease-Research.	52
47	Indian-Journal-of-Nematology.	51
48	Indian-Journal-of-Soil-Conservation.	51
49	Journal-of-Interacademia.	51
50	Legume-Research.	51
51	Oryza.	50
52	Cooperative-Sugar.	49
53	Journal-of-Hill-Research.	49
54	Journal-of-Research-ANGRAU.	49
55	Annals-of-Agri-Bio-Research.	48
56	Forage-Research.	48
57	Seed-Research.	48
58	Annals-of-Biology-Ludhiana.	47
59	Annals-of-Plant-Physiology.	47
60	Indian-Journal-of-Comparative-Microbiology	47
61	Journal-of-Rural-Development-Hyderabad.	47
62	Entomon.	46
63	Indian-Journal-of-Chemistry,-Section B	46
64	Journal-of-Oilseeds-Research.	46
65	Journal-of-Mycology-and-Plant-Pathology.	45
66	Pesticide-Research-Journal.	44
67	Shashpa.	44
68	Journal-of-Phytological-Research.	43
69	Journal-of-Veterinary-Parasitology.	43
70	Indian-Journal-of-Veterinary-Pathology.	42

No.	Journal title	No. of Indian papers
71	Indian-Journal-of-Sericulture.	41
72	Bhartiya-Krishi-Anusandhan-Patrika.	40
73	Cheiron.	40
74	Journal-of-Nuclear-Agriculture-and-Biology.	40
75	Mysore-Journal-of-Agricultural-Sciences.	40
76	Indian-Journal-of-Nutrition-and-DieteticsI.	38
77	Journal-of-Dairying,-Foods-and-Home-Sciences.	38
78	International-Journal-of-Animal-Sciences.	36
79	Journal-of-Ecobiology.	36
80	Journal-of-Environmental-Biology.	36
81	Range-Management-and-Agroforestry.	36
82	Pest-Management-in-Horticultural-Ecosystems.	33
83	South-Indian-Horticulture.	33
84	Indian-Journal-of-Pharmaceutical-Sciences.	32
85	Journal-of-the-Indian-Potato-Association.	32
86	Agricultural-Reviews-Karnal.	31
87	Horticultural-Journal.	31
88	Indian-Journal-of-Microbiology.	31
89	Indian-Journal-of-Virology.	31
90	Advances-in-Agricultural-Research-in-India.	30
91	Annals-of-Forestry.	30
92	Indian-Journal-of-Animal-Research.	30
93	Indian-Journal-of-Ecology.	30
94	Journal-of-the-Andaman-Science-Association.	30
95	Phytomorphology.	30
96	Proceedings-of-the-National-Academy-of-Sciences-India.- Section B	30
97	Journal-of-Communicable-Diseases.	29
98	Journal-of-Ecotoxicology-and-Environmental-Monitoring.	29
99	Van-Vigyan.	29
100	Journal-of-Biological-Control.	28
101	Indian-Cooperative-Review.	27
102	Indian-Journal-of-Environment-and-Toxicology.	27
103	Journal-of-Spices-and-Aromatic-Crops.	27
104	Indian-Journal-of-Medical-Research.	26
105	Journal-of-Plantation-Crops.	26
106	Indian-Journal-of-Animal-Health.	25

No.	Journal title	No. of Indian papers
107	International-Chickpea-and-Pigeonpea-Newsletter.	25
108	World-Weeds.	25
109	Indian-Journal-of-Dairy-and-Biosciences.	24
110	Indian-Pediatrics.	25
111	International-Journal-of-Tropical-Agriculture.	24
112	Journal-of-Bombay-Veterinary-College.	24
113	Journal-of-Mycopathological-Research.	24
114	Agricultural-Marketing.	23
115	Annals-of-Arid-Zone.	23
116	Haryana-Agricultural-University-Journal-of-Research.	23
117	Indian-Journal-of-Marine-Sciences.	23
118	Gujarat-Agricultural-University-Research-Journal.	22
119	Tobacco-Research.	22
120	Indian-Journal-of-Small-Ruminants.	21
121	Indian-Journal-of-Veterinary-Research.	21
122	Journal-of-Plant-Biochemistry-and-Biotechnology.	21
123	Indian-Textile-Journal.	20
124	Uttar-Pradesh-Journal-of-Zoology.	20
125	Centaur-Mylapore.	19
126	Indian-Journal-of-Entomology.	19
127	Journal-of-Biosciences.	19
128	Journal-of-Ornamental-Horticulture-New-Series.	19
129	Journal-of-Research,-Punjab-Agricultural-University	19
130	National-Academy-Science-Letters.	19
131	Planters'-Chronicle.	19
132	Tropical-Ecology.	19
133	International-Arachis-Newsletter.	18
134	Indian-Journal-of-Veterinary-Anatomy.	17
135	Journal-of-Advanced-Zoology.	17
136	Current-Agriculture.	16
137	Indian-Forester.	16
138	Indian-Agriculturist.	16
139	Indian-Coffee.	16
140	Journal-of-Parasitic-Diseases.	16
141	Journal-of-Parasitology-and-Applied-Animal-Biology.	16
142	Pest-Management-and-Economic-Zoology.	16

No.	Journal title	No. of Indian papers
143	Vaniki-Sandesh.	16
144	Advances-in-Forestry-Research-in-India.	15
145	Indian-Journal-of-Malariology.	15
146	International-Journal-of-Nematology.	15
147	Journal-of-Aquaculture-in-the-Tropics.	15
148	Journal-of-Living-World.	15
149	Medical-Journal-Armed-Forces-India.	15
150	Indian-Journal-of-Agricultural-Economics.	14
151	Indian-Journal-of-Toxicology.	14
152	Journal-of-Scientific-and-Industrial-Research.	14
153	Cashew.	13
154	Bihar-Journal-of-Agricultural-Marketing.	12
155	Journal-of-the-Orchid-Society-of-India.	12
156	Pashudhan.	12
157	Journal-of-the-Timber-Development-Association-of-India.	11
158	Plant-Physiology-and-Biochemistry-New-Delhi.	11
159	Proceedings-of-the-Indian-National-Science-Academy. - Part B	11
160	Recent-Horticulture.	11
161	Economic-Affairs-Calcutta.	10
162	Journal-of-Camel-Practice-and-Research.	10
163	Journal-of-the-Oil-Technologists'-Association-of-India.	10
164	Journal-of-the-Indian-Medical-Association.	9
165	MFP-News.	9
166	National-Bank-News-Review-Bombay.	9
167	Punjab-Vegetable-Grower.	9
168	Clay-Research.	8
169	Indian-Journal-of-Gastroenterology.	8
170	Fertiliser-Marketing-News.	7
171	Journal-of-Applied-Animal-Research.	7
172	Mycorrhiza-News.	7
173	National-Medical-Journal-of-India.	7
174	State-Bank-of-India-Monthly-Review.	7
175	Indian-Journal-of-Biochemistry-and-Biophysics.	6
176	Indian-Journal-of-Hill-Farming.	6
177	Indian-Journal-of-Natural-Products.	5

No.	Journal title	No. of Indian papers
178	Indian-Journal-of-Regional-Science.	5
179	South-Asian-Anthropologist.	5
180	Wood-News.	5
181	Applied-Botany-Abstracts.	4
182	News-Letter -National-Horticultural-Research-and-Development-Foundation.	4
183	RIS-Biotechnology-and-Development-Review.	4
184	Indian-Journal-of-Pediatrics.	3
185	Pacific-and-Asian-Journal-of-Energy.	3
186	Sarvekshana.	3
187	Allelopathy-Journal.	2
188	Artha-Vijnana.	2
189	Artha-vikas.	2
190	Bulletin -Postgraduate-Institute-of-Medical-Education-and-Research	2
191	Indian-Journal-of-Leprosy.	2
192	Proceedings-of-the-Indian-Academy-of-Sciences, -Earth-and-Planetary-Sciences.	2
193	Contributions-to-Indian-Sociology.	1
194	Ecologist.	1
195	Evergreen-Trichur.	1
196	ICID-Journal.	1
197	ICIMOD, -Newsletter-of-the-International-Centre-for-Integrated-Mountain-Development.	1
198	Indian-Cashew-Journal.	1
199	Indian-Economic-Review.	1
200	Indian-Journal-of-Gender-Studies.	1
201	Indian-Journal-of-Tuberculosis.	1
202	IPGRI-Newsletter-for-Asia	1
203	Journal-of-Genetics.	1
204	Journal-of-the-Indian-Institute-of-Science.	1
205	Bulletin-of-the -UPASI-Tea-Research-Department	1
206	Tourism-Recreation-Research.	1
207	Two-and-a-Bud.	1
208	Yojana.	1
Total		8157

**Table 6. Distribution of Indian papers by
impact factor range of journals
(based on impact factor data from *JCR* 1997)**

Impact factor - <i>JCR</i> 1997	No. of journals	No. of papers
0.000	441	6061
0.0 - 0.5	105	1365
0.5 - 1.0	131	560
1.0 - 1.5	85	243
1.5 - 2.0	44	83
2.0 - 2.5	20	42
2.5 - 3.0	10	25
3.0 - 3.5	3	5
3.5 - 4.0	5	11
4.0 - 4.5	1	5
4.5 - 5.0	3	4
5.0 - 5.5	3	4
5.5 - 6.0	1	1
6.0 - 7.0	2	3
Total	854	10412

**Table 7: Distribution of Indian research papers covered by
CAB Abstracts 1990-94 & 1998 by subfield**

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
1	AA000	Agriculture (General)	1	58
2	AA500	Research	18	51
3	BB500	History and Biography	1	8
4	BB700	Palaeontology and Archaeology	1	7
5	CC000	Professions, Education, Information and Training (General)	7	19
6	CC100	Educational and Training Aids	2	19
7	CC200	Extension and Advisory Work	29	24
8	CC300	Information and Library Sciences	8	12
9	CC310	Documentation	2	2
10	CC400	Collections	1	2
11	CC720	Veterinary Profession	0	1
12	DD500	Laws and Regulations	6	4
13	EE100	Economics (General)	7	40
14	EE110	Agricultural Economics	8	23
15	EE120	Policy and Planning (General)	89	147
16	EE130	Supply, Demand and Prices	29	221
17	EE140	Input Supply Industries	5	47
18	EE145	Farm Input Utilization	17	56
19	EE150	Environmental Economics	25	46
20	EE160	Land Use and Valuation	15	43
21	EE165	Agricultural Structure and Tenure System	9	35
22	EE170	Water Resources, Irrigation and Drainage Economics	31	80
23	EE200	Farming Systems and Management	70	311
24	EE300	Cooperatives	13	39
25	EE350	Industry and Enterprises	10	26
26	EE450	Development Aid, Agencies and Projects	22	18
27	EE500	Food Policy, Food Security and Food Aid	10	16
28	EE520	Food Industry	5	146
29	EE600	International Trade	7	26
30	EE700	Distribution and Marketing of Products	27	153
31	EE720	Consumer Economics	3	6
32	EE730	Transport	4	0
33	EE800	Investment, Finance and Credit	36	110
34	EE900	Labour and Employment	25	91

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
35	EE950	Income and Poverty	25	38
36	FF000	Plants of Economic Importance (General)	107	547
37	FF003	Plant Production	8	0
38	FF005	Field Crops	16	0
39	FF007	Forage and Fodder Crops	2	0
40	FF020	Plant Breeding and Genetics	1135	5675
41	FF030	Plant Morphology and Structure	94	263
42	FF040	Plant Composition	225	987
43	FF060	Plant Physiology and Biochemistry	312	1335
44	FF061	Plant Nutrition	91	418
45	FF062	Plant-Water Relations	52	234
46	FF100	Plant Production	786	5231
47	FF150	Plant Cropping Systems	141	279
48	FF160	Plant Propagation	98	386
49	FF170	in vitro Culture of Plant Material	118	190
50	FF400	Mycorrhizas and Fungi of Economic Importance; Symbiotic Nitrogen Fixation	125	445
51	FF500	Weeds and Noxious Plants	163	469
52	FF600	Pests Pathogens and Biogenic Diseases of Plants	1301	8898
53	FF610	Virtual Bacterial and Fungal Diseases of Plants	4	0
54	FF620	Plant Pests	11	0
55	FF700	Plant Disorders and Injuries (Not caused directly by Organisms)	24	37
56	FF800	Plant Toxicology	5	3
57	FF900	Environmental Tolerance of Plants	37	166
58	HH000	Pathogen, Pest and Parasite Management (General)	12	229
59	HH100	Biological Control	67	347
60	HH200	Environmental Pest Management	5	14
61	HH300	Integrated Pest Management	15	49
62	HH400	Control by Chemicals and Drugs	594	1465
63	HH405	Pesticides and Drugs Control	2	0
64	HH410	Pesticide and Drug Resistance	11	50
65	HH430	Pesticide and Drug Residues and Ecotoxicology	1	0
66	HH500	Repellents and Attractants	6	19
67	HH600	Host Resistance and Immunity	40	227

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
68	HH700	Other Control Measures	4	95
69	JJ000	Soil Science	0	11
70	JJ100	Soil Biology	86	195
71	JJ200	Soil Chemistry and Mineralogy	143	289
72	JJ300	Soil Physics	39	198
73	JJ400	Soil Morphology, Formation and Classification	48	486
74	JJ500	Soil Surveys and Land Evaluation	10	103
75	JJ600	Soil Fertility	36	122
76	JJ700	Fertilizers and other Amendments	375	1086
77	JJ800	Soil Water Management	149	160
78	JJ900	Soil Cultivation	24	39
79	KK100	Forestry (General)	398	1102
80	KK110	Silviculture	152	464
81	KK120	Forest Mensuration and Management	31	106
82	KK130	Forest Fire Management	2	4
83	KK140	Protection Forestry	7	53
84	KK150	Other Land Use	5	179
85	KK160	Arboriculture	1	5
86	KK500	Forest Products (General)	3	16
87	KK510	Wood Properties and Utilization	38	169
88	KK515	Wood Processing	4	39
89	KK520	Forest Products (Wood-based Materials)	2	31
90	KK530	Forest Products (Pulping and Chemical Utilization of Wood)	0	29
91	KK540	Forest Products (Miscellaneous, including Minor Forest Products)	47	42
92	KK600	Agroforestry	73	84
93	LL000	Animal Science	0	4
94	LL010	Beekeeping and Bees	13	196
95	LL020	Sericulture	63	203
96	LL030	Culture of other Invertebrates (Not Aquaculture)	3	6
97	LL040	Laboratory Animal Science	7	76
98	LL050	Game Farming, Game Management and Game	0	8
99	LL060	Draught Animals	2	20
100	LL070	Pets and Companion Animals	19	10
101	LL080	Zoo Animals	2	7
102	LL100	Animal Husbandry (General)	17	336

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
103	LL110	Animal Husbandry (Dairy)	95	291
104	LL120	Animal Husbandry (Meat)	18	17
105	LL130	Animal Husbandry (Eggs)	9	42
106	LL140	Animal Husbandry (Wool and Other Fibres)	4	29
107	LL148	Fur bearing Animals	1	0
108	LL150	Animal Husbandry (Other Products)	0	1
109	LL180	Animal Husbandry and Production	2	0
110	LL200	Animal Breeding and Genetics	49	664
111	LL210	Animal Reproduction and Development	236	578
112	LL220	Animal Genetics	58	396
113	LL240	Animal Genetics and Breeding	1	0
114	LL250	Animal Reproduction and Embryology	8	0
115	LL300	Animal Behaviour	17	50
116	LL500	Animal Nutrition (General)	57	49
117	LL510	Animal Nutrition (Physiology)	80	261
118	LL520	Animal Nutrition (Production Responses)	79	557
119	LL600	Animal Physiology and Biochemistry (Excluding Nutrition)	136	297
120	LL650	Animal Immunology	1	0
121	LL700	in vitro Culture of Animal Tissue	3	1
122	LL800	Animal Health and Hygiene (General)	8	84
123	LL810	Animal Welfare	2	0
124	LL820	Parasites, Vectors, Pathogens and Biogenic Diseases of Animals	485	2222
125	LL821	Prion Viral Bacterial and Fungal Pathogens of	1	0
126	LL822	Protozoan Helminth Mollusc and Arthropod	1	0
127	LL860	Animal Disorders (Not caused by Organisms)	133	365
128	LL870	Animal Injuries	9	2
129	LL880	Animal Treatment and Diagnosis (Non Drug)	83	136
130	LL900	Animal Toxicology, Poisoning and Pharmacology	105	746
131	LL950	Toxicology and Poisoning of Animals	1	0
132	MM000	Aquatic Sciences	0	7
133	MM110	Fisheries	15	5
134	MM120	Aquaculture (Animals)	70	156
135	MM130	Aquaculture (Plants)	0	1
136	MM300	Aquatic Biology and Ecology	29	19
137	NN000	Engineering and Safety	1	27

No.	Subfield code	Subfield	No. of papers	
			1996	1990-94
138	NN050	Computer and Electronic Systems	2	1
139	NN100	Ergonomics and Safety	2	13
140	NN200	Farm Vehicles as Power Sources	0	15
141	NN300	Farm and Horticultural Structures	1	20
142	NN310	Environmental Control in Structures	2	3
143	NN400	Agricultural and Forestry Equipment (General)	5	46
144	NN410	Aquacultural equipment	1	9
145	NN420	Fertilizer, Application Equipment		6
146	NN430	Pest and Weed Control Equipment	7	24
147	NN440	Irrigation and Drainage Equipment	4	41
148	NN450	Soil Cultivation and Handling Equipment	4	33
149	NN451	Crop Sowing and Planting Equipment	7	16
150	NN452	Crop Tending Equipment	0	2
151	NN453	Crop Harvesting Equipment	11	33
152	NN460	Cleaning, Grading, Transport and Handling	7	26
153	NN461	Food and Feed Packaging Technology and Equipment	0	30
154	NN470	Drying Equipment	3	48
155	NN480	Animal Feeding and Watering Equipment	0	2
156	NN490	Milking and Dairy Equipment	0	31
157	NN500	Storage equipment	1	2
158	NN600	Processing Equipment and Technology	15	53
159	NN700	Waste Handling and Treatment Equipment	1	18
160	NN900	Other Equipment	2	11
161	PP000	Natural Resources (General)	2	8
162	PP100	Energy	17	87
163	PP200	Water Resources (General)	2	47
164	PP210	Freshwater and Brackish Water	49	48
165	PP220	Salt Water	2	0
166	PP300	Land Resources	11	36
167	PP320	Wetlands	3	8
168	PP350	Grasslands and Rangelands	23	30
169	PP400	Erosion; Soil and Water Conservation	49	160
170	PP500	Meteorology and Climate	45	91
171	PP600	Pollution and Degradation	75	271

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
172	PP700	Biological Resources (General)	16	70
173	PP710	Biological Resources (Animal)	28	144
174	PP720	Biological Resources (Plant)	49	110
175	PP800	Natural Phenomena	1	2
176	QQ000	Food Science and Food Products (Human)	3	12
177	QQ010	Milk and Dairy Produce	176	785
178	QQ020	Sugar and Sugar Refining	40	423
179	QQ030	Meat Produce	6	15
180	QQ040	Poultry Produce (not Meat)	1	2
181	QQ050	Crop Produce	143	104
182	QQ060	Aquatic Produce	9	3
183	QQ070	Other Produce	3	19
184	QQ100	Food Processing (General)	10	25
185	QQ110	Food Storage and Preservation	3	38
186	QQ111	Biodeterioration, Storage Problems and Pests of Food	8	121
187	QQ120	Microbiology of Food Processing	10	5
188	QQ130	Food Additives	1	2
189	QQ200	Food Contamination, Residues and Toxicology	12	127
190	QQ500	Food Composition and Quality	27	240
191	RR000	Forage and Feed Products (Non-human)	18	14
192	RR100	Forage and Feed Processing (General)	18	48
193	RR110	Feed Storage and Preservation	0	12
194	RR111	Biodeterioration, Storage Problems and Pests of Feed	1	2
195	RR120	Microbiology of Feed Processing	1	23
196	RR130	Feed Additives	9	8
197	RR200	Feed Contamination, Residues and Toxicology	4	31
198	RR300	Feed Composition and Quality	24	236
199	SS100	Agricultural Products (Animal)	2	10
200	SS110	Biodeterioration, Storage Problems and Pests of Animal Products	0	11
201	SS120	Residues and Contamination of Animal Products	0	1
202	SS200	Agricultural Products (Plant)	42	111
203	SS210	Biodeterioration, Storage Problems and Pests of Plant Products	20	126
204	SS230	Composition and Quality of Plant Products	20	42
205	SS300	Biodeterioration (General)	0	136

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
206	SS310	Biodeterioration (Non-biological Products)	0	15
207	SS320	Biodeterioration Organisms	2	18
208	TT100	Medical and Veterinary Helminthology Records (Discontinued)	0	29
209	TT200	Medical and Veterinary Protozoology Records	0	27
210	TT300	Medical and Veterinary Entomology Records	0	342
211	UU000	Sociology (General)	1	4
212	UU100	Settlement	10	11
213	UU150	Urban Regeneration	1	0
214	UU200	Demography	9	19
215	UU250	Human Fertility	3	10
216	UU300	Public Services	10	26
217	UU350	Health Services	6	11
218	UU360	Communication	7	4
219	UU460	Community Development	16	21
220	UU470	Participation and Self Help	10	5
221	UU480	Social Structure	2	33
222	UU490	Social Psychology and Culture	5	20
223	UU500	Women	50	35
224	UU600	Leisure (General)	1	4
225	UU620	Recreation and Sport	1	4
226	UU630	Arts Entertainment and Cultural Heritage	1	0
227	UU640	Pastimes and Social Life		1
228	UU670	Gardening, Landscaping and Landscapes	1	3
229	UU700	Tourism and Travel	12	9
230	VV000	Human Health and Hygiene (General)	2	54
231	VV050	Human Physiology and Biochemistry	0	5
232	VV060	Human Reproduction and Development	3	4
233	VV100	Human Nutrition (General)	31	41
234	VV110	Diet Studies and Health	14	102
235	VV120	Physiology of Human Nutrition	16	182
236	VV130	Diet and Diet-related Diseases	61	202
237	VV140	Human Nutrition (Animal Models)	53	160
238	VV200	Parasites, Vectors, Pathogens and Biogenic Diseases of Humans	295	1302
239	VV300	Public Health and Nuisance Pests	1	87
240	VV600	Human Disorders (Not caused by Organisms)	5	5

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
241	VV700	Human Treatment and Diagnosis (Non Drug)	2	3
242	VV800	Human Toxicology, Poisoning and Pharmacology	17	43
243	VV900	Health and Safety at Work	0	1
244	WW000	Biotechnology	54	231
245	XX000	Wastes (General)	1	94
246	XX100	Animal Wastes	16	9
247	XX200	Plant Wastes	11	129
248	XX300	Human Wastes and Refuse	2	16
249	XX400	Industrial Wastes and Effluents	20	101
250	XX500	Radioactive Wastes	1	0
251	XX600	Waste Conversion and Utilization	6	43
252	XX700	Biodegradation Organisms	1	53
253	ZZ000	Auxiliary Disciplines	0	116
254	ZZ100	Mathematics and Statistics	33	15
255	ZZ200	Materials Science	3	24
256	ZZ310	Anatomy, Morphology and Structure (General)	12	75
257	ZZ320	General Biology	2	1
258	ZZ330	General Ecology	8	4
259	ZZ331	Plant Ecology	5	21
260	ZZ332	Animal Ecology	2	5
261	ZZ340	General Physiology	1	3
262	ZZ350	General Biochemistry	0	1
263	ZZ360	General Molecular Biology	1	4
264	ZZ370	Genetics (General and Theoretical)	1	25
265	ZZ380	Taxonomy and Evolution	74	336
266	ZZ390	General Microbiology	12	93
267	ZZ400	Environmental Sciences (General)	0	6
268	ZZ500	Physical Sciences	2	10
269	ZZ600	Chemistry	10	13
270	ZZ800	Earth Sciences (General)	6	33
271	ZZ900	Techniques and Methodology	67	267
		Unknown	22	0
		Total	11855	51761

**Table 7A: Distribution of Indian research papers covered by
CAB Abstracts 1990-94 & 1998 classified by subfield**

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
1	FF600	Pests Pathogens and Biogenic Diseases of Plants	1301	8898
2	FF020	Plant Breeding and Genetics	1135	5675
3	FF100	Plant Production	786	5231
4	HH400	Control by Chemicals and Drugs	594	1465
5	LL820	Parasites, Vectors, Pathogens and Biogenic Diseases of Animals	485	2222
6	KK100	Forestry (General)	398	1102
7	JJ700	Fertilizers and other Amendments	375	1086
8	FF060	Plant Physiology and Biochemistry	312	1335
9	VV200	Parasites, Vectors, Pathogens and Biogenic Diseases of Humans	295	1302
10	LL210	Animal Reproduction and Development	236	578
11	FF040	Plant Composition	225	987
12	QQ010	Milk and Dairy Produce	176	785
13	FF500	Weeds and Noxious Plants	163	469
14	KK110	Silviculture	152	464
15	JJ800	Soil Water Management	149	160
16	JJ200	Soil Chemistry and Mineralogy	143	289
17	QQ050	Crop Produce	143	104
18	FF150	Plant Cropping Systems	141	279
19	LL600	Animal Physiology and Biochemistry (Excluding Nutrition)	136	297
20	LL860	Animal Disorders (Not caused by Organisms)	133	365
21	FF400	Mycorrhizas and Fungi of Economic Importance; Symbiotic Nitrogen Fixation	125	445
22	FF170	In vitro Culture of Plant Material	118	190
23	FF000	Plants of Economic Importance (General)	107	547
24	LL900	Animal Toxicology, Poisoning and Pharmacology	105	746
25	FF160	Plant Propagation	98	386
26	LL110	Animal Husbandry (Dairy)	95	291
27	FF030	Plant Morphology and Structure	94	263
28	FF061	Plant Nutrition	91	418

No.	Subfield code	Subfield	No. of papers	
			1998	1990-91
29	EE120	Policy and Planning (General)	89	147
30	JJ100	Soil Biology	86	195
31	LL880	Animal Treatment and Diagnosis (Non Drug)	83	136
32	LL510	Animal Nutrition (Physiology)	80	261
33	LL520	Animal Nutrition (Production Responses)	79	557
34	PP600	Pollution and Degradation	75	271
35	ZZ380	Taxonomy and Evolution	74	336
36	KK600	Agroforestry	73	84
37	EE200	Farming Systems and Management	70	311
38	MM120	Aquaculture (Animals)	70	156
39	HH100	Biological Control	67	347
40	ZZ900	Techniques and Methodology	67	267
41	LL020	Sericulture	63	203
42	VV130	Diet and Diet-related Diseases	61	202
43	LL220	Animal Genetics	58	396
44	LL500	Animal Nutrition (General)	57	49
45	WW000	Biotechnology	54	231
46	VV140	Human Nutrition (Animal Models)	53	160
47	FF062	Plant-Water Relations	52	234
48	UU500	Women	50	35
49	LL200	Animal Breeding and Genetics	49	664
50	PP400	Erosion; Soil and Water Conservation	49	160
51	PP720	Biological Resources (Plant)	49	110
52	PP210	Freshwater and Brackish Water	49	48
53	JJ400	Soil Morphology, Formation and Classification	48	486
54	KK540	Forest Products (Miscellaneous, including Minor Forest Products)	47	42
55	PP500	Meteorology and Climate	45	91
56	SS200	Agricultural Products (Plant)	42	111
57	QQ020	Sugar and Sugar Refining	40	423
58	HH600	Host Resistance and Immunity	40	227
59	JJ300	Soil Physics	39	198
60	KK510	Wood Properties and Utilization	38	169
61	FF900	Environmental Tolerance of Plants	37	166
62	JJ600	Soil Fertility	36	122
63	EE800	Investment, Finance and Credit	36	110
64	ZZ100	Mathematics and Statistics	33	15
65	KK120	Forest Mensuration and Management	31	106

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
66	EE170	Water Resources, Irrigation and Drainage	31	80
67	VV100	Human Nutrition (General)	31	41
68	EE130	Supply, Demand and Prices	29	221
69	CC200	Extension and Advisory Work	29	24
70	MM300	Aquatic Biology and Ecology	29	19
71	PP710	Biological Resources (Animal)	28	144
72	QQ500	Food Composition and Quality	27	240
73	EE700	Distribution and Marketing of Products	27	153
74	EE900	Labour and Employment	25	91
75	EE150	Environmental Economics	25	46
76	EE950	Income and Poverty	25	38
77	RR300	Feed Composition and Quality	24	236
78	JJ900	Soil Cultivation	24	39
79	FF700	Plant Disorders and Injuries (Not caused directly by Organisms)	24	37
80	PP350	Grasslands and Rangelands	23	30
81	EE450	Development Aid, Agencies and Projects	22	18
82	SS210	Biodeterioration, Storage Problems and Pests of Plant Products	20	126
83	XX400	Industrial Wastes and Effluents	20	101
84	SS230	Composition and Quality of Plant Products	20	42
85	LL070	Pets and Companion Animals	19	10
86	AA500	Research	18	51
87	RR100	Forage and Feed Processing (General)	18	48
88	LL120	Animal Husbandry (Meat)	18	17
89	RR000	Forage and Feed Products (Non-human)	18	14
90	LL100	Animal Husbandry (General)	17	336
91	PP100	Energy	17	87
92	EE145	Farm Input Utilization	17	56
93	LL300	Animal Behaviour	17	50
94	VV800	Human Toxicology, Poisoning and Pharmacology	17	43
95	VV120	Physiology of Human Nutrition	16	182
96	PP700	Biological Resources (General)	16	70
97	UU460	Community Development	16	21
98	XX100	Animal Wastes	16	9
99	FF005	Field Crops	16	0
100	NN600	Processing Equipment and Technology	15	53
101	HH300	Integrated Pest Management	15	49

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
102	EE160	Land Use and Valuation	15	43
103	MM110	Fisheries	15	5
104	VV110	Diet Studies and Health	14	102
105	LL010	Beekeeping and Bees	13	196
106	EE300	Cooperatives	13	39
107	HH000	Pathogen, Pest and Parasite Management	12	229
108	QQ200	Food Contamination, Residues and Toxicology	12	127
109	ZZ390	General Microbiology	12	93
110	ZZ310	Anatomy, Morphology and Structure (General)	12	75
111	UU700	Tourism and Travel	12	9
112	XX200	Plant Wastes	11	129
113	HH410	Pesticide and Drug Resistance	11	50
114	PP300	Land Resources	11	36
115	NN453	Crop Harvesting Equipment	11	33
116	FF620	Plant Pests	11	0
117	JJ500	Soil Surveys and Land Evaluation	10	103
118	EE350	Industry and Enterprises	10	26
119	UU300	Public Services	10	26
120	QQ100	Food Processing (General)	10	25
121	EE500	Food Policy, Food Security and Food Aid	10	16
122	ZZ600	Chemistry	10	13
123	UU100	Settlement	10	11
124	QQ120	Microbiology of Food Processing	10	5
125	UU470	Participation and Self Help	10	5
126	LL130	Animal Husbandry (Eggs)	9	42
127	EE165	Agricultural Structure and Tenure System	9	35
128	UU200	Demography	9	19
129	RR130	Feed Additives	9	8
130	QQ060	Aquatic Produce	9	3
131	LL870	Animal Injuries	9	2
132	QQ111	Biodeterioration, Storage Problems and Pests of Food	8	121
133	LL800	Animal Health and Hygiene (General)	8	84
134	EE110	Agricultural Economics	8	23
135	CC300	Information and Library Sciences	8	12
136	ZZ330	General Ecology	8	4
137	FF003	Plant Production	8	0
138	LL250	Animal Reproduction and Embryology	8	0

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
139	LL040	Laboratory Animal Science	7	76
140	KK140	Protection Forestry	7	53
141	EE100	Economics (General)	7	40
142	EE600	International Trade	7	26
143	NN460	Cleaning, Grading, Transport and Handling	7	26
144	NN430	Pest and Weed Control Equipment	7	24
145	CC000	Professions, Education, Information and Training (General)	7	19
146	NN451	Crop Sowing and Planting Equipment	7	16
147	UU360	Communication	7	4
148	XX600	Waste Conversion and Utilization	6	43
149	ZZ800	Earth Sciences (General)	6	33
150	HH500	Repellents and Attractants	6	19
151	QQ030	Meat Produce	6	15
152	UU350	Health Services	6	11
153	DD500	Laws and Regulations	6	4
154	KK150	Other Land Use	5	179
155	EE520	Food Industry	5	146
156	EE140	Input Supply Industries	5	47
157	NN400	Agricultural and Forestry Equipment (General)	5	46
158	ZZ331	Plant Ecology	5	21
159	UU490	Social Psychology and Culture	5	20
160	HH200	Environmental Pest Management	5	14
161	VV600	Human Disorders (Not caused by Organisms)	5	5
162	FF800	Plant Toxicology	5	3
163	HH700	Other Control Measures	4	95
164	NN440	Irrigation and Drainage Equipment	4	41
165	KK515	Wood Processing	4	39
166	NN450	Soil Cultivation and Handling Equipment	4	33
167	RR200	Feed Contamination, Residues and Toxicology	4	31
168	LL140	Animal Husbandry (Wool and Other Fibres)	4	29
169	EE730	Transport	4	0
170	FF610	Virtual Bacterial and Fungal Diseases of Plants	4	0
171	NN470	Drying Equipment	3	48
172	QQ110	Food Storage and Preservation	3	38
173	ZZ200	Materials Science	3	24
174	QQ070	Other Produce	3	19

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
175	KK500	Forest Products (General)	3	16
176	QQ000	Food Science and Food Products (Human)	3	12
177	UU250	Human Fertility	3	10
178	PP320	Wetlands	3	8
179	EE720	Consumer Economics	3	6
180	LL030	Culture of other Invertebrates (Not Aquaculture)	3	6
181	VV060	Human Reproduction and Development	3	4
182	LL700	in vitro Culture of Animal Tissue	3	1
183	VV000	Human Health and Hygiene (General)	2	54
184	PP200	Water Resources (General)	2	47
185	UU480	Social Structure	2	33
186	KK520	Forest Products (Wood-based Materials)	2	31
187	LL060	Draught Animals	2	20
188	CC100	Educational and Training Aids	2	19
189	SS320	Biodeterioration Organisms	2	18
190	XX300	Human Wastes and Refuse	2	16
191	NN100	Ergonomics and Safety	2	13
192	NN900	Other Equipment	2	11
193	SS100	Agricultural Products (Animal)	2	10
194	ZZ500	Physical Sciences	2	10
195	PP000	Natural Resources (General)	2	8
196	LL080	Zoo Animals	2	7
197	ZZ332	Animal Ecology	2	5
198	KK130	Forest Fire Management	2	4
199	NN310	Environmental Control in Structures	2	3
200	VV700	Human Treatment and Diagnosis (Non Drug)	2	3
201	CC310	Documentation	2	2
202	NN050	Computer and Electronic Systems	2	1
203	ZZ320	General Biology	2	1
204	FF007	Forage and Fodder Crops	2	0
205	HH405	Pesticides and Drugs Control	2	0
206	LL180	Animal Husbandry and Production	2	0
207	LL810	Animal Welfare	2	0
208	PP220	Salt Water	2	0
209	XX000	Wastes (General)	1	94
210	VV300	Public Health and Nuisance Pests	1	87
211	AA000	Agriculture (General)	1	58

No.	Subfield code	Subfield	No. of papers	
			1998	1990-94
212	XX700	Biodegradation Organisms	1	53
213	NN000	Engineering and Safety	1	27
214	ZZ370	Genetics (General and Theoretical)	1	25
215	RR120	Microbiology of Feed Processing	1	23
216	NN300	Farm and Horticultural Structures	1	20
217	NN700	Waste Handling and Treatment Equipment	1	18
218	NN410	Aquacultural equipment	1	9
219	BB500	History and Biography	1	8
220	BB700	Palaeontology and Archaeology	1	7
221	KK160	Arboriculture	1	5
222	UU000	Sociology (General)	1	4
223	UU600	Leisure (General)	1	4
224	UU620	Recreation and Sport	1	4
225	ZZ360	General Molecular Biology	1	4
226	UU670	Gardening, Landscaping and Landscapes	1	3
227	ZZ340	General Physiology	1	3
228	CC400	Collections	1	2
229	NN500	Storage equipment	1	2
230	PP800	Natural Phenomena	1	2
231	QQ040	Poultry Produce (not Meat)	1	2
232	QQ130	Food Additives	1	2
233	RR111	Biodeterioration, Storage Problems and Pests of Feed	1	2
234	HH430	Pesticide and Drug Residues and Ecotoxicology	1	0
235	LL148	Fur bearing Animals	1	0
236	LL240	Animal Genetics and Breeding	1	0
237	LL650	Animal Immunology	1	0
238	LL821	Prion Viral Bacterial and Fungal Pathogens of Animals	1	0
239	LL822	Protozoan Helminth Mollusc and Arthropod Parasites of Animals	1	0
240	LL950	Toxicology and Poisoning of Animals	1	0
241	UU150	Urban Regeneration	1	0
242	UU630	Arts Entertainment and Cultural Heritage	1	0
243	XX500	Radioactive Wastes	1	0
		Unknown	22	0
		Total	11855	51761

**Table 7B: Distribution of Indian research papers covered by
CAB Abstracts 1998 and 1990-94 by major area**

Area Code	Area	No. of papers	
		1998	1990-94
FF	Plants of Economic Importance (General)	4855	25563
LL	Animal Sciences	1808	7654
JJ	Soil Science	910	2689
KK	Forestry, Forest Products and Agroforestry	763	2323
HH	Pathogen, Pest and Parasite Management	757	2495
VV	Human Health and Hygiene (General)	500	2191
EE	Economics (General)	492	1718
QQ	Food Science and Food Products	452	1921
PP	Natural Resources (General)	372	1112
ZZ	Auxiliary Disciplines	239	1052
UU	Sociology (General)	146	220
MM	Aquatic Science	114	188
SS	Agricultural Products (General)	86	470
NN	Engineering and Safety	76	510
RR	Forage and Feed Products (Non-human)	75	374
XX	Wastes (General)	58	445
WW	Biotechnology	54	231
CC	Professions, Education, Information and Training (General)	49	79
AA	Agriculture (General)	19	109
DD	Administration of Agencies and Organizations	6	4
BB	History and Biography	2	15
TT	Medical and Veterinary Records	-	398
	Unknown	22	-
Total		11855	51761

Table 8: Indian institutions publishing papers as seen from *CAB Abstracts 1998*

No.	Institution	City/town	Number of papers
1	Chaudhary Charan Singh Haryana Agricultural University	Hisar	473
2	Punjab Agricultural University	Ludhiana	390
3	Indian Agricultural Research Institute	New Delhi	378
4	University of Agricultural Sciences	Bangalore	253
5	Tamil Nadu Agricultural University	Coimbatore	239
6	Assam Agricultural University	Jorhat	229
7	Indian Veterinary Research Institute	Izatnagar	221
8	University of Agricultural Sciences	Dharwad	213
9	G. B. Pant University of Agriculture and Technology	Pantnagar	212
10	Bidhan Chandra Krishi Viswavidyalaya	Mohanpur	153
11	National Dairy Research Institute	Karnal	152
12	Banaras Hindu University	Varanasi	150
13	Jawaharlal Nehru Krishi Vishwavidyalaya	Jabalpur	142
14	Dr. Panjabrao Deshmukh Krishi Vidyapeeth	Akola	136
15	Himachal Pradesh Krishi Vishwavidyalaya	Palampur	127
16	Gujarat Agricultural University	Anand	119
17	Orrisa University of Agriculture and Technology	Bhubaneswar	113
18	Indian Institute of Horticultural Research	Bangalore	104
19	Dr. Y. S. Pamar, University of Horticulture and Forestry	Solan	101
20	Rajendra Agricultural University	Pusa	100
21	Central Institute of Medicinal and Aromatic Plants	Lucknow	96
22	Mahatma Phule Krishi Vidyapeeth	Rahuri	92
23	Indira Gandhi Agricultural University	Raipur	90
24	International Crops Research Institute for the Semi-Srid Tropics	Patancheru	89
25	University of Delhi	New Delhi	84
26	Madras Veterinary College	Chennai	74
27	Aligarh Muslim University	Aligarh	67
28	National Botanical Research Institute	Lucknow	66
29	Birsa Agricultural University	Ranchi	63
30	Forest Research Institute	Dehra Dun	61
31	Marathwada Agricultural University	Parbhani	61
32	C. S. Azad University of Agriculture & Technology	Kanpur	57
33	Annamalai University	Annamalainagar	55
34	University of Calcutta	Calcutta	55
35	Rajasthan Agriculture University	Udaipur	52
36	N.D. University of Agriculture & Technology	Faizabad	50
37	Indian Grassland and Fodder Research Institute	Jhansi	50
38	S.V. Agricultural College	Tirupati	50
39	Indian Institute of Spices Research	Calicut	47
40	Indian Institute of Science	Bangalore	45
41	Regional Plant Resource Centre	Bhubaneswar	45

No.	Institution	City/town	Number of papers
42	Kerala Agricultural University	Vellanikara	45
43	<i>Tropical Forest Research Institute</i>	Jabalpur	44
44	Madurai Kamaraj University	Madurai	44
45	Central Rice Research Institute	Cuttack	43
46	College of Agriculture	Hyderabad	42
47	All India Institute of Medical Sciences	New Delhi	41
48	Central Soil and Water Conservation Research & Training Institute	Dehra Dun	39
49	University of Rajasthan	Jaipur	39
50	Central Arid Zone Research Institute	Jodhpur	39
51	Central Soil Salinity Research Institute	Karnal	38
52	Kerala Forest Research Institute,	Peechi	38
53	University of Madras	Chennai	38
54	Vaccine Research Centre	Chennai	36
55	Sugarcane Breeding Institute	Coimbatore	36
56	Bhabha Atomic Research Centre	Mumbai	36
57	National Bureau of Soil Survey and Land Use Planning	Nagpur	36
58	College of Veterinary Sciences	Tirupati	36
59	Central Drug Research Institute	Lucknow	35
60	Sher-e-Kashmir University of Agricultural Sciences and Technology	Srinagar	35
61	Institute of Wood Science and Technology	Bangalore	34
62	Bombay Veterinary College	Mumbai	34
63	Central Potato Research Institute	Shimla	34
64	Central Sheep & Wool Research Institute,	Avikanagar	33
65	Andhra Pradesh Agricultural University	Hyderabad	33
66	College of Agriculture	Nagpur	33
67	National Chemical Laboratory	Pune	33
68	Visva-Bharati University	Santiniketan	33
69	ICAR Complex for NEH Region	Barapani	32
70	Osmania University	Hyderabad	32
71	Central Food Technological Research Institute	Mysore	31
72	Tropical Botanic Garden and Research Institute	Trivandrum	31
73	Guru Nanak Dev University	Amritsar	29
74	Central Avian Research Institute	Izatnagar	29
75	Central Agricultural Research Institute	Portblair	29
76	Hamdard University	New Delhi	28
77	University of Gorakhpur	Gorakhpur	28
78	Directorate of Oilseeds Research	Hyderabad	28
79	National Institute of Nutrition	Hyderabad	28
80	Indian Institute of Technology	Kharagpur	28
81	Rubber Research Institute of India	Kottayam	27
82	Sri Venkateswara University	Tirupati	27
83	National Dairy Development Board	Anand	26
84	Konkan Krishi Vidyapeeth	Dapoli	26
85	Veterinary College and Research Institute	Namakkal	26

No.	Institution	City/town	Number of papers
86	UPASI Tea Research Institute	Valparai	26
87	Burdwan University	Burdwan	25
88	Arid Forest Research Institute	Jodhpur	25
89	Central Plantation Crops Research Institute	Kasaragod	25
90	Agricultural College and Research Institute	Madurai	25
91	University of Hyderabad	Hyderabad	25
92	Central Sericultural Research & Training Institute	Mysore	25
93	Bose Institute	Calcutta	23
94	College of Veterinary Science	Guwahati	23
95	Kalyani University	Kalyani	23
96	H.N.B. Garhwal University	Srinagar	23
97	University of Kerala	Trivandrum	23
98	Indian Institute Soil Science	Bhopal	22
99	Panjab University	Chandigarh	22
100	Bharathiar University	Coimbatore	22
101	Bharathidasan University	Tiruchirappalli	22
102	Karnataka State Sericulture Research & Development Institute	Bangalore	21
103	Central Institute of Freshwater Aquaculture	Bhubaneswar	21
104	Central Institute for Research on Buffaloes	Hisar	21
105	Agharkar Research Institute	Pune	21
106	Maharaja Sayajirao University of Baroda	Vadodara	21
107	University of Mysore	Mysore	21
108	Indian Institute of Chemical Biology	Calcutta	20
109	Manipur University	Canchipur	20
110	Loyla College	Chennai	20
111	Cochin University of Science & Technology	Cochin	20
112	J.N. Krishi Vishwa Vidyalaya	Jabalpur	20
113	Central Institute for Research on Goats	Mathura	20
114	Ranchi Veterinary College	Ranchi	20
115	Postgraduate Institute of Medical Education and Research	Chandigarh	19
116	College of Veterinary Science and Animal Husbandry	Jabalpur	19
117	Dr Harisingh Gour Vishwavidyalaya	Sagar	19
118	U.P. Council of Sugarcane Research	Shahjahanpur	19
119	Devi Ahilya University	Indore	18
120	University of Calicut	Kerala	18
121	Indian Institute of Sugarcane Research	Lucknow	18
122	Indian Veterinary Research Institute	Nainital	18
123	National Bureau of Plant Genetic Resources	New Delhi	18
124	Maharshi Dayanand University	Rohtak	18
125	Andhra University	Visakhapatnam	18
126	Orissa Veterinary College	Bhubaneswar	17
127	College of Veterinary Science & Animal Husbandry	Durg	17
128	Regional Research Laboratory	Jorhat	17
129	Punjabi University	Patiala	17
130	Vasantdada Sugar Institute	Pune	17

No.	Institution	City/town	Number of papers
131	North-Eastern Hill University	Shillong	17
132	Jadavpur University	Calcutta	16
133	Regional Research Laboratory	Jammu	16
134	Industrial Toxicology Research Centre	Lucknow	16
135	College of Veterinary Science and Animal Husbandry	Mhow	16
136	Jawaharlal Nehru University	New Delhi	16
137	Regional Research Laboratory (CSIR)	Trivandrum	16
138	Sri Krishnadevaraya University	Anantapur	15
139	Central Sericultural Research and Training Institute	Berhampore	15
140	J. N. K. V. V. College of Agriculture	Gwalior	15
141	Central Research Institute for Dryland Agriculture	Hyderabad	15
142	Project Directorate for Cropping Systems Research	Meerut	15
143	International Centre for Genetic Engineering and Biotechnology	New Delhi	15
144	Malaria Research Centre (ICMR)	New Delhi	15
145	College of Agriculture	Pune	15
146	IGKV Regional Agricultural Research Station	Raigarh	15
147	Indian Lac Research Institute	Ranchi	15
148	Nagpur Veterinary College	Nagpur	15
149	Veterinary College	Bidar	14
150	M.S. Swaminathan Research Foundation	Chennai	14
151	S.K.N. College of Agriculture	Jobner	14
152	Central Plantation Crops Research Institute	Kayangulam	14
153	Kurukshetra University	Kurukshetra	14
154	Central Tobacco Research Institute (Indian Council of Agricultural Research)	Rajahmundry	14
155	Avinashilingam Deemed University	Coimbatore	13
156	Veterinary College	Bangalore	13
157	Utkal University	Bhubaneswar	13
158	West Bengal University of Animal and Fishery Sciences	Calcutta	13
159	State Forest Research Institute	Jabalpur	13
160	Indian Veterinary Research Institute	Mukteswar	13
161	National Agricultural Technology Project, ICAR	New Delhi	13
162	Kakatiya University	Warangal	13
163	Tamil Nadu Rice Research Institute	Aduthurai	12
164	Gujarat University	Ahmedabad	12
165	Central Research Institute for Jute & Allied Fibers	Barrackpore	12
166	College of Veterinary and Animal Science	Bikaner	12
167	University of Jammu	Jammu	12
168	Nagpur University	Nagpur	12
169	Tata Energy Research Institute	New Delhi	12
170	St. Xavier's College	Palayankottai	12
171	M.L. Sukhadia University	Udaipur	12
172	Christian Medical College & Hospital	Vellore	12
173	Indian Institute of Chemical Technology	Hyderabad	12
174	Regional Research Station (CCSHAU)	Karnal	12

No.	Institution	City/town	Number of papers
175	Central Institute of Medicinal and Aromatic Plants	Bangalore	11
176	Institute of Forest Genetics and Tree Breeding	Coimbatore	11
177	Regional Medical Research Centre	Dibrugarh	11
178	Centre for Cellular and Molecular Biology	Hyderabad	11
179	National Remote Sensing Agency	Hyderabad	11
180	National Research Centre for Soybean	Indore	11
181	Indian Institute of Pulse Research	Kanpur	11
182	Central Institute for Subtropical Horticulture	Lucknow	11
183	University of Lucknow	Lucknow	11
184	Mangalore University	Mangalore	11
185	University of Bombay	Mumbai	11
186	West Bengal University of Animal and Fishery Sciences	Nadia	11
187	National Institute of Virology	Pune	11
188	College of Agricultural Engineering	Raichur	11
189	College of Veterinary and Animal Sciences	Trichur	11
190	Tamil Nadu Agricultural University	Vriddhachalam	11
191	University of Allahabad	Allahabad	10
192	Bangalore University	Bangalore	10
193	National Research Centre on Camel	Bikaner	10
194	Central Coffee Research Institute	Chikmagalur	10
195	Gulbarga University	Gulbarga	10
196	National Institute of Rural Development	Hyderabad	10
197	Central Potato Research Station	Jalandhar	10
198	Tocklai Experimental Station	Jorhat	10
199	Tamil Nadu Agricultural University	Mettupalayam	10
200	Central Institute for Cotton Research	Nagpur	10
201	National Institute of Immunology	New Delhi	10
202	University of Pune	Pune	10
203	Saurashtra University	Rajkot	10
204	University of Roorkee	Roorkee	10
205	Dayalbagh Educational Institute	Agra	9
206	Allahabad Agricultural Institute	Allahabad	9
207	National Dairy Research Institute	Bangalore	9
208	Project Directorate of Biological Control	Bangalore	9
209	Agricultural College	Bapatla	9
210	Indian Statistical Institute	Calcutta	9
211	Anna University	Chennai	9
212	Sugarcane Research Station	Cuddalore	9
213	National Research Centre for Weed Science	Jabalpur	9
214	Indian Institute of Technology	New Delhi	9
215	North Eastern Regional Institute of Science & Technology	Nirjuli	9
216	Vector Control Research Centre	Pondicherry	9
217	College of Agriculture	Rewa	9
218	National Institute of Hydrology	Roorkee	9

No.	Institution	City/town	Number of papers
219	Himachal Pradesh University	Shimla	9
220	Kittur Rani Channamma College of Horticulture	Belgaum	8
221	Water Technology Centre for Eastern Region	Bhubaneswar	8
222	IVRI Regional Station	Calcutta	8
223	Indian Institute of Technology	Chennai	8
224	Darjeeling Government College	Darjeeling	8
225	National Research Centre on Equines (NRCE),	Hisar	8
226	College of Agriculture	Indore	8
227	National Research Centre for Agroforestry	Jhansi	8
228	Pandit Jawaharlal Nehru College of Agriculture	Karaikal	8
229	Directorate of Wheat Research	Karnal	8
230	College of Fisheries	Mangalore	8
231	University of Agricultural Sciences	Mangalore	8
232	Kasturba Medical College	Manipal	8
233	C. S. Azad University of Agriculture and Technology	Mathura	8
234	Indian Inst. of Technol. Bombay	Mumbai	8
235	Sambalpur University	Sambalpur	8
236	R.A.K. College of Agriculture	Sehore	8
237	College of Agriculture	Thiruvananthapuram	8
238	Space Applications Centre	Ahmedabad	7
239	Institute of Rural Management	Anand	7
240	Indian Institute of Plantation Management	Bangalore	7
241	Indian Statistical Research Office	Bangalore	7
242	Rohikhand University	Bareilly	7
243	Regional Agricultural Research Station, IGKV	Bilaspur	7
244	Punjab University	Chandigarh	7
245	Central Leather Research Institute	Chennai	7
246	Bidan Chandra Krishi Viswavidyalaya	Cooch Behar	7
247	Wildlife Institute of India	Dehra Dun	7
248	Regional Agricultural Research Station	Guntur	7
249	National Research Centre for Citrus	Nagpur	7
250	Regional Agricultural Research Station	Palem	7
251	Bihar Agricultural College	Sabour	7
252	Centre for Earth Science Studies	Thiruvananthapuram	7
253	Kerala Forest Research Institute	Thrissur	7
254	N. G. Ranga Agricultural University	Tirupati	7
255	Central Tuber Crops Research Institute	Trivandrum	7
256	Vikram University	Ujjain	7
257	Jai Research Foundation	Valvada	7
258	Tripura University	Agartala	6
259	R.B.S. College	Agra	6
260	Vivekananda Parvatiya Krishi Anushandhan Shala	Almora	6
261	Krishi Vigyan Kendra	Baran	6
262	Berhampur University	Berhampur	6

No.	Institution	City/town	Number of papers
263	School of Tropical Medicine	Calcutta	6
264	Centre of Minor Forest Products (COMFORPTS)	Dehra Dun	6
265	Institute of Economic Growth	New Delhi	6
266	Gauhati University	Guwahati	6
267	College of Veterinary Science	Hyderabad	6
268	National Research Centre for Sorghum	Hyderabad	6
269	ICAR Research Complex for NEH Region	Imphal	6
270	Rani Durgavati University	Jabalpur	6
271	Agricultural Research Station	Jaipur	6
272	National Research Centre for Groundnut	Junagadh	6
273	Kasturba Medical College	Mangalore	6
274	Tata Institute of Social Sciences	Mumbai	6
275	Defence Food Research Laboratory	Mysore	6
276	National Environmental Engineering Research Institute	Nagpur	6
277	Jawaharal Nehru University	New Delhi	6
278	Maulana Azad Medical College	New Delhi	6
279	National Centre for Agriculture Economics and Policy Research	New Delhi	6
280	Indian Veterinary Research Institute	Palampur	6
281	Agricultural Research Institute	Patna	6
282	Pondicherry University	Pondicherry	6
283	Botanical Survey of India	Port Blair	6
284	Chennai Medical College	Chennai	6
285	Regional Agriculture Research Station	Pura	6
286	IGAU College of Agriculture	Raipur	6
287	School of Studies in Life Sciences	Raipur	6
288	Indian Cardamom Research Institute	Sakaleshpur	6
289	Conifers Research Centre	Shimla	6
290	Himachal Pradesh Krishi Vishwavidyalaya	Sirmour	6
291	Sree Chitra Tirunal Institute for Medical Sciences & Technology	Trivandrum	6
292	Tamil Nadu Agricultural University	Veppankulam	6
293	National Research Centre for Cashew	Puttur	6
294	Tamil Nadu Agricultural University	Aduthurai	5
295	Indian Institute of Management	Ahmedabad	5
296	G B Pant Institute of Himalayan Environment & Development	Almora	5
297	Dr Babasaheb Ambedkar Marathwada University	Aurangabad	5
298	Chaudhary Charan Singh Haryana Agricultural University	Bajaura	5
299	Institute for Social and Economic Change	Bangalore	5
300	PAU Regional Research Station	Bathinda	5
301	Barkatullah University	Bhopal	5
302	Central Institute of Agricultural Engineering	Bhopal	5
303	College of Agriculture	Bijapur	5
304	Burdwan Raj College	Burdwan	5
305	Ramakrishna Mission Vivekananda College	Chennai	5
306	Regional Coffee Research Station	Chundale	5

No.	Institution	City/town	Number of papers
307	Botanical Survey of India	Coimbatore	5
308	D.B.S. College	Dehra Dun	5
309	HPKV Regional Research Station	Dhaulakuan	5
310	Tirhut College of Agriculture	Dholi	5
311	Botanical Survey of India	Gangtok	5
312	Regional Research Station	Gurdaspur	5
313	Defence Research and Development Establishment	Gwalior	5
314	Malaria Research Centre	Haldwani	5
315	Botanical Survey of India	Howrah	5
316	National Geophysical Research Institute	Hyderabad	5
317	Veterinary College	Hyderabad	5
318	Regional Tasar Research Station	Imphal	5
319	Malaria Research Centre	Jabalpur	5
320	Haryana State Minor Irrigation and Tubewells Corporation	Karnal	5
321	Sugarcane Breeding Institute	Karnal	5
322	J.N. Agriculture University	Khargone	5
323	Himachal Pradesh Krishi Vishwavidyalaya	Kinnaur	5
324	Tamil Nadu Agricultural University	Kovilpatti	5
325	Centre for Water Resources Development and Management	Kozhikode	5
326	Chaudhary Charan Singh University	Lakhaoti	5
327	National Bureau of Fish Genetic Resources	Lucknow	5
328	JMDPL Mahila College	Madhubani	5
329	The American College	Madurai	5
330	Thiagarajar College	Madurai	5
331	Regional Research Station	Mandya	5
332	College of Veterinary Science and Animal Husbandry	Mathura	5
333	Vidyasagar University	Midnapore	5
334	Regional Research Station	Mudigere	5
335	National Bank for Agriculture and Rural Development	Mumbai	5
336	Gujarat Agricultural University	Navsari	5
337	University College of Medical Sciences & Guru Teg Bahadur Hospital	New Delhi	5
338	G.S. Sugarcane Breeding and Research Institute	Pdrauna	5
339	National Pulses Research Centre	Pudukkottai	5
340	J. J. College of Arts and Science	Pudukkottai	5
341	CTRI Research Station	Pusa	5
342	Ranchi University	Ranchi	5
343	Sugarcane Research Institute	Samastipur	5
344	JNKVV College of Agriculture	Sehore	5
345	Tamil Nadu Agricultural University	Sirugamani	5
346	College of Horticulture	Thrissur	5
347	Zonal Research Station	Tiptur	5
348	Periyar College of Pharmaceutical Sciences for Girls	Trichy	5
349	Tamil Nadu Veterinary and Animal Sciences University	Tuticorin	5
350	College of Agriculture	Vellayani	5
351	Regional Research Station	Vridhachalam	5

No.	Institution	City/town	Number of papers
352	National Agricultural Research Project	Yavatmal	5
353	Botanical Survey of India	Allahabad	4
354	SMC College of Dairy Science	Anand	4
355	S.M.M. Town P.G. College	Ballia	4
356	St John's Medical College	Bangalore	4
357	Himachal Pradesh Krishi Vishvavidyalaya	Berthin	4
358	Regional Centre of Central Tuber Crop Research Institute	Bhubaneswar	4
359	Central Sheep & Wool Research Institute Arid Region	Bikaner	4
360	SPIC Science Foundation	Chennai	4
361	JN Krishi Vishwa Vidyalaya Krishi Vigyan Kendra	Chhindwara	4
362	Indira Gandhi National Forest Academy	Dehra Dun	4
363	National Institute of Communicable Diseases	New Delhi	4
364	College of Agriculture	Dhule	4
365	Indira Gandhi Krishi Vishwa Vidyalaya	Durg	4
366	Janata Mahavidyalaya	Etawah	4
367	Goa University	Goa	4
368	Jiwaji University	Gwalior	4
369	Agricultural Research Station	Hanumanamatti	4
370	Veterinary Biological and Research Institute	Hyderabad	4
371	Government P.G. College	Jind	4
372	Institute of Rain & Moist Deciduous Forests Research	Jorhat	4
373	Tamil Nadu Agricultural University	Killakulam	4
374	ICAR Research Complex for NEH Region	Lembucherra	4
375	Sanjay Gandhi Postgraduate Institute of Medical Sciences	Lucknow	4
376	Agricultural Research Station	Maruteru	4
377	Forest College and Research Institute	Mettupalayam	4
378	Centre for Development Studies	Nainital	4
379	Fertiliser Association of India	New Delhi	4
380	Ministry of Agriculture	New Delhi	4
381	National Centre for Integrated Pest Management	New Delhi	4
382	North Lakhimpur College	North Lakhimpur	4
383	Patna University	Patna	4
384	Defence Agricultural Research Laboratory	Pithoragarh	4
385	K.M. Centre for Post Graduate Studies	Pondicherry	4
386	Regional Sugarcane & Rice Research Station	Rudru	4
387	College of Agriculture	Sambalpur	4
388	All India Coordinated Potato Improvement Project	Shimla	4
389	Regional Research Station	Shimoga	4
390	Institute of Agriculture	Sriniketan	4
391	Defence Research Laboratory	Tezpur	4
392	Amala Cancer Research Centre	Thrissur	4
393	Sri Padmavathi Mahila Visvavidyalayam	Tirupati	4
394	Livestock Research Station	Udaipur	4
395	Insect Biopesticide Research Centre	Jalandhar	4
396	Veterinary College	Udgir	4

No.	Institution	City/town	Number of papers
397	Sardar Patel University	Vallabh Vidyanagar	4
398	Dr Ambedkar University	Agra	3
399	St. John's College	Agra	3
400	M.L.N. Medical College	Allahabad	3
401	TD Medical College Hospital	Alleppey	3
402	Regional Agricultural Research Station	Anakapalle	3
403	Veterinary College	Anand	3
404	ICAR Project on Animal Disease Monitoring and Surveillance	Bangalore	3
405	Indian Plywood Industries Research & Training Institute	Bangalore	3
406	Silkworm Seed Technology Laboratory	Bangalore	3
407	M. S. J. College	Bharatpur	3
408	Agricultural Research Station	Bidar	3
409	S.P. Medical College	Bikaner	3
410	University College of Science	Calcutta	3
411	Zoological Survey of India	Calcutta	3
412	B. N. College of Agriculture	Charali	3
413	Main Bio-control Research Laboratory	Chengalpattu	3
414	Central Institute for Cotton Research	Coimbatore	3
415	Government Arts College	Coimbatore	3
416	Indian Council of Forestry Research and Education	Coimbatore	3
417	Salim Ali Center for Ornithology & Natural History	Coimbatore	3
418	Regional Sericultural Research Station	Coonoor	3
419	Sugar Research Station	Cuddalore	3
420	D.A.V. College	Dehra Dun	3
421	Defence Institute of Physiology & Allied Sciences	New Delhi	3
422	National Malaria Eradication Programme	New Delhi	3
423	Indian School of Mines	Dhanbad	3
424	Rural Home Science College	Dharwad	3
425	Dibrugarh University	Dibrugarh	3
426	National Research Centre on Yak	Dirang	3
427	National Institute of Oceanography	Dona Paula	3
428	UPASI Tea Advisory Service	Durgabetta	3
429	Directorate of Marketing and Inspection	Faridabad	3
430	ICAR Research Complex for NEH Region	Gangtok	3
431	Jamnalal Bajaj Institute of Applied Agricultural Research	Golagokarannath	3
432	College of Agriculture	Gwalior	3
433	Chilli Research Centre	Hanumanamatti	3
434	Gurukul Kangri University	Hardwar	3
435	Central Rice Research Institute	Hazaribag	3
436	Oilseeds Research	Hyderabad	3
437	Central Agricultural University	Imphal	3
438	Project Coordinating Centre AICRP (Whitegrub)	Jaipur	3
439	RAU Agricultural Research Station	Jaipur	3
440	Agricultural Research Station	Jalore	3
441	Jhargram Raj College	Jhargram	3

No.	Institution	City/town	Number of papers
442	Botanical Survey of India	Jodhpur	3
443	J.N. Vyas University	Jodhpur	3
444	Indian Cardamom Research Institute	Kaillasanadu	3
445	National Sugar Institute	Kanpur	3
446	National Bureau of Animal Genetic Resources	Karnal	3
447	Regional Horticultural Research Station	Kinnaur	3
448	National Agricultural Research Project	Koraput	3
449	Indian Agricultural Research Institute	Kullu	3
450	Himachal Pradesh Krishi Vishvavidyalaya	Leo	3
451	AMC Centre and School	Lucknow	3
452	Birbal Sahni Institute of Palaeobotany	Lucknow	3
453	King George's Medical College	Lucknow	3
454	Indian Institute of Spices Research	Madikeri	3
455	Centre for Research in Medical Entomology	Madurai	3
456	Regional Wheat Rust Research Station	Mahabaleshwar	3
457	Central Potato Research Station	Meerut	3
458	Central Potato Research Station	Modipuram	3
459	WB University of Animal & Fishery Sciences	Mohanpur	3
460	Rice Research Station	Moncompu	3
461	Indira Gandhi Institute of Development Research	Mumbai	3
462	King Edward Memorial Hospital	Mumbai	3
463	University of Mumbai	Mumbai	3
464	National Horticultural Research and Development Foundation	Nasik	3
465	Department of Science & Technology	New Delhi	3
466	Lady Hardinge Medical College	New Delhi	3
467	National Centre for Medium Range Weather Forecasting,	New Delhi	3
468	J.S.S. College of Pharmacy	Ootacamund	3
469	Tamil Nadu Agricultural University	Paiyur	3
470	Bihar Veterinary College	Patna	3
471	Hort. College & Research Institute	Periyakulam	3
472	Tamil Nadu Agricultural University	Periyakulam	3
473	Government Fruit Research Centre	Pithoragarh	3
474	Rajiv Gandhi College of Veterinary and Animal Sciences	Pondicherry	3
475	Sri Sathya Sai Institute of Higher Learning	Prasanthinilayam	3
476	Indian Council of Agricultural Research	Pratapgarh	3
477	P.V.P. College	Pravaranagar	3
478	Tamil Nadu Agricultural University	Pudukottai	3
479	Central Institute of Freshwater Aquaculture	Rahara	3
480	Central Tasar Research and Training Institute	Ranchi	3
481	Institute of Veterinary Preventive Medicine	Ranipet	3
482	Nagarjuna Agricultural Research and Development Institute,	Secunderabad	3
483	AICRP on Tobacco, Regional Res. Stn.	Shimoga	3
484	College of Agriculture	Shimoga	3
485	Tata Energy Research Institute	Siliguri	3
486	North Bengal University	Siliguri	3

No.	Institution	City/town	Number of papers
487	College of Forestry	Sirsi	3
488	Sugarcane Research Station	Sirugamani	3
489	Faculty of Veterinary Sciences and Animal Husbandry	Srinagar	3
490	SK University of Agricultural Sciences and Technology	Srinagar	3
491	Tamil Nadu Agricultural University	Thanjavur	3
492	Agriculture College and Research Institute	Tiruchirappali	3
493	Regional Agricultural Research Station	Titabar	3
494	St. Joseph's College	Trichy	3
495	College of Engineering	Visakhapatnam	3
496	Institute of Pharmacy	Wardha	3
497	University of Horticulture & Forestry	Kullu	3
498	Centre for Ecological Research and Conservation	Mysore	3
499	Nutrition Foundation of India		2
500	Regional Fruit Research Station	Abohar	2
501	Maharaja Bir Bikram College	Agartala	2
502	L.M. College of Pharmacy,	Ahmedabad	2
503	Forest Research Institute	Akola	2
504	Post Graduate Institute, Dr. Panjabrao Deshmukh, Krishi Vidyapeeth	Akola	2
505	D. S. College	Aligarh	2
506	Tamil Nadu Agricultural University	Aliyar Nagar	2
507	Dr Panjabrao Deshmukh Krishi Vidyapeeth	Amaravati	2
508	Gujarat Agriculture University	Anand	2
509	A.N.G.R. Agricultural University	Anantapur	2
510	Regional Sericultural Research Station	Anantapur	2
511	Animal Health Centre	Anantapur	2
512	Agricultural Research Station	Annigeri	2
513	University of Agricultural Sciences	Arabhavi	2
514	Tamil Nadu Agricultural University	Aruppukottai	2
515	National Institute of Animal Nutrition and Physiology	Bangalore	2
516	National Institute of Mental Health and Neurosciences	Bangalore	2
517	St Josephs College of Arts and Science	Bangalore	2
518	A.N.S. College	Barh	2
519	M. S. University of Baroda	Baroda	2
520	College of Pharmaceutical Sciences	Berhampur	2
521	Khallikote Autonomous College	Berhampur	2
522	T.M. Bhagalpur University	Bhagalpur	2
523	Tamil Nadu Agricultural University	Bhavanisagar	2
524	Bhavnagar University	Bhavnagar	2
525	Jawaharlal Nehru Hospital and Research Centre	Bhilainagar	2
526	Indian Institute of Forest Management	Bhopal	2
527	College of Agriculture	Bhubaneswar	2
528	Indian Council of Medical Research	Bhubaneswar	2
529	Institute of Life Sciences	Bhubaneswar	2
530	Nabakrushna Choudhry Centre for Development Studies	Bhubaneswar	2
531	Orissa Remote Sensing Application Centre	Bhubaneswar	2

No.	Institution	City/town	Number of papers
532	Raja Balwant Singh College	Bichpuri	2
533	Regional Research Station	Bijapur	2
534	National Research Centre for Arid Horticulture	Bikaner	2
535	Buldhana Forest Division	Buldhana	2
536	Forest Department	Calcutta	2
537	Medical College	Calcutta	2
538	National Institute of Cholera and Enteric Diseases	Calcutta	2
539	Government Medical College	Chandigarh	2
540	Horticultural Experiments and Training Centre	Chaubattia	2
541	Central Institute of Brackishwater Aquaculture	Chennai	2
542	Dr A.L.M. Post-Graduate Institute of Basic Medical Sciences	Chennai	2
543	Sri Ramachandra Medical College and Research Institute	Chennai	2
544	Centre for Forestry Research and Human Resource Development	Chhindwara	2
545	Zonal Agricultural Research Station	Chhindwara	2
546	Adaptive Trial Center	Chittorgarh	2
547	Central Institute of Fisheries Technology	Cochin	2
548	Directorate of Cashewnut and Cocoa Development	Cochin	2
549	UPASI Tea Advisory Service	Coonoor	2
550	Animal Disease Research Institute	Cuttack	2
551	C.M. Science College	Darbhanga	2
552	L. N. Mithila University	Darbhanga	2
553	LCS College	Darbhanga	2
554	Wadia Institute of Himalayan Geology	Dehra Dun	2
555	Winrock International	Dehra Dun	2
556	Dr. P.R. Ghogery Science College	Dhule	2
557	Dr Ram Manohar Lohia Avadh University	Faizabad	2
558	Gujarat Ecological Education & Research Foundation	Gandhinagar	2
559	Goa Medical College	Goa	2
560	ICAR Res. Complex,	Goa	2
561	Sugarcane Research Station	Gorakhpur	2
562	Cattle Project	Guntur	2
563	Agricultural Research Station	Hassan	2
564	Vinoba Bhave University	Hazaribag	2
565	Agriculture Research Station	Hiriyur	2
566	Agricultural Research Institute	Hyderabad	2
567	Centre for Economic and Social Studies	Hyderabad	2
568	Indian Council of Agricultural Research	Hyderabad	2
569	National Academy for Agricultural Research Management	Hyderabad	2
570	Indian Cardamom Research Institute	Idukki	2
571	Arunachal Pradesh University	Itanagar	2
572	College of Agriculture	Jabalpur	2
573	R.D. University	Jabalpur	2
574	Zonal Agricultural Research Station	Jagdalpur	2
575	Sugarcane Research Station	Jalandhar	2
576	North Maharashtra University	Jalgaon	2

No.	Institution	City/Town	Number of papers
577	Oilseeds Research Station	Jaigaon	2
578	G.G.M. Science College	Jammu	2
579	Regional Agricultural Research Station	Jammu	2
580	Dr. Sampurnanand Medical College	Jodhpur	2
581	Locust Warning Organisation	Jodhpur	2
582	Tea Research Association	Jorhat	2
583	Indian Foremers Fertiliser Coop. Ltd	Kalol	2
584	Central Institute of Freshwater Aquaculture	Kalyani	2
585	Himachal Pradesh Agricultural University	Kangra	2
586	Oilseeds Research Station	Kangra	2
587	Regional Research Station	Kapurthala	2
588	Wheat Research	Karnal	2
589	Sugarcane Research Station	Kashipu	2
590	Regional Fruit Research Station	Katol	2
591	Coconut Res. Station	Kayangulum	2
592	Jute Research Station	Kendrapara	2
593	Kerala Agricultural University	Kerala	2
594	Regional Research Station	Kheri	2
595	Silk Seed Technology Laboratory	Kodathi	2
596	Rajaram College	Kolhapur	2
597	Shivaji University	Kolhapur	2
598	The New College	Kolhapur	2
599	Y.C. Warana Mahavidyalaya	Kolhapur	2
600	G. B. Pant Institute of Himalayan	Kosi-Almora	2
601	Agri. Res. Station	Kota	2
602	Regional Agricultural Research Station	Kottayam	2
603	Central Plantation Crops Research Institute	Krishnapuram	2
604	Veterinary College	Latur	2
605	Govt. of Uttar Pradesh	Lucknow	2
606	Christian Medical College	Ludhiana	2
607	Cardamom Research Centre	Madikeri	2
608	Sri Meenakshi Government College	Madurai	2
609	College of Pharmaceutical Sciences	Manipal	2
610	A.V.C. College	Mannampandal	2
611	Regl. Hort. Res. Stn	Mashobra	2
612	G B Pant University of Agricultural and Technology	Meerut	2
613	Janta Vedic College	Meerut	2
614	Meerut University	Meerut	2
615	Krishi Vigyan Kendra	Mudigere	2
616	Central Institute for Research on Cotton Technology	Mumbai	2
617	Fishery Survey of India	Mumbai	2
618	IMTECH Institute of Microbial Technology	Chandigarh	2
619	L.T.M. Medical College and Hospital	Mumbai	2
620	Ramniranjan Jhunjhunwala College	Mumbai	2
621	Seth G.S. Medical College	Mumbai	2

No.	Institution	City/town	Number of papers
622	Cancer Research Institute	Mumbai	2
623	University Department of Chemical Technology	Mumbai	2
624	B. B. A. Bihar University	Muzaffarpur	2
625	Biotechnology Centre	Mysore	2
626	Pest Management Laboratory	Mysore	2
627	Unit of Central Coffee Research Institute	Mysore	2
628	Govt. of West Bengal	Nadia	2
629	Nagarjuna University	Nagarjunanagar	2
630	Agriculture College	Nagpur	2
631	Kumaon University	Nainital	2
632	Sugarcane Research Station	Nayagarh	2
633	Centre for Biochemical Technology	New Delhi	2
634	Gene Campaign - NGO	New Delhi	2
635	Indian Dairy Association	New Delhi	2
636	International Development Research Centre	New Delhi	2
637	Ministry of Rural Areas and Employment	New Delhi	2
638	National Physical Laboratory	New Delhi	2
639	Regional Medical Research Centre (ICMR)	New Delhi	2
640	Research Foundation for Science Technology and Ecology	New Delhi	2
641	World Bank	New Delhi	2
642	Agricultural Research Station	Niphad	2
643	Animal Health Centre	Ongole	2
644	Tamil Nadu Agricultural University	Ooty	2
645	Malaria Research Centre (ICMR)	Panaji	2
646	Pepper Research Station	Panniyur	2
647	College of Veterinary Sciences	Pantnagar	2
648	Tamil Nadu Agricultural University	Paramakudi	2
649	Patna Medical College	Patna	2
650	Central Electronics Engineering Research Institute	Pilani	2
651	Jawaharlal Institute of Postgraduate Medical Education and Research	Pondichery	2
652	A.V.V.M. Sri Pushpam College	Poondi	2
653	Indian Council of Medical Research	Port Blair	2
654	Vegetable Research Station	Pulur	2
655	Armed Forces Medical College	Pune	2
656	BAIF Development Research Foundation	Pune	2
657	Botanical Survey of India	Pune	2
658	Indian Institute of Tropical Meteorology	Pune	2
659	National Centre For Cell Science	Pune	2
660	Vaikunth Mehta National Institute of Cooperative Management	Pune	2
661	Pt. Ravishankar Shukla University	Raipur	2
662	Regional Forest Research Centre	Rajahmundry	2
663	Central Horticultural Experiment Station	Ranchi	2
664	Institute of Forest Productivity	Ranchi	2
665	Government Post Graduate College	Rishikesh	2
666	Botanical Survey of India	Salem	2

No.	Institution	City/town	Number of papers
667	Regional Research Station	Sambalpur	2
668	C.P. College of Agriculture	Sardar Krushinagar	2
669	Main Sugarcane Research Station	Sehore	2
670	Conservator of Forests	Siliguri	2
671	Central Institute for Cotton Research Regional Station	Sirsa	2
672	Forestry Degree Programme	Sirsi	2
673	University of Agricultural Sciences	Sirsi	2
674	All India Coordinated Research Project on Oilseeds	Solapur	2
675	Malaria Research Centre	Sonapur	2
676	Biswanath College of Agriculture	Sonitpur	2
677	Ramie Research Station	Sorbhog	2
678	Agricultural Research Station	Sriganganagar	2
679	Institute of Medical Sciences	Srinagar	2
680	Department of Plant Protection	Sriniketan	2
681	South Gujarat University	Surat	2
682	Sikkim Government College	Tadong	2
683	I.C.A.R. Research Complex for NEH Region	Tadong	2
684	CSWCRTI, Regional Research Centre	Sunabeda	2
685	Kerala Agricultural University	Tavanur	2
686	Periyar Tiger Reserve	Thekkady	2
687	Tamil Nadu Agricultural University	Tiruchirappalli	2
688	S. V. Agricultural College	Tirupati	2
689	N.N.S. College	Titabor	2
690	University College	Trivandrum	2
691	Fisheries College and Research Institute	Tuticorin	2
692	College of Veterinary & Animal Sciences	Udgir	2
693	Agricultural Research Station	Ullal	2
694	H. P. K. V. Regional Research Station	Bajaura	2
695	Tamil Nadu Agricultural University	Vallanad	2
696	Udai Pratap College	Varanasi	2
697	Regional Fruit Research Station	Vengurla	2
698	Animal Health Centre	Vijayawada	2
699	Regional Agricultural Research Station	Waraseoni	2
700	Tamil Nadu Agricultural University	Yercaud	2
701	National Agricultural Research Project,	Palghar	2
702	French Institute	Pondicherry	2
703	Directorate of Wheat Research	Shimla	2
704	National Centre for Mushroom Research & Training	Solan	2
705	Dry Farming Research Station	Solapur	2
706	Rice Research Institute	Aduthurai	1
707	Varanashi Research Foundation	Adyanadka	1
708	Printing and Stationary Department	Agartala	1
709	Rubber Research Institute of India	Agartala	1
710	Agra College	Agra	1
711	Central Soil & Water Conservation Research & Training Institute	Agra	1

No.	Institution	City/town	Number of papers
712	Indian Statistical Research Office	Ahmedabad	1
713	M G Science Institute	Ahmedabad	1
714	National Institute of Co-operative Management	Ahmedabad	1
715	National Institute of Occupational Health	Ahmedabad	1
716	Physical Research Laboratory	Ahmedabad	1
717	Commerce and Science College	Ahmednagar	1
718	PVP College	Ahmednagar	1
719	North-Eastern Hill University	Aizawl	1
720	M. D. S. University	Ajmer	1
721	College of Agriculture	Akola	1
722	Oil Seed Research Station	Akola	1
723	Veterinary Hospital	Alampur	1
724	Regional Research Institute of Unani Medicine	Aigarh	1
725	Central Inland Capture Fisheries Research Institute	Allahabad	1
726	Indian Foremers Fertiliser Coop. Ltd	Allahabad	1
727	K. A. P. G. College	Allahabad	1
728	Horticultural Experiments and Training Centre	Almora	1
729	Manonmaniam Sundaranar University	Alwarkurichi	1
730	Amravati University	Amravati	1
731	Directorate of Plant Protection	Amritsar	1
732	Irrigation and Power Research Institute	Amritsar	1
733	Khalsa College	Amritsar	1
734	Cashew Research Station	Anakkayam	1
735	B.A. College of Agriculture	Anand	1
736	S.K. University	Anantapur	1
737	Sri Sathya Sai Institute of Higher Learning Anantapur	Anantapur	1
738	SSBN College	Anantapur	1
739	Agricultural Research Station	Anantharajupet	1
740	Rice Research and Regional Station	Anantnag	1
741	Middle Andaman Forest Division	Andaman and Nicobar	1
742	Indian Foremers Fertiliser Coop. Ltd	Aonla	1
743	KRC college of Horticulture	Arabhavi	1
744	Regional Research Station	Aruppukottai	1
745	Maharashtra Irrigation Commission	Aurangabad	1
746	R.L.S.Y. College	Aurangabad	1
747	Indian Grassland and Fodder Research Institute	Avikanagar	1
748	K. S. Saket P. G. College,	Ayodhya	1
749	Shibli National P. G. College	Azamgarh	1
750	Agriculture Research Station	Badnapur	1
751	U.A.S. Agricultural Research Station	Bagalkot	1
752	Crop Research Station	Bahraich	1
753	Forest Rangers College	Balaghat	1
754	Veterinary Assistant Surgeon	Balaghat	1
755	Banasthali Vidyapith	Banasthali	1
756	Project Tiger	Bandipur	1

No.	Institution	City/town	Number of papers
757	Biological Control	Bangalore	1
758	Central Silk Board	Bangalore	1
759	College of Agriculture	Bangalore	1
760	Dairy Science College	Bangalore	1
761	Division of Horticulture, (G.K.V.K)	Bangalore	1
762	Ford Foundation Project	Bangalore	1
763	GREEN Foundation	Bangalore	1
764	Indian Council of Agricultural Research	Bangalore	1
765	Jawaharlal Nehru Centre for Advanced Scientific Research	Bangalore	1
766	Karnataka Association for the Advancement of Science	Bangalore	1
767	Kidwai Memorial Institute of Oncology	Bangalore	1
768	MS Ramaiah Medical College	Bangalore	1
769	NBSS & LUP Regional Centre	Bangalore	1
770	Regional Institute of Cooperative Management	Bangalore	1
771	Seed Technology Research Unit	Bangalore	1
772	Sports Authority of India	Bangalore	1
773	St. John's National Academy of Health Sciences	Bangalore	1
774	Tata Energy Research Institute	Bangalore	1
775	National Research Centre for Women in Agriculture	Bankura	1
776	College of Agriculture	Bapatla	1
777	A.N.G.R. Agricultural University	Bapatla	1
778	College of Agricultural Engineering	Bapatla	1
779	Bareilly College	Bareilly	1
780	Department of Forests	Bareilly	1
781	M.C. College	Barpeta	1
782	Institute for Research in Jute & Allied Fibres	Barrackpore	1
783	Central Soil & Water Conservation Research & Training Institute	Bellary	1
784	MKCG Medical College	Berhampur	1
785	Survey of Medicinal Plants Unit	Bhadrak	1
786	Bhagalpur University	Bhagalpur	1
787	Soil Survey and Land Use Planning Centre	Bhagalpur	1
788	ICAR-Water Management Scheme	Bhavanisagar	1
789	Central Salt & Marine Chemicals Research Institute	Bhavnagar	1
790	S.S. Engrg. College	Bhavnagar	1
791	Gandhi Medical College	Bhopal	1
792	Regional Research Laboratory	Bhopal	1
793	S. N. Govt. Girls College	Bhopal	1
794	Technical Teachers Training Institute	Bhopal	1
795	All India Coordinated Vegetable Improvement Project	Bhubaneswar	1
796	College of Veterinary Science and Animal Husbandry	Bhubaneswar	1
797	Command Area Development Organization	Bhubaneswar	1
798	Directorate of Resettlement and Rehabilitation	Bhubaneswar	1
799	Forest Department	Bhubaneswar	1
800	Horticulture Government of Orissa	Bhubaneswar	1
801	Institute for Socio-economic Development	Bhubaneswar	1

No.	Institution	City/town	Number of papers
802	Plant Physiology and Biochemistry Laboratory	Bhubaneswar	1
803	Plant Tissue Culture Laboratory	Bhubaneswar	1
804	Regional Medical Research Centre (ICMR)	Bhubaneswar	1
805	Regional Resources Centre	Bhubaneswar	1
806	State Centre Orissa	Bhubaneswar	1
807	Weavers' Service Centre	Bhubaneswar	1
808	Krishi Vigyana Kendra	Bidar	1
809	T.P. Verma College	Bihar	1
810	S.P.M. College	Biharsharif	1
811	University of Agricultural Sciences	Bijapur	1
812	Agriculture and Soil Survey	Bikaner	1
813	Border Security Force	Bikaner	1
814	NRC for Arid Horticulture	Bikaner	1
815	Regional Research Station	Bikaner	1
816	Government Autonomous Science Post Graduate College	Bilaspur	1
817	Guru Ghasidas University	Bilaspur	1
818	Regional Agricultural Research Station	Bilaspur	1
819	Magadh University	Bodh Gaya	1
820	Regional Research Station	Brahmavar	1
821	A.S. Post-Graduate College	Bulandshahar	1
822	Veterinary Dispensary	Buldana	1
823	Burdwan Medical College	Burdwan	1
824	B.C. Roy Post Graduate Institute of Basic Medical Sciences	Calcutta	1
825	Botanical Survey of India	Calcutta	1
826	Calcutta Municipal Corporation	Calcutta	1
827	Calcutta School of Tropical Medicine	Calcutta	1
828	Central Food Laboratory	Calcutta	1
829	Conservator of Forests	Calcutta	1
830	Eastern Regional Station of IVRI	Calcutta	1
831	Govt. of West Bengal	Calcutta	1
832	Jute Technological Research Laboratories	Calcutta	1
833	Ministry of Commerce	Calcutta	1
834	National Atlas and Thematic Mapping Organisation	Calcutta	1
835	Presidency College	Calcutta	1
836	Shibnath Sastri College	Calcutta	1
837	Social Forestry Division	Calcutta	1
838	Arecanut and Spices Development	Calicut	1
839	Indian Institute Spices Research	Calicut	1
840	Indian Society for Spices	Calicut	1
841	Medical College Hospital	Calicut	1
842	National Institute of Communicable Diseases	Calicut	1
843	Zoological Survey of India	Calicut	1
844	CSWCRTI, Research Centre	Chandigarh	1
845	Directorate of Animal Husbandry	Chandigarh	1
846	Punjab State Council for Sci. & Technol	Chandigarh	1

No.	Institution	City/town	Number of papers
847	Government Science College	Chatrapur	1
848	All India Institute of Medical Sciences	Chennai	1
849	Chennai Veterinary College	Chennai	1
850	Coconut Development Board	Chennai	1
851	D.G. Vaishnav College	Chennai	1
852	Directorate of Tobacco Development	Chennai	1
853	Forest Department	Chennai	1
854	Guru Nanak College	Chennai	1
855	Institute for Research in Medical Statistics	Chennai	1
856	Institute of Cooperative Management	Chennai	1
857	Kilpauk Medical College and Hospital	Chennai	1
858	Madras Christian College	Chennai	1
859	Malaria Research Centre	Chennai	1
860	Medical and Vision Research Foundation	Chennai	1
861	School of Hygiene and Public Health	Chennai	1
862	Sir Theagaraya College	Chennai	1
863	State Planning Commission	Chennai	1
864	The New College	Chennai	1
865	Coffee Research Sub-Station	Chettalli	1
866	Krishi Vigyan Kendra	Chhindwara	1
867	AICRP on Cashewnut	Chintamani	1
868	Regional Research Station	Chiplima	1
869	Chitrakoot Gramodaya University	Chitrakoot	1
870	Mahatma Gandhi Gramodaya Vishwavidyalaya	Chitrakoot	1
871	Lohia Govt. College	Churu	1
872	Cashew Export Promotion Council of India	Cochin	1
873	Sacred Heart College	Cochin	1
874	P.S.G. College of Arts and Science	Coimbatore	1
875	Rural Development and Environmental Studies	Coimbatore	1
876	Sri Ramakrishna Institute of Paramedical Sciences	Coimbatore	1
877	Regional Sericulture Research Station	Coonoor	1
878	Agricultural Research Station	Cuddapah	1
879	N.M. Sadguru Water and Development Foundation	Dahod	1
880	College of Agriculture	Dapoli	1
881	Konkan Krishi Vidyapeeth	Dapoli	1
882	R. B. Jalan Bela College	Darbhanga	1
883	Regional Research Station	Darisai	1
884	Wart Testing Station	Darjeeling	1
885	Animal Resources Development	Debipur	1
886	Potato Research Station	Deesa	1
887	Botanical Survey of India	Dehra Dun	1
888	State Forest Service College	Dehra Dun	1
889	Centre for Research on Ecology & Environment Applications	Dehra Dun	1
890	Himalayan Institute of Medical Sciences	Dehra Dun	1
891	Indian Institute of Remote Sensing (NRSA)	Dehra Dun	1

No.	Institution	City/town	Number of papers
892	Watershed Management Directorate	Dehra Dun	1
893	Tamil Nadu Veterinary and Animal Sciences University	Dharmapuri	1
894	College of Rural Home Sciences	Dharwad	1
895	IGFRI Regional Research Station,	Dharwad	1
896	Karnataka University	Dharwad	1
897	Dhenkanal Govt. College	Dhenkanal	1
898	College of Fisheries	Dholi	1
899	Jai Hind College of Arts	Dhule	1
900	S. K. University	Dumka	1
901	Agricultural Research Station	Durgapura	1
902	Chikkaiah Naicker College	Erode	1
903	Punjab Agricultural University	Faridkot	1
904	Central Arid Zone Research Institute	Fodhpur	1
905	Gandhigram Rural University	Gandhigram	1
906	Gujarat Pollution Control Board	Gandhinagar	1
907	Sikkim Government College	Gangtok	1
908	GB Pant University of Agriculture and Technology	Garhwal	1
909	Central Sheep and Wool Research Institute	Garsa	1
910	Gaya College	Gaya	1
911	Giridih College	Giridih	1
912	Dhempe College of Arts & Science	Goa	1
913	Institute for Economics and Social Sciences Research	Gondia	1
914	DDU University of Gorakhpur	Gorakhpur	1
915	M. G. P. G. College	Gorakhpur	1
916	St. Andrew's College	Gorakhpur	1
917	Gujarat Institute of Development Research	Gota	1
918	Agricultural Research Station	Gulbarga	1
919	Govt. College Chachaura-Binaganj	Guna	1
920	Aravalli Project	Gurgaon	1
921	Potash Research Institute of India	Gurgaon	1
922	Arya Vidyapeeth College	Guwahati	1
923	National Institute of Rural Development	Guwahati	1
924	Cotton College	Guwahatti	1
925	JN Krishi Visva Vidyalaya	Gwalior	1
926	Agricultural Research Station	Hagari	1
927	S.S.V. (P.G.) College	Hapur	1
928	Jawaharlal Nehru Krishi Vishwa Vidyalaya	Harda	1
929	KB Women's College	Hazaribagh	1
930	Government Livestock Farm	Hisar	1
931	Guru Jambheshwar University	Hisar	1
932	Hojai College	Hojai	1
933	Bengal Eng. College	Howrah	1
934	A.N.G.R. Agricultural University	Hyderabad	1
935	Agricultural College	Hyderabad	1
936	Animal Husbandry Department	Hyderabad	1

No.	Institution	City/town	Number of papers
937	Centre for DNA and Diagnostics	Hyderabad	1
938	College of Home Science	Hyderabad	1
939	Department of Horticulture	Hyderabad	1
940	Directorate of Rice Research Rajendranagar	Hyderabad	1
941	Dr B. R. Ambedkar Open University	Hyderabad	1
942	Indian Immunologicals	Hyderabad	1
943	Institute for Rural Health Studies	Hyderabad	1
944	J.N.T. University	Hyderabad	1
945	MAHYCO Research Foundation	Hyderabad	1
946	National Centre for Laboratory Animal Sciences	Hyderabad	1
947	National Institute of Research and Social Action	Hyderabad	1
948	National Plant Protection Training Institute	Hyderabad	1
949	Nizam's Institute of Medical Sciences	Hyderabad	1
950	Project Directorate on Poultry	Hyderabad	1
951	Rice Research (DRR)	Hyderabad	1
952	State Bank Institute of Rural Development	Hyderabad	1
953	Wultural University	Hyderabad	1
954	ICMR Unit for Research on AIDS in North-eastern States of India	Imphal	1
955	Disease Investigation Laboratory	Indore	1
956	Holkar Science College	Indore	1
957	J.N. Krishi Vishwa Vidyalaya	Indore	1
958	P.M.B. Gujarati Science College	Indore	1
959	State Forest Research Institute	Itanagar	1
960	Livestock Production Research	Izatnagar	1
961	Madhya Pradesh State Forest Research Institute	Jabalpur	1
962	IGAU Zonal Agricultural Research Station	Jagdalpur	1
963	Andhra Pradesh Agric Univ	Jagtial	1
964	Regional Agricultural Research Station	Jagtial	1
965	Forest Research Centre	Jaina	1
966	AICRP on Pesticide Residues	Jaipur	1
967	Indian Institute of Health Management Research	Jaipur	1
968	Livestock Field Investigation Station	Jaipur	1
969	Malaviya Regional Engineering College	Jaipur	1
970	National Institute of Agricultural Marketing	Jaipur	1
971	Police Forensic Science Lab	Jaipur	1
972	S.M.S. Medical College	Jaipur	1
973	Univ. Rajasthan	Jaipur	1
974	Central Arid Zone Research Institute	Jaisalmer	1
975	DAV College	Jalandhar	1
976	Sukanta Mahavidyalaya	Jalpaiguri	1
977	Department of Veterinary Medicine	Jammu	1
978	Field Research Laboratory, DRDO	Jammu	1
979	Kashmir University	Jammu	1
980	Gandhi Memorial Science College	Jammu	1
981	National Metallurgical Laboratory	Jamshedpur	1

No.	Institution	City/town	Number of papers
982	B.S. Govt. P.G. College	Jaora	1
983	Institute of Development Studies	Japur	1
984	Maize Improvement Project	Jashipur	1
985	T D Post graduate College	Jaunpur	1
986	Krishi Vigyan Kendra	Jhabua	1
987	Zonal Agricultural Research,	Jhabua	1
988	Achhruram Memorial College	Jhalda	1
989	Agricultural Research Station	Jodhpur	1
990	Defence Laboratory	Jodhpur	1
991	Desert Medicine Research Centre	Jodhpur	1
992	Zoological Survey of India	Jodhpur	1
993	National Bureau of Soil Survey and Land Use Planning	Jorhat	1
994	All India Coordinated Research Project on Groundnut	Junagadh	1
995	College of Agricultural Engineering and Technology	Junagadh	1
996	Forestry Department	Junagadh	1
997	National Institute of Hydrology	Kakinada	1
998	Sree Sankara College	Kalady	1
999	Department of Genetics and Plant Breeding	Kalahandi	1
1000	Regional Sericultural Research Station	Kalimpong	1
1001	A.N.D.N.N.M. Mahavidyalaya	Kanpur	1
1002	Christ Church College	Kanpur	1
1003	College of Agriculture	Kanpur	1
1004	Defence Materials & Stores Research & Development Establishment	Kanpur	1
1005	Indian Institute of Technology	Kanpur	1
1006	Arignar Anna Government Arts College	Karaikal	1
1007	Andhra Pradesh Agricultural University	Karimnagar	1
1008	S.R.R. Government College	Karimnagar	1
1009	Regional Agricultural Research Station	Karjat	1
1010	Dairy Microbiology Division	Karnal	1
1011	Resource Management Programme	Karnal	1
1012	Government Junior College	Karvetinagar	1
1013	Crop Protection Division CPCRI	Kasaragod	1
1014	Agricultural Research Station	Kathalagere	1
1015	Regional Sericultural Research Station	Kathua	1
1016	Government College of Khairagarh	Khairagarh	1
1017	Government College of Women	Khammam	1
1018	College of Veterinary Science	Khanaparsa	1
1019	Centre for Socio-economic and Environmental Studies	Cochin	1
1020	Horticultural Research Station	Kodaikanal	1
1021	College of Agriculture	Kolhapur	1
1022	Regional Sugarcane and Jaggery Research Station	Kolhapur	1
1023	AGRA Earth & Environmental	Kota	1
1024	Mahatma Gandhi University	Kottayam	1
1025	Central Arid Zone Research Institute	Kukma	1

No.	Institution	City/town	Number of papers
1026	Regional Research Station	Kukumseri	1
1027	Dr A.V. Baliga College of Arts and Science	Kumta	1
1028	All India Radio	Kurnool	1
1029	Animal Husbandry Department	Kurnool	1
1030	Krishi Gyan Kendra	Kurukshetra	1
1031	A.S. College	Lakhaoti	1
1032	BSNV Postgraduate College	Lucknow	1
1033	Centre for Research & Development of Waste & Marginal Land	Lucknow	1
1034	Deen Dayal Upadhyaya State Institute of Rural Development	Lucknow	1
1035	Department of Crop Science and Farm Management	Lucknow	1
1036	J.N.P.G. College	Lucknow	1
1037	Sugarcrops Gemplasm and Breeding Laboratory	Lucknow	1
1038	Uttar Pradesh Council of Agricultural Research	Lucknow	1
1039	Dayanand Medical College & Hospita	Ludhiana	1
1040	Agricultural Research Station	Madhira	1
1041	Regional Research Station	Madhopur	1
1042	Plant Quarantine Station	Madras	1
1043	National Agricultural Research Project	Mahabaleshwar	1
1044	Kanha Tiger Reserve	Mandla	1
1045	K. N. K. College of Agriculture	Mandsaur	1
1046	Aquaculture at the College of Fisheries	Mangalore	1
1047	Research Centre of CMFRI	Mangalore	1
1048	St. Aloysius College	Mangalore	1
1049	Agricultural Research Station	Mannuthy	1
1050	Nagaland University	Medziphema	1
1051	D.N. (P.G.) College	Meerut	1
1052	Project Directorate on Cattle	Meerut	1
1053	Indira Gandhi Educational Youth and Rural Development Trust	Melagaram	1
1054	Sugarcane Research Station	Melalathur	1
1055	National Institute of Social Sciences	Mhow	1
1056	Midnapore College	Midnapore	1
1057	Panskura Banamali College	Midnapore	1
1058	Block Animal Health Centre	Midnapur	1
1059	M.M. College	Modinagar	1
1060	West Bengal University of Animal and Fishery Sciences	Mohanpur	1
1061	Zonal Agricultural Research Station	Morena	1
1062	College of Horticulture and Regional Research Station	Mudigere	1
1063	Agricultural Research Station	Mugad	1
1064	D. G. Ruparel College	Mumbai	1
1065	K. E. M. Hospital	Mumbai	1
1066	Konkan Agricultural University	Mumbai	1
1067	Sir J.J. Group of Hospitals and Grant Medical College	Mumbai	1
1068	Bombay Natural History Society	Mumbai	1
1069	Central Institute of Fisheries Education	Mumbai	1

No.	Institution	City/town	Number of papers
1070	I.Y.College of Arts	Mumbai	1
1071	International Institute for Population Sciences	Mumbai	1
1072	Ramnarain Ruia College	Mumbai	1
1073	Relief and Rehabilitation Department	Mumbai	1
1074	S.N.D.T. Women's University	Mumbai	1
1075	Krishi Vigyan Kendra	Munger	1
1076	R.D. & D.J. College	Munger	1
1077	D. A. V. (PG) College	Muzaffar Nagar	1
1078	C. C. R. (P.G.) College	Muzaffarnagar	1
1079	Sugarcane Research Institute	Muzaffarnagar	1
1080	Kala-Azar Research Centre Muzaffarpur	Muzaffarpur	1
1081	R.D.S. College	Muzaffarpur	1
1082	Tirhut College of Agriculture	Muzaffarpur	1
1083	J.S.S. College of Pharmacy	Mysore	1
1084	Central Institute for Research Bufflao	Nabha	1
1085	Beej Bachao Andolan (NGO)	Nagani	1
1086	Central Agmark Laboratory	Nagpur	1
1087	Geological Survey of India	Nagpur	1
1088	Government Medical College Hospital	Nagpur	1
1089	Laxminarayan Institute of Technology	Nagpur	1
1090	Regional Forest Research Station	Nagpur	1
1091	Regional Remote Sensing Service Centre	Nagpur	1
1092	Central Institute of Medicinal and Aromatic Plants	Nainital	1
1093	Cotton Research Station	Nanded	1
1094	Post Graduate Department of Chemistry	Nanded	1
1095	SGGS College of Eng. & Tech	Nanded	1
1096	Dr Y.S. Parmar University of Horticulture and Forestry	Nauni-Solan	1
1097	National Agricultural Research Project	Navegaon Bandh	1
1098	N. M. College of Agriculture	Navsari	1
1099	Animal Health Centre	Nellore	1
1100	Institute of Nuclear Medicine & Allied Sciences	New Delhi	1
1101	Sri Aurobindo College	New Delhi	1
1102	All India Soil and Land Use Survey	New Delhi	1
1103	Biotechnology in Agriculture and Forestry	New Delhi	1
1104	Central Road Research Institute	New Delhi	1
1105	Centre for Atmospheric Sciences	New Delhi	1
1106	Centre for Science and Environment	New Delhi	1
1107	Christian Medical Association of India	New Delhi	1
1108	Confederation of Indian Industry	New Delhi	1
1109	Council of Scientific and Industrial Research	New Delhi	1
1110	Department of Electronics	New Delhi	1
1111	Directorate of Food & Agricultural Sciences	New Delhi	1
1112	Ford Foundation	New Delhi	1
1113	Freedom from Hunger Campaign/Action for Development Program	New Delhi	1

No.	Institution	City/town	Number of papers
1114	Government of Himachal Pradesh	New Delhi	1
1115	Indian Foremers Fertiliser Coop. Ltd	New Delhi	1
1116	Indian Institute of Public Administration	New Delhi	1
1117	Indian National Academy of Engineering	New Delhi	1
1118	Indira Gandhi National Open University	New Delhi	1
1119	Institute for Research in Medical Statistics	New Delhi	1
1120	International Commission on Irrigation and Drainage	New Delhi	1
1121	International Potato Center (CIP)	New Delhi	1
1122	International Rice Research Institute	New Delhi	1
1123	Lady Shri Ram College	New Delhi	1
1124	Ministry of Chemicals and Fertilizers	New Delhi	1
1125	Ministry of Home Affairs	New Delhi	1
1126	Ministry Of Science And Technology	New Delhi	1
1127	National Academy of Agricultural Sciences	New Delhi	1
1128	National Dairy Development Board	New Delhi	1
1129	National Institute of Science	New Delhi	1
1130	National Thermal Power Corporation	New Delhi	1
1131	Natl. Ctr. for Medium Range Weather Forecasting	New Delhi	1
1132	Neonatology Unit of Lady Hardinge Medical College	New Delhi	1
1133	North Eastern Regional Institute of Science and Technology	New Delhi	1
1134	Planning Commission	New Delhi	1
1135	Regional Office for Asia and the Pacific	New Delhi	1
1136	Research and Information System for the Non-aligned and Other Developing Countries	New Delhi	1
1137	Society for Health Education and Learning Packages	New Delhi	1
1138	Society for Promotion of Wastelands Development	New Delhi	1
1139	Society of Management Science and Applied Cybernetics	New Delhi	1
1140	Swedforest International	New Delhi	1
1141	University Enclave Delhi	New Delhi	1
1142	Vallabh Bhai Patel Chest institute	New Delhi	1
1143	Winrock International	New Delhi	1
1144	World Wide Fund for Nature	New Delhi	1
1145	College of Agriculture	Nileshwar	1
1146	Regional Research Station	North Lakhimpur	1
1147	Central Sugarcane Research Station	Padegaon	1
1148	Govt. Victoria College	Palakkad	1
1149	Veterinary Hospital	Palli	1
1150	Central Plantation Crops Research Institute	Palode	1
1151	College of Veterinary and Animal Sciences	Parabhani	1
1152	College of Home Science	Parabhani	1
1153	Mahathma Gandhi University	Pathanamthitta	1
1154	Government Medical College	Patiala	1
1155	Thapar Institute of Engineering & Technology	Patiala	1
1156	Central Potato Research Station	Patna	1

No.	Institution	City/town	Number of papers
1157	Coconut Development Board	Patna	1
1158	G. D. Mahila College	Patna	1
1159	Kala-azar Research Centre	Patna	1
1160	R.K.D. College	Patna	1
1161	Sci.-B, Ganga Plains North Regional Ctr.	Patna	1
1162	Regional Agricultural Research Station	Pattambi	1
1163	Horticultural College and Research Institute	Perumbarai	1
1164	Maharaja College for Women	Perundurai	1
1165	All India Co-ordinated Research Project on Dryland Agriculture	Phulbani	1
1166	Birla Institute of Technology and Science	Pilani	1
1167	Tagore Arts College	Pondicherry	1
1168	Andaman & Nicobar Islands Forest and Plantation Development	Port Blair	1
1169	J.N. Government College	Port Blair	1
1170	High Altitude Research Station	Pottangi	1
1171	Animal husbandry, I.V.B.P	Pune	1
1172	Central Water and Power Research Station	Pune	1
1173	Deccan College Postgraduate and Research Institute	Pune	1
1174	Fergusson College	Pune	1
1175	Forest Department	Pune	1
1176	Gokhale Inst. Politics and Econ.	Pune	1
1177	Jawaharlal Nehru Ayurvedic Medicinal Plants Garden and Herbarium	Pune	1
1178	Mahatma Phule Krishi Vidyapeeth	Pune	1
1179	Modern College	Pune	1
1180	National Agricultural Research Project	Pune	1
1181	National Institute of Bank Management	Pune	1
1182	Poona College of Pharmacy	Pune	1
1183	Zonal Agricultural Research Station	Pune	1
1184	Feroze Gandhi College	Rae Bareilly	1
1185	Regional Coffee Research Station	Raghavendra Nagar	1
1186	Vegetable Improvement Project	Rahuri	1
1187	University of Agricultural Sciences	Raichur	1
1188	KG Arts & Science College	Raigarh	1
1189	Research Centre	Raipur	1
1190	College of Agriculture	Rajendranagar	1
1191	S.N. College	Rajkanika	1
1192	V.S.J. College	Rajnagar	1
1193	Tamil Nadu Agricultural University	Ramanathapuram	1
1194	NBPGR Regional Station	Ranchi	1
1195	Ranchi Women's College	Ranchi	1
1196	Regional Sericultural Research Station	Ranchi	1
1197	Society for Environment & Rural Economic Development	Ranchi	1
1198	Department of Agriculture	Rangat	1
1199	A. P. S. University	Rewa	1
1200	Govt. Post Graduate College	Rishikesh	1

No.	Institution	City/town	Number of papers
1201	Sharma Postgraduate Institute of Medical Sciences	Rohtak	1
1202	Regional Research Station	Ropar	1
1203	State Government of Haryana	Rohtak	1
1204	Government College	Rourkela	1
1205	MS College	Saharanpur	1
1206	College of Basic Sciences	Samastipur	1
1207	Samastipur College	Samastipur	1
1208	H.P. Krishi Vishvavidyalaya	Sangla	1
1209	P.N. College	Saran	1
1210	Shershah College	Sasaram	1
1211	Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyaia Chitrakoot	Satna	1
1212	Aerobiology and Biosystematics Laboratory	Santiniketan	1
1213	Kuvempu University	Shankaraghatta	1
1214	St. Anthony's College	Shillong	1
1215	Catalyst Research & Development	Sindri	1
1216	College of Veterinary Sciences	Singh Nagar	1
1217	Regional Horticultural Research Station	Simor	1
1218	Agriculture Research Station	Sirsi	1
1219	Regional Animal disease Diagnostics and Epidemiology	Sivagangai	1
1220	Ayya Nadar Janaki Ammal College	Sivakasi	1
1221	Sonari College	Sonari	1
1222	M.D. (P.G.) College	Sriganganagar	1
1223	Institute of Animal Health and Biological Products	Srinagar	1
1224	J.K. University of Agricultural Sciences & Technology	Srinagar	1
1225	Regional Research Laboratory	Srinagar	1
1226	Karnataka Regional Engineering Coll	Srinivasnagar	1
1227	Tamil Nadu Agricultural University	Srivilliputtur	1
1228	M.L.S.M. College	Sunder Nagar	1
1229	Government Medical College	Surat	1
1230	State Institute of Animal Health	Tanuku	1
1231	Main Dry Farming Research Station	Targhadia	1
1232	North Eastern Regional Inst. Water and Land Management	Tezpur	1
1233	Tezpur University	Tezpur	1
1234	Tamil Nadu Agricultural University	Thadiyankudisai	1
1235	Tamil University	Thanjavur	1
1236	CARD Krishi Vigyan Kendra	Thelleyoor	1
1237	Veterinary Dispensary	Theni	1
1238	Central Plantation Crops Research Institute	Thiruvananthapuram	1
1239	International School of Dravidian Linguistics	Thiruvananthapuram	1
1240	Sri Sankara College	Thiruvananthapuram	1
1241	Cashew Research Station	Thrissur	1
1242	Christ College	Thrissur	1
1243	UAS Regional Research Station	Tiptur	1
1244	National Research Centre on Banana	Tiruchirappali	1

No.	Institution	City/town	Number of papers
1245	Anbil Dharmalingam Agricultural College and Research Institute	Tiruchirappali	1
1246	Coll. of Agric. Eng	Tiruchirappali	1
1247	Irrigation Management and Training Institute	Tiruchirappali	1
1248	Bishop Heber College	Tiruchirappalli	1
1249	Government Arts College for Women	Tirunelveli	1
1250	S.V. Arts College	Tirupati	1
1251	Wildlife Management Circle	Tirupati	1
1252	Central Sheep and Wool Research Institute	Tonk	1
1253	Krishi Vigyan Kendra	Tonk	1
1254	Veterinary College	Trichur	1
1255	Tamil Nadu Agricultural University	Trindivanam	1
1256	Rajiv Gandhi Centre for Biotechnology	Trivandrum	1
1257	Women in Development, Socioeconomic Unit Foundation	Trivandrum	1
1258	Aravalli Afforestation Project	Udaipur	1
1259	Regional Research Station	Udayagiri	1
1260	Green Arc Society	Udipur	1
1261	GB Pant University of Agriculture and Technology	Ujhani	1
1262	National Agricultural Research Project	Umerkote	1
1263	ICAR Research Complex for NEH Region	Umiam	1
1264	Agricultural Research Station	Vadgaon-Maval	1
1265	Islamiah College	Vaniyambadi	1
1266	Indian Railways Cancer Institute and Research Centre	Varanasi	1
1267	CSWCRTI Research Centre	Vasad	1
1268	Voorhees College	Vellore	1
1269	Kandaswami Kandar's College	Velur	1
1270	Animal Husbandry Department	Vijayawada	1
1271	V.R. Siddhartha Engg. College	Vijayawada	1
1272	Agricultural Research Station	Virinjipuram	1
1273	V. H. N. S. N. College	Virudhunagar	1
1274	M.R. (Autonomous) College	Vizianagaram	1
1275	Agri. Res. Station	Washim	1
1276	Regional Coffee Research Station	Wayanad	1
1277	Wildlife Division	Jalpaiguri	1
1278	Government Cattle Breeding Farm	Yavatmal	1
1279	College Of Dairy Technology	Yeotmal	1
1280	Horticultural Research Station	Yercaud	1
	Unknown		447
	PRIVATE		284
	TOTAL		11855

Table 9: Contributions made by different types of organisations as seen from CAB Abstracts 1998 and 1990-1994

	1998	%		1990-94	%
Academic	-	7011	59.1	32805	63.4
Scientific Agencies (Cent Gov.)	-	2614	22.0	10966	21.2
Ministries	-	548	4.6	1830	3.5
State Govt	-	792	6.6	3614	7.0
Private	-	208	1.8	924	1.7
International	-	113	1.0	704	1.3
Home Address	-	8	0.1	122	0.2
Hospital	-	40	0.3	178	0.3
Foundation	-	46	0.3	137	0.3
Society	-	20	0.2	109	0.2
Bank	-	8	0.1	13	0.0
Project	-	-	-	63	0.1
Unknown	-	447	3.8	296	0.5
		11855	100	51761	100

	1998	1990-94		1998	1990-94
Academic					
<i>Universities</i>			<i>Colleges</i>		
Agricultural	-	4039	Agricultural	-	523
General	-	1744	General	-	510
Medical	-	85	Medical	-	106
Engineering	-	-	Engineering	-	4
		5868			1143
		26902			5903

	1998	1990-94
Scientific Agencies (Central Government)		
Indian Council of Agricultural Research (ICAR)	-	2033
Council of Scientific and Industrial Research (CSIR)	-	414
Indian Council of Medical Research (ICMR)	-	85
Department of Atomic Energy (DAE)	-	55
Defence Research and Development Organization (DRDO)	-	27
	2614	10966

	1998	1990-94
Ministries		
Ministry of Environment and Forests	-	222
Ministry of Commerce	-	74
Ministry of Science and Technology	-	77
Ministry of Health and Family Welfare	-	18
Ministry of Textiles	-	6
Ministry of Agriculture	-	9
Ministry of Food and Civil Supplies	-	-
Ministry of Human Resource	-	-
Ministry of Information and Broadcasting	-	1
Ministry of Mines	-	1
Ministry of Chemicals and Fertilizers	-	71
Ministry of Planning	-	11
Ministry of Water Resource	-	43
Ministry of Rural development	-	14
Ministry of Defence	-	-
Ministry of Industry	-	-
Ministry of Energy	-	-
Ministry of Steel and Mines	-	-
Ministry of Finance	-	-
Ministry of Railways	-	-
Ministry of Power	-	-
	548	1830

Table 10. Indian states contributing to the world literature of agriculture as seen from *CAB Abstracts* - 1998 & 1990-94

No.	State/Union territory	No. of papers	
		1998	1990-94
1	Uttar Pradesh	1661	8327
2	Karnataka	1117	3984
3	Tamil Nadu	1047	4072
4	Maharashtra	851	4084
5	Delhi	807	3666
6	Haryana	776	4017
7	Andhra Pradesh	687	3557
8	Madhya Pradesh	630	2091
9	West Bengal	572	2866
10	Punjab	483	2910
11	Kerala	454	1484
12	Himachal Pradesh	358	1799
13	Orissa	342	1158
14	Assam	336	737
15	Rajasthan	322	1798
16	Bihar	307	1303
17	Gujarat	293	1710
18	Jammu & Kashmir	93	675
19	Chandigarh (UT)	56	507
20	Meghalaya	52	376
21	Andaman & Nicobar Islands (UT)	41	157
22	Pondicherry (UT)	36	130
23	Manipur	35	111
24	Tripura	16	51
25	Sikkim	13	54
26	Goa	12	60
27	Arunachal Pradesh	9	14
28	Nagaland	1	38
29	Mizoram	1	5
30	Lakswadeep	-	1
	Unknown	447	19
Total		11855	51761

UT = Union territory

Table 11: Indian cities contributing to the world literature of agriculture as seen from *CAB Abstracts* 1998

No.	City/town	No. of papers
1	New Delhi	800
2	Bangalore	590
3	Hisar	482
4	Ludhiana	394
5	Coimbatore	346
6	Hyderabad	307
7	Lucknow	286
8	Jorhat	263
9	Jabalpur	263
10	Chennai	258
11	Izatnagar	251
12	Bhubaneswar	235
13	Karnal	228
14	Dharwad	219
15	Pantnagar	214
16	Calcutta	190
17	Anand	157
18	Mohanpur	157
19	Varanasi	153
20	Mumbai	152
21	Pune	150
22	Akola	142
23	Dehra Dun	138
24	Palampur	133
25	Tirupati	129
26	Nagpur	127
27	Ranchi	114
28	Trivandrum	108
29	Pusa	105
30	Raipur	105
31	Solan	102
32	Rahuri	93
33	Mysore	91
34	Patancheru	89
35	Madurai	86
36	Jodhpur	78

No.	City/town	No. of papers
37	Kanpur	76
38	Aligarh	70
39	Srinagar	70
40	Jaipur	65
41	Udaipur	61
42	Parabhani	63
43	Jhansi	58
44	Chandigarh	56
45	Shimla	56
46	Annamalainagar	55
47	Calicut	54
48	Meerut	52
49	Faizabad	53
50	Cuttack	45
51	Vellanikara	45
52	Indore	42
53	Bhopal	39
54	Port Blair	39
55	Mangalore	38
56	Peechi	38
57	Jammu Tawi	36
58	Bikaner	35
59	Avikanagar	34
60	Gorakhpur	34
61	Pondicherry	34
62	Santiniketan	34
63	Burdwan	33
64	Guwahati	32
65	Ahmedabad	32
66	Amritsar	32
67	Barapani	32
68	Cochin	30
69	Kottayam	30
70	Allahabad	29
71	Dapoli	28
72	Gwalior	28
73	Kharagpur	28
74	Kasaragod	27

No.	City/town	No. of papers
75	Tiruchirappalli	27
76	Valparai	27
77	Namakkal	26
78	Kalyani	25
79	Nainital	25
80	Anantapur	24
81	Agra	23
82	Kozhicode	23
83	Durg	21
84	Patna	21
85	Vadodara	21
86	Visakhapatnam	21
87	Canchipur	20
88	Mathura	19
89	Patiala	19
90	Rohtak	19
91	Roorkee	19
92	Sagar	19
93	Shahjahanpur	19
94	Aduthurai	18
95	Bidar	18
96	Raigarh	18
97	Shillong	18
98	Thrissur	18
99	Jalandhar	17
100	Mhow	17
101	Rajahmundry	17
102	Kayangulam	16
103	Vridhachalam	16
104	Berhampore	15
105	Imphal	15
106	Kurukshetra	15
107	Sehore	15
108	Trichur	15
109	Dibrugarh	14
110	Jobner	14
111	Mettupalayam	14
112	Sambalpur	14
113	Barrackpore	13

No.	City/town	No. of papers
114	Farah	13
115	Mukteswar	13
116	Nadia	13
117	Pudukkottai	13
118	Tiruchirappali	13
119	Vellore	13
120	Warangal	13
121	Almora	12
122	Bapatla	12
123	Cuddalore	12
124	Darjeeling	12
125	Palayankottai	12
126	Raichur	12
127	Shimoga	12
128	Berhampur	11
129	Bilaspur	11
130	Gulbarga	11
131	Guntur	11
132	Agartala	10
133	Chikmagalur	10
134	Keonjhar	10
135	Manipal	10
136	Rajkot	10
137	Rewa	10
138	Annand	9
139	Bareilly	9
140	Chhindwara	9
141	Gangtok	9
142	Goa	9
143	Gurgaon	9
144	Junagadh	9
145	Kolhapur	9
146	Nirjuli	9
147	Belgaum	8
148	Bijapur	8
149	Kinnaur	8
150	Mudigere	8
151	Siliguri	8

No.	City/town	No. of papers
152	Sirsi	8
153	Samastipur	8
154	Tuticorin	8
155	Aurangabad	7
156	Bajaura	7
157	Cooch Behar	7
158	Darbhanga	7
159	Dhule	7
160	Hanumanamatti	7
161	Kullu	7
162	Midnapore	7
163	Muzaffarpur	7
164	Palem	7
165	Pattambi	7
166	Pithoragarh	7
167	Sabour	7
168	Sirmour	7
169	Surat	7
170	Ujjain	7
171	Valvada	7
172	Baran	6
173	Bathinda	6
174	Coonoor	6
175	Dholi	6
176	Hardwar	6
177	Hazratbagh	6
178	Howrah	6
179	Kota	6
180	Kovilpatti	6
181	Lekhaoti	6
182	Navsari	6
183	Periyakulam	6
184	Pura	6
185	Puttur	6
186	Sakaleshpur	6
187	Sirugamani	6
188	Sriniketan	6
189	Tezpur	6
190	Tiptur	6

No.	City/town	No. of papers
191	Udgir	6
192	Veppankulam	6
193	Yavatmal	6
194	Baroda	5
195	Chundale	5
196	Dhaulakuan	5
197	Gandhinagar	5
198	Golagokarannath	5
199	Gurdaspur	5
200	Jalgaon	5
201	Khargone	5
202	Madhubani	5
203	Madikeri	5
204	Mandya	5
205	Nashik	5
206	North Lakhimpur	5
207	Ootacamund	5
208	Vellayani	5
209	Vijayawada	5
210	Ballia	4
211	Berthin	4
212	Bhagalpur	4
213	Bhavnagar	4
214	Etawah	4
215	Haldwani	4
216	Jind	4
217	Kangra	4
218	Killakulam	4
219	Lembucherra	4
220	Mahabaleshwar	4
221	Maruteru	4
222	Pdrauna	4
223	Rudrur	4
224	Solapur	4
225	Tadong	4
226	Thanjavur	4
227	Vallabh Vidyanagar	4
228	Ahmednagar	3
229	Alleppey	3

No.	City/town	No. of papers
230	Amaravati	3
231	Anakapalle	3
232	Arabhavi	3
233	Aruppukottai	3
234	Barauni	3
235	Bharatpur	3
236	Bhavanisagar	3
237	Buldhana	3
238	Charali	3
239	Chengalpattu	3
240	Dhanbad	3
241	Dirang	3
242	Dona Paula	3
243	Durgabetta	3
244	Faridabad	3
245	Itanagar	3
246	Jagdapur	3
247	Jalore	3
248	Jhargram	3
249	Kailasanadu	3
250	Kheri	3
251	Koraput	3
252	Kurnool	3
253	Lali	3
254	Latur	3
255	Leo	3
256	Modipuram	3
257	Moncompu	3
258	Moradabad	3
259	Munger	3
260	Muzaffar Nagar	3
261	Nanded	3
262	Padappai	3
263	Paiyur	3
264	Pattan	3
265	Pilani	3
266	Prasanthinilayam	3
267	Pratapgarh	3

No.	City/town	No. of papers
268	Pravaranagar	3
269	Rahara	3
270	Ranipet	3
271	Rishikesh	3
272	Secunderabad	3
273	Shahpur	3
274	Sriganganagar	3
275	Titabar	3
276	Wardha	3
277	Yercaud	3
278	Abohar	2
279	Annigeri	2
280	Balaghat	2
281	Barh	2
282	Bharuch	2
283	Bhilainagar	2
284	Bichpuri	2
285	Chaubattia	2
286	Chitrakoot	2
287	Chittorgarh	2
288	Dharmapuri	2
289	Hassan	2
290	Hiriyur	2
291	Idukki	2
292	Jagtial	2
293	Jaunpur	2
294	Jhabua	2
295	Kalol	2
296	Kapurthala	2
297	Karaikal	2
298	Karimnagar	2
299	Kashipur	2
300	Katol	2
301	Kendrapara	2
302	Kodathi	2
303	Kosi-Almora	2
304	Krishnapuram	2
305	Madhopur	2
306	Mannampandal	2

No.	City/town	No. of papers
307	Mashobra	2
308	Nagarjunanagar	2
309	Nauni	2
310	Nayagarh	2
311	Niphad	2
312	Ongole	2
313	Palghar	2
314	Panaji	2
315	Panniyur	2
316	Paramakudi	2
317	Poondi	2
318	Pulur	2
319	Saharanpur	2
320	Salem	2
321	Sarapaka	2
322	Seorahi	2
323	Sirsa	2
324	Sonapur	2
325	Sorbhog	2
326	Sunabeda	2
327	Tavanur	2
328	Thekkady	2
329	Tonk	2
330	Toopran	2
331	Ullal	2
332	Uthpamalayam	2
333	Vallanand	2
334	Vengurta	2
335	Waraseoni	2
336	Adyanadka	1
337	Aizawl	1
338	Ajmer	1
339	Alageswar	1
340	Alampur	1
341	Aliyar Nagar	1
342	Aliyarnagar	1
343	Alwarkurichi	1
344	Anakkayam	1
345	Anantharajupet	1

No.	City/town	No. of papers
346	Anantnag	1
347	Angamally	1
348	Aonla	1
349	Ayodhya	1
350	Azamgarh	1
351	Babralla	1
352	Badnapur	1
353	Bagalkot	1
354	Baheri	1
355	Bahraich	1
356	Banasthali	1
357	Bandipur	1
358	Bankura	1
359	Baramba	1
360	Barpeta	1
361	Bazpur	1
362	Bellary	1
363	Bhadrak	1
364	Bhalukpong	1
365	Bhanavasi	1
366	Bhawanipatna	1
367	Biharsharif	1
368	Biswnath Chariali	1
369	Bodh Gaya	1
370	Brahmavar	1
371	Bulandshahar	1
372	Chandrapur	1
373	Chatrapur	1
374	Chettalli	1
375	Chintamani	1
376	Chiplima	1
377	Churu	1
378	Cuddapah	1
379	Dahod	1
380	Darisai	1
381	Daulatpur	1
382	Daurala	1
383	Debipur	1

No.	City/town	No. of papers
384	Deesa	1
385	Dharani Nagar	1
386	Dhenkanal	1
387	Dindigul	1
388	Dumka	1
389	Durgapura	1
390	Eluru	1
391	Erode	1
392	Faridkot	1
393	Fodhpur	1
394	Gadag	1
395	Gadepan	1
396	Gandhigram	1
397	Garhwal	1
398	Garsa	1
399	Gaya	1
400	Ghaziabad	1
401	Giridih	1
402	Gondia	1
403	Gota	1
404	Guna	1
405	Hagari	1
406	Hapur	1
407	Harda	1
408	Hojai	1
409	Jaina	1
410	Jaisalmer	1
411	Jalna	1
412	Jalpaigur	1
413	Jalpaiguri	1
414	Jamshedpur	1
415	Jaora	1
416	Jashipur	1
417	Jhalda	1
418	Kakinada	1
419	Kalady	1
420	Kalahandi	1
421	Kalimpong	1

No.	City/town	No. of papers
422	Karjat	1
423	Karnprayag	1
424	Karvetinagar	1
425	Kathalagere	1
426	Kathua	1
427	Khairagarh	1
428	Khammam	1
429	Khanaparsa	1
430	Khatauli	1
431	Khatiguda	1
432	Kodaikanal	1
433	Kodinar	1
434	Koppa	1
435	Kukma	1
436	Kukumseri	1
437	Kumta	1
438	Madhira	1
439	Makhdoom	1
440	Mandla	1
441	Mandsaur	1
442	Mannuthy	1
443	Mariani	1
444	Mawana	1
445	Mayurbhanj	1
446	Medziphema	1
447	Melagaram	1
448	Melalathur	1
449	Midnapur	1
450	Modinagar	1
451	Mohali	1
452	Morena	1
453	Mugad	1
454	Munnar	1
455	Nabha	1
456	Nagani	1
457	Narkatia Gan	1
458	Navegaon Bandh	1
459	Nellore	1

No.	City/town	No. of papers
460	Neyveli	1
461	Nileshwar	1
462	Noida	1
463	Padegaon	1
464	Palakkad	1
465	Palli	1
466	Palode	1
467	Panchkula	1
468	Pathanamthitta	1
469	Perumbarai	1
470	Perundurai	1
471	Phulbani	1
472	Pottangi	1
473	Rae Bareli	1
474	Raghavendra Nagar	1
475	Rajendranagar	1
476	Rajkanika	1
477	Rajnagar	1
478	Ramanathapuram	1
479	Rangat	1
480	Ranikhet	1
481	Rauzagaon	1
482	Ropar	1
483	Rotak	1
484	Rourkela	1
485	Rudrapur	1
486	Sangla	1
487	Saran	1
488	Sasaram	1
489	Satna	1
490	Shahranpur	1
491	Shankaraghatta	1
492	Simbhaoli	1
493	Sindri	1
494	Singh Nagar	1
495	Sivagangai	1
496	Sivakasi	1
497	Sivgamani	1
498	Sonari	1

No.	City/town	No. of papers
499	Sonitpur	1
500	Srinivasnagar	1
501	Srivilliputtur	1
502	Sunder Nagar	1
503	Surajkund	1
504	Tanuku	1
505	Targhadia	1
506	Thadiyankudisai	1
507	Thadiyoor	1
508	Thane	1
509	Theni	1
510	Tirunelveli	1
511	Titabor	1
512	Udayagiri	1
513	Udipur	1
514	Ugarkhurd	1
515	Ujhani	1
516	Umerkote	1
517	Umiam	1
518	Vadgaon-Maval	1
519	Vaniyambadi	1
520	Vasad	1
521	Velur	1
522	Vendiperiyar	1
523	Virinjipuram	1
524	Virudhunagar	1
525	Vizianagaram	1
526	Walchandnagar	1
527	Waltair	1
528	Waranangar	1
529	Washim	1
530	Wayanad	1
531	Yeotmal	1
	Unknown	28
	Address not given	425
Total		11855

Table 11A: Leading Indian cities contributing to the world literature of agriculture [*CAB Abstracts* 1998 and 1990-94]

No.	City/town	No. of papers	
		1998	1990-94
1	New Delhi	800	3664
2	Bangalore	590	2086
3	Hisar	482	2545
4	Ludhiana	394	2636
5	Coimbatore	346	1666
6	Hyderabad	307	1643
7	Lucknow	286	1245
8	Jorhat	263	483
9	Jabalpur	263	754
10	Chennai	258	950
11	Izatnagar	251	923
12	Bhubaneswar	235	642
13	Karnal	228	1180
14	Dharwad	219	784
15	Pantnagar	214	938
16	Calcutta	190	904
17	Anand	157	821
18	Mohanpur	157	1013
19	Varanasi	153	740
20	Mumbai	152	688
21	Pune	150	664
22	Akola	142	563
23	Dehra Dun	138	883
24	Palampur	133	668
25	Tirupati	129	439
26	Nagpur	127	418
27	Ranchi	114	518
28	Trivandrum	108	450
29	Pusa	105	452
30	Raipur	105	198

**Table 12A: India's contribution to the world literature of agriculture as seen from *CAB Abstracts* 1998
categorised by subfield and institution**

Institution →	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Total
Subfield																				
Pests Pathogens and Biogenic Diseases of Plants	47	51	82	29	48	47	0	48	17	26	0	15	15	16	23	16	18	37	24	559
Plant Breeding and Genetics	45	35	71	28	32	25	0	28	28	18	0	16	24	19	10	10	20	7	5	421
Plant Production	27	32	18	28	26	20	0	31	17	14	0	5	12	24	11	12	16	8	7	308
Control by Chemicals and Drugs	24	20	29	13	22	7	5	16	11	14	2	9	11	4	2	6	11	12	8	226
Parasites, Vectors, Pathogens and Biogenic Diseases of Animals	33	31	1	7	1	17	71	1	8	0	1	1	1	2	9	2	0	0	0	186
Forestry (General)	10	5	2	8	4	0	0	1	2	2	0	0	0	1	0	1	0	1	3	40
Fertilizers and other Amendments	13	17	19	6	15	9	0	5	4	11	0	4	7	7	6	2	5	5	1	136
Plant Physiology and Biochemistry	10	20	27	5	9	1	0	8	5	1	0	11	6	0	1	0	4	3	1	112
Parasites, Vectors, Pathogens and Biogenic Diseases of Humans	1	1	0	0	0	0	2	0	1	0	0	9	6	0	0	0	0	0	0	20
Animal Reproduction and Development	12	9	0	3	0	12	23	0	4	0	25	5	3	2	1	4	0	0	0	103
Plant Composition	7	7	5	0	4	2	1	3	0	0	1	6	0	0	1	0	0	0	2	39
Milk and Dairy Produce	5	3	0	5	0	0	1	0	3	2	42	1	0	1	0	16	0	0	1	80
Weeds and Noxious Plants	5	4	3	5	5	2	0	6	1	3	0	2	6	3	7	0	3	2	1	58
Silviculture	5	1	0	3	0	1	0	3	1	0	0	0	1	0	0	0	1	0	8	24
Soil Water Management	9	9	2	5	5	2	0	0	3	3	0	0	2	4	2	7	1	1	1	56
Crop Produce	8	5	2	4	0	1	0	5	0	2	0	0	1	3	1	0	1	0	4	37
Soil Chemistry and Mineralogy	14	5	15	1	6	6	0	1	2	3	0	3	1	2	0	0	1	1	0	61
Plant Cropping Systems	2	1	5	2	3	2	0	3	5	8	0	2	5	3	1	3	3	1	0	49
Animal Physiology and Biochemistry (Excluding Nutrition)	9	6	1	0	0	8	6	0	4	1	8	2	5	0	4	11	0	0	0	65
Animal Disorders (Not caused by Organisms)	6	12	0	6	0	3	12	0	1	0	0	0	1	2	10	1	2	0	0	56

Subfield	Institution →	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Total
Mycorrhizas and Fungi of Economic Importance; Symbiotic Nitrogen Fixation		10	1	5	2	2	1	0	2	3	4	0	3	4	0	0	1	5	0	1	44
In vitro Culture of Plant Material		1	2	4	3	1	2	0	5	3	0	0	2	1	0	0	0	0	0	0	24
Animal Toxicology, Poisoning and Pharmacology		3	11	0	2	1	2	15	0	5	0	1	0	2	1	0	0	1	0	0	44
Plant Propagation		0	1	1	3	2	1	0	3	0	4	0	2	0	2	1	0	0	1	4	25
Animal Husbandry (Dairy)		8	1	1	1	0	3	11	0	0	0	15	0	0	2	0	3	0	0	0	45
Plant Morphology and Structure		2	2	1	7	1	4	0	2	3	2	0	0	4	0	2	1	1	1	0	33
Plant Nutrition		4	3	5	3	2	0	0	1	1	4	0	1	1	5	1	1	0	4	0	36
Soil Biology		10	2	4	1	4	2	0	2	1	2	0	8	2	3	2	0	1	0	1	45
Animal Treatment and Diagnosis		4	4	0	3	0	1	17	0	9	3	0	0	0	0	2	2	0	0	0	45
Animal Nutrition (Physiology)		9	3	0	0	0	2	7	0	4	0	10	0	1	1	1	0	0	0	0	38
Animal Nutrition (Production Responses)		7	4	1	1	0	2	10	0	3	0	1	0	0	0	0	0	1	0	0	30
Total		350	308	304	184	193	185	181	174	149	127	106	107	122	107	98	99	95	84	72	3045

A - Chaudhary Charan Singh Haryana Agricultural University, Hisar
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 F - Assam Agricultural University, Jorhat
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Table 12B: India's contribution to the world literature categorised by major area and institution [Source: CAB Abstracts 1998]

subfield	institution →	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Total
Plants of Economic Importance (General), FF		169	164	238	120	139	110	1	148	83	88	1	73	78	72	62	45	71	66	54	1782
Animal Science, LL		97	91	6	32	2	57	192	3	47	8	84	11	19	12	31	26	5	1	1	725
Soil Science, JJ		51	43	50	17	33	25	0	12	14	20	0	15	14	22	10	11	10	9	4	360
Pathogen, Pest and Parasite Management (General), HH		34	29	38	24	29	10	6	19	12	15	2	9	11	7	3	7	11	22	10	298
Food Science and Food Products, QQ		21	10	5	11	0	3	5	5	4	5	44	1	1	4	2	17	2	1	5	146
Forestry, Forest Products & Agroforestry, KK		22	7	2	11	5	2	1	5	8	3	0	1	1	3	0	2	2	1	17	93
Economics (General), EE		8	7	3	11	3	2	2	7	13	8	1	1	6	1	3	5	4	1	1	87
Natural Resources (General), PP		5	11	7	2	5	2	1	4	6	3	1	7	1	3	2	0	6	0	1	67
Human Health and Hygiene (General), VV		10	4	0	3	0	2	2	1	5	0	2	17	6	0	0	0	0	0	0	52
Auxiliary Disciplines, ZZ		4	2	11	3	7	0	2	1	2	0	2	2	1	0	5	4	0	2	0	48
Engineering and Safety, NN		3	5	3	6	9	0	1	1	0	0	1	0	0	4	1	0	5	0	0	39
Forage & Feed Products (Non-human), RR		2	8	0	1	0	0	8	0	2	0	9	0	1	0	0	1	0	0	0	32
Agricultural Products (General), SS		6	0	8	2	2	2	0	1	1	0	0	1	1	0	0	0	0	0	1	25
Sociology (General), UU		3	3	0	2	1	1	0	3	1	2	1	2	1	2	0	1	0	0	0	23
Wastes (General), XX		4	4	2	0	3	0	0	0	1	0	0	0	0	2	1	0	0	0	0	17
Professions, Education, Information and Training (General), CC		1	1	0	5	0	4	0	2	0	0	1	0	0	1	0	0	0	0	0	15
Aquatic Sciences, MM		1	1	0	3	0	1	0	1	2	0	0	3	0	1	0	0	0	0	0	13
Agriculture (General), AA		0	0	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	5
Biotechnology, WW		0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3
		441	390	376	253	238	222	221	213	201	153	151	143	141	134	120	119	116	104	94	3830

A - Chaudhary Charan Singh Haryana Agricultural University, Hisar
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S - Dr. Y.S. Parmar University of Horticulture and Aromatic Plants

Table 13. Contribution to selected Indian journals by major publishing institutions
 [Source: *CAB Abstracts* 1998]

journal	institution →	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Total
Karnataka-Journal-of-Agricultural-Sciences.		0	0	0	17	0	0	0	127	0	0	0	0	0	0	0	0	2	0		146
Indian-Journal-of-Animal-Sciences.		16	20	2	1	0	8	27	0	8	0	10	0	11	0	4	3	0	0	0	110
Indian-Veterinary-Journal.		10	16	0	11	0	18	28	0	6	0	2	0	1	4	6	6	1	0	0	109
Indian-Journal-of-Agricultural-Sciences.		5	6	9	2	5	7	0	3	5	4	0	1	6	0	6	6	7	10	2	84
Environment-and-Ecology.		3	9	0	0	0	2	0	0	0	29	0	4	3	0	1	0	25	1	0	77
Indian-Journal-of-Agronomy.		7	3	12	0	5	3	0	0	6	4	0	2	9	1	8	4	9	1	0	74
PKV-Research-Journal.		0	0	1	0	0	3	0	0	0	0	0	0	0	62	0	0	0	3	0	69
Crop-Research-Hisar.		9	0	4	9	1	6	0	4	3	1	0	3	8	7	2	0	5	0	1	63
Journal-of-the-Indian-Society-of-Soil-Science.		6	11	15	1	7	3	0	1	3	3	0	3	0	2	4	0	0	1	2	62
Insect-Environment.		0	8	0	4	4	7	0	3	2	1	0	1	0	7	5	2	1	13	2	60
Annals-of-Agricultural-Research.		3	2	23	0	3	7	0	1	9	4	0	1	1	0	2	2	1	0	1	60
Indian-Journal-of-Dairy-Science.		4	1	1	1	0	2	12	0	0	0	26	0	1	0	0	6	0	0	0	54
Madras-Agricultural-Journal.		0	1	0	2	47	0	0	2	0	1	0	0	0	0	0	0	0	0	0	53
Agricultural-Science-Digest-Karnal.		9	2	4	1	10	1	0	4	5	1	0	0	8	3	1	1	1	0	1	52
Indian-Phytopathology.		6	3	14	0	4	2	0	2	4	2	0	1	1	0	3	1	1	0	3	47
Indian-Journal-of-Genetics-and-Plant-Breeding.		3	5	18	1	0	1	0	0	3	1	0	1	1	1	2	1	1	0	0	39
Indian-Journal-of-Experimental-Biology.		4	2	10	0	0	2	5	0	1	0	2	4	1	1	0	0	0	0	0	32
Advances-in-Plant-Sciences.		0	1	0	0	2	1	0	0	1	1	0	3	14	0	0	0	0	1	1	25
Current-Science.		0	0	8	4	0	0	1	1	1	0	0	4	2	0	0	1	0	0	1	23
Indian-Journal-of-Forestry.		6	1	0	0	0	0	0	0	3	0	0	1	0	0	0	2	0	0	4	17
Journal-of-Maharashtra-Agricultural-Universities.		0	0	2	2	0	0	0	3	0	0	0	1	0	1	0	0	0	0	0	9
Indian-Forester.		0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	8
Journal-of-Medicinal-and-Aromatic-Plant-Sciences.		1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	4
Total		92	93	124	56	88	73	73	151	61	52	40	31	67	89	44	35	52	33	23	1277

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|---|---|---|---|---|--|
| A | - | Chaudhary Charan Singh Haryana Agricultural University, Hisar | K | - | Natioanl Diary Research Institute, Karnal |
| B | - | Punjab Agricultural University, Ludhiana | L | - | Banaras Hindu University, Varanasi |
| C | - | Indian Agricultural Research Institute, New Delhi | M | - | Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur |
| D | - | University of Agricultural Sciences, Bangalore | N | - | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola |
| E | - | Tamil Nadu Agricultural University, Coimbatore | O | - | Himachal Pradesh Krishi Vishvavidyalaya, Palampur |
| F | - | Assam Agricultural University, Jorhat | P | - | Gujarat Agricultural University, Anand |
| G | - | Indian Veterinary Research Institute, Izatnagar | Q | - | Orissa University of Agriculture and Technology, Bhubaneswar |
| H | - | University of Agricultural Sciences, Dharwad | R | - | Indian Institute of Horticultural and Forestry, Bangalore |
| I | - | G.B. Pant University of Agriculture and Technology, Pantnagar | S | - | Dr. Y.S. Parmar University of Horticulture and Aromatic Plants |
| J | - | Bidan Chandra Krishi Viswavidyalaya, Mohanpur | | | |

Table 13A. Contribution to selected foreign journals by major publishing institutions
 [Source: *CAB Abstracts* 1998]

Journal	institution →	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Total
International-Rice-Research-Notes.		1	1	6	1	8	1	0	0	5	0	0	3	0	0	1	0	0	0	0	27
Biologia-Plantarum.		3	1	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	12
Buffalo-Journal		2	10	0	0	0	0	7	0	1	0	4	0	0	0	0	4	0	0	0	28
Cruciferae-Newsletter.		11	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	15
Phytochemistry..		1	2	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6
Journal-of-Agronomy-and-Crop-Science.		0	1	7	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	10
Total		18	16	21	1	9	1	7	0	6	0	4	8	1	0	1	4	0	1	0	98

A - Chaudhary Charan Singh Haryana Agricultural University, Hisar
 B - Punjab Agricultural University, Ludhiana
 C - Indian Agricultural Research Institute, New Delhi
 D - University of Agricultural Sciences, Bangalore
 E - Tamil Nadu Agricultural University, Coimbatore
 F - Assam Agricultural University, Jorhat
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Table 14: India's contribution to the world literature categorised by institution and journal impact factor*
 [Source: *CAB Abstracts 1998*]

Institution	Impact factor→	A	B	C	D	E	F	G	H	Total
Chaudhary Charan Singh Haryana Agricultural, Hisar		373	75	16	6	3	0	0	0	473
Punjab Agricultural University, Ludhiana		312	52	22	3	1	0	0	0	390
Indian Agricultural Research Institute, New Delhi		297	52	13	8	1	4	3	0	378
University of Agricultural Sciences, Bangalore		235	11	5	1	1	0	0	0	253
Tamil Nadu Agricultural University, Coimbatore		222	14	2	1	0	0	0	0	239
Assam Agricultural University, Jorhat		202	25	2	0	0	0	0	0	229
Indian Veterinary Research Institute, Izatnagar		176	34	8	2	1	0	0	0	221
University of Agricultural Sciences, Dharwad		206	5	1	1	0	0	0	0	213
G. B. Pant University of Agriculture and Technology, Pantnagar		176	31	4	1	0	0	0	0	212
Bidhan Chandra Krishi Viswavidyalaya, Mohanpur		141	10	2	0	0	0	0	0	153
National Dairy Research Institute, Karnal		128	11	5	5	2	1	0	0	152
Banaras Hindu University, Varanasi		92	27	12	8	4	3	4	0	150
Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur		99	30	3	4	4	1	0	1	142
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola		135	1	0	0	0	0	0	0	136
Himachal Pradesh Krishi Vishwavidyalaya, Palampur		99	24	3	1	0	0	0	0	127
Gujarat Agricultural University, Anand		101	18	0	0	0	0	0	0	119
Orissa University of Agriculture and Technology, Bhubaneswar		96	16	0	1	0	0	0	0	113
Indian Institute of Horticultural Research, Bangalore		84	16	1	2	1	0	0	0	104
		3174	452	99	44	18	9	7	1	3804

* Only journals with impact factor up to 3.5 are included in this table.
 See the text for journals with IF > 3.5.

A - 0.000 E - > 1.500 ≤ 2.000
 B - > 0.000 ≤ 0.500 F - > 2.000 ≤ 2.500
 C - > 0.500 ≤ 1.000 G - > 2.500 ≤ 3.000
 D - > 1.000 ≤ 1.500 H - > 3.000 ≤ 3.500

Table 15: Papers published by Indian researchers in journals of impact factor higher than 3.5

Journal title [Publishing institution]	Impact factor JCR - 1997	No. of Papers
<i>FEBS Letters</i>		
Indian Institute of Science, Bangalore	3.504	2
National Institute of Immunology, New Delhi	3.504	2
All India Institute of Medical Sciences, New Delhi	3.504	1
<i>Plant Physiology</i>		
International Centre for Genetic Engineering and Biotechnology, Aruna Asaf Ali Marg, New Delhi 110 067, India.	4.311	1
School of Life Sciences, Jawaharlal Nehru University, New Delhi 110067, India.		1
Department of Genetics, University of Delhi, South Campus, Benito Juarez Road, New Delhi 110021, India.		1
Department of Plant Sciences, School of Biological Sciences, Madurai Kamaraj University, Madurai 625 021, India.		1
Plant Molecular Biology Unit, Division of Biochemical Sciences, National Chemical Laboratory, Pune 411 008, India.		1
<i>Critical Reviews in Plant Sciences</i>		
Centre for Plant Molecular Biology and Department of Plant Molecular Biology, University of Delhi South Campus, Benito Juarez Road, New Delhi 110021, India.	4.606	1
Molecular Biophysics Unit, Indian Institute of Science, Bangalore 560012, India.		1
<i>Infection and Immunity</i>		
International Centre for Genetic Engineering and Biotechnology, New Delhi 110067, India.	3.713	1
International Centre for Genetic Engineering and Biotechnology, Aruna Asaf Ali Marg, New Delhi 110067, India.		1
<i>Journal of Biological Chemistry</i>		
Centre for Plant Molecular Biology, School of Life Sciences, Jawaharlal Nehru University, New Delhi 110067, India.	6.963	1
Molecular Biophysics Unit, Indian Institute of Science, Bangalore 560012, India.		1
<i>Journal of Clinical Microbiology</i>		
Department of Microbiology, Maulana Azad Medical College, New Delhi, India.	3.783	1*
Department of Microbiology, Lokmanya Tilak Municipal Medical College and Hospital, Sion, Mumbai 400 022, India.		1

Journal title [Publishing institution]	Impact factor JCR - 1997	No. of Papers
<i>Parasitology Today</i>		
International Centre for Genetic Engineering and Biotechnology, New Delhi, India.	5.189	1**
School of Environmental Sciences, Jawaharlal Nehru University, New Mehrauli Road, New Delhi 110067, India.		1
<i>AIDS</i>		
Department of International Health, School of Hygiene and Public Health, Chennai, India.	5.050	1
<i>Analytical Chemistry Washington</i>		
Bio-organic Chemistry Laboratory, National Institute of Immunology, Aruna Asaf Ali Marg, JNU Complex, New Delhi 110 067, India.	4.743	1
<i>American Journal of Clinical Nutrition</i>		
Department of Physiology, Nutrition Research Center, St John's Medical College, Bangalore, India.	3.980	1
<i>Trends in Ecology and Evolution</i>		
Centre for Ecological Sciences, Indian Institute of Science, Bangalore 560 012, India.	6.678	1
<i>Virology New York</i>		
Department of Microbiology and Cell Biology, Indian Institute of Science, Bangalore 560 012, India.	3.540	1
<i>Journal of Molecular Biology</i>		
Molecular Biophysics Unit, Indian Institute of Science, Bangalore 560 012, India.	5.673	1
<i>Molecular Pharmacology</i>		
Molecular Parasitology Laboratory, Indian Institute of Chemical Biology, Calcutta 700 032, India.	4.921	1

All of these are journal articles, except

* correspondence,

** Conference paper, journal article

Table 16: India's contribution to the world literature categorised by major area and journal [Source: CAB Abstracts 1998]

Subfield	Journal->	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Total
Plants of Economic Importance (General), FF		0	137	89	128	0	117	28	113	111	61	64	6	111	78	95	72	79	59	0	82	0	58	40	70	10	1608
Animal Sciences, LL		336	1	24	1	157	11	0	1	0	12	41	0	0	2	0	0	0	0	0	0	51	1	7	2	0	647
Soil Science, JJ		0	39	24	17	0	1	126	33	16	8	2	4	16	19	5	18	1	15	1	1	0	4	12	0	2	364
Forestry, Forest Products and Agroforestry, KK		0	3	9	2	1	2	1	2	5	10	3	115	1	2	9	3	2	1	1	0	0	5	2	1	52	232
Pathogen, Pest and Parasite Management, HH		11	14	16	11	4	24	2	6	6	6	7	4	3	7	6	4	10	6	0	0	0	1	3	3	2	156
Economics (General), EE		1	1	5	5	1	0	0	2	3	5	0	3	0	2	0	4	0	1	56	0	1	1	0	0	0	91
Natural Resources (General), PP		1	4	13	3	2	4	4	2	3	12	0	18	0	3	2	2	1	2	2	0	0	1	2	0	6	87
Food Science and Food Products, QQ		4	1	3	9	3	0	0	0	0	2	5	0	1	0	0	4	0	2	2	0	26	2	3	0	0	67
Auxiliary Disciplines, ZZ		0	1	2	1	1	3	4	0	0	3	2	5	1	5	0	1	7	0	0	0	1	1	0	0	1	39
Human Health and Hygiene (General), VV		1	0	2	2	0	3	0	0	0	15	7	0	0	0	0	2	0	0	1	0	0	1	0	0	0	34
Sociology (General), UU		0	0	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	19	0	0	0	2	0	0	25
Agricultural Products (General), SS		0	0	0	2	0	1	0	0	2	1	4	0	1	0	1	0	0	2	1	0	0	3	1	0	0	19
Aquatic Science, MM		0	0	3	1	2	1	0	0	0	2	4	1	0	0	0	0	0	0	1	0	0	0	0	0	1	16
Engineering and Safety, NN		0	1	1	4	0	0	1	0	2	0	0	0	0	2	0	1	0	0	0	0	0	0	4	0	0	16
Biotechnology, WW		0	3	0	0	2	0	0	0	0	6	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	15
Forage and Feed Products (Non-human), RR		0	0	2	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	12
		354	205	193	188	179	167	166	159	150	144	141	156	134	120	118	111	100	88	86	83	80	79	77	76	74	3428

A	-	Indian-Veterinary-Journal.	M	-	Annals-of-Agricultural-Research.
B	-	Indian-Journal-of-Agricultural-Sciences.	N	-	Madras-Agricultural-Journal.
C	-	Environment-and-Ecology.	O	-	Advances-in-Plant-Sciences.
D	-	Karnataka-Journal-of-Agricultural-Sciences.	P	-	Journal-of-Maharashtra-Agricultural-Universities
E	-	Indian-Journal-of-Animal-Sciences.	Q	-	Indian-Phytopathology.
F	-	Insect-Environment.	R	-	Agricultural-Science-Digest-Karnal.
G	-	Journal-of-the-Indian-Society-of-Soil-Science.	S	-	Economic-and-Political-Weekly.
H	-	Indian-Journal-of-Agronomy.	T	-	International-Rice-Research-Notes.
I	-	Crop-Research-Hisar.	U	-	Indian-Journal-of-Dairy-Science.
J	-	Current-Science.	V	-	Journal-of-Medicinal-and-Aromatic-Plant-Sciences.
K	-	Indian-Journal-of-Experimental-Biology..	W	-	PKV-Research-Journal.
L	-	Indian-Forester.	X	-	Indian-Journal-of-Genetics-and-Plant-Breeding
			Y	-	Indian-Journal-of-Forestry.

Figures

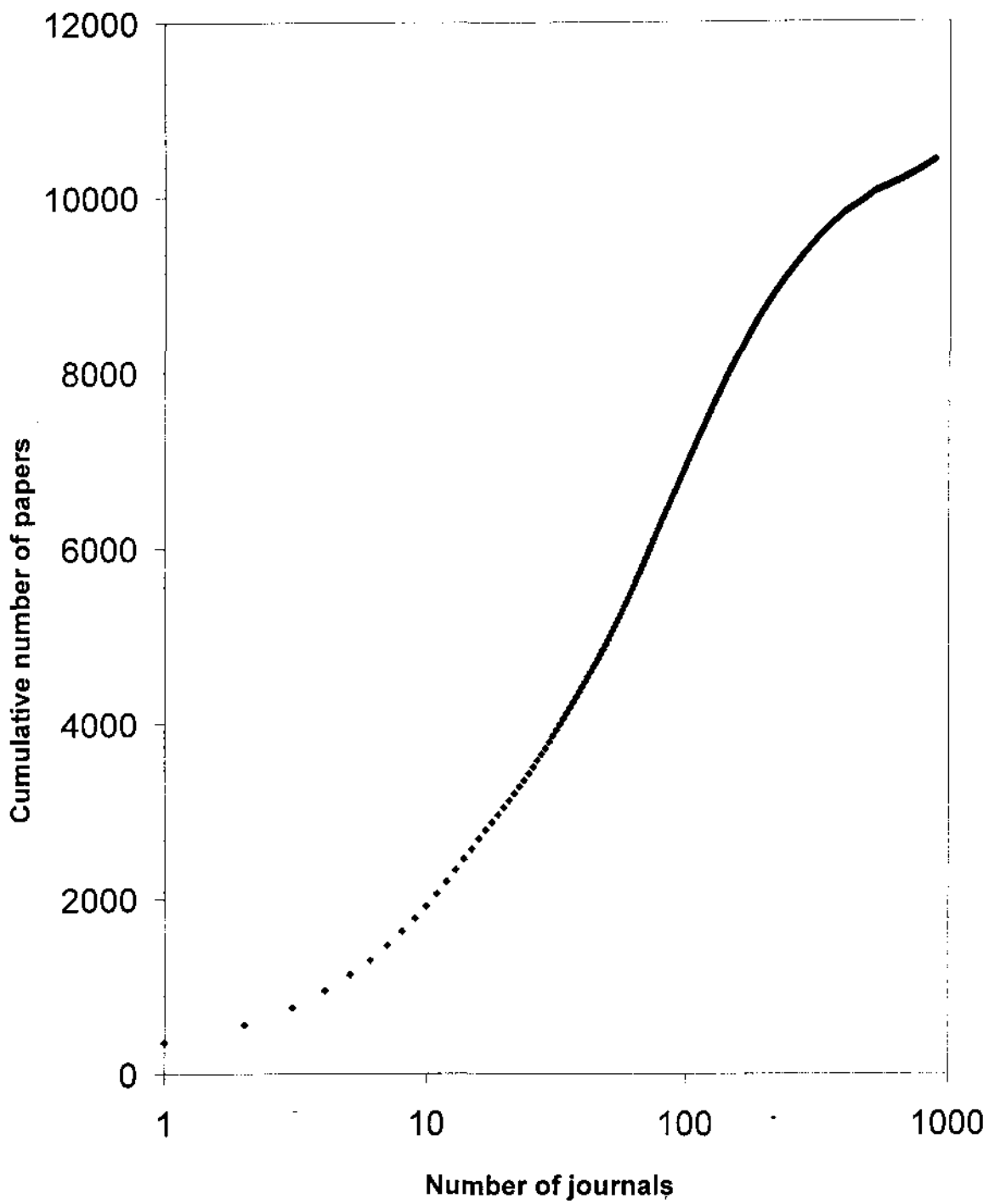


Fig. 1. Number of journals vs. cumulative number of Indian papers

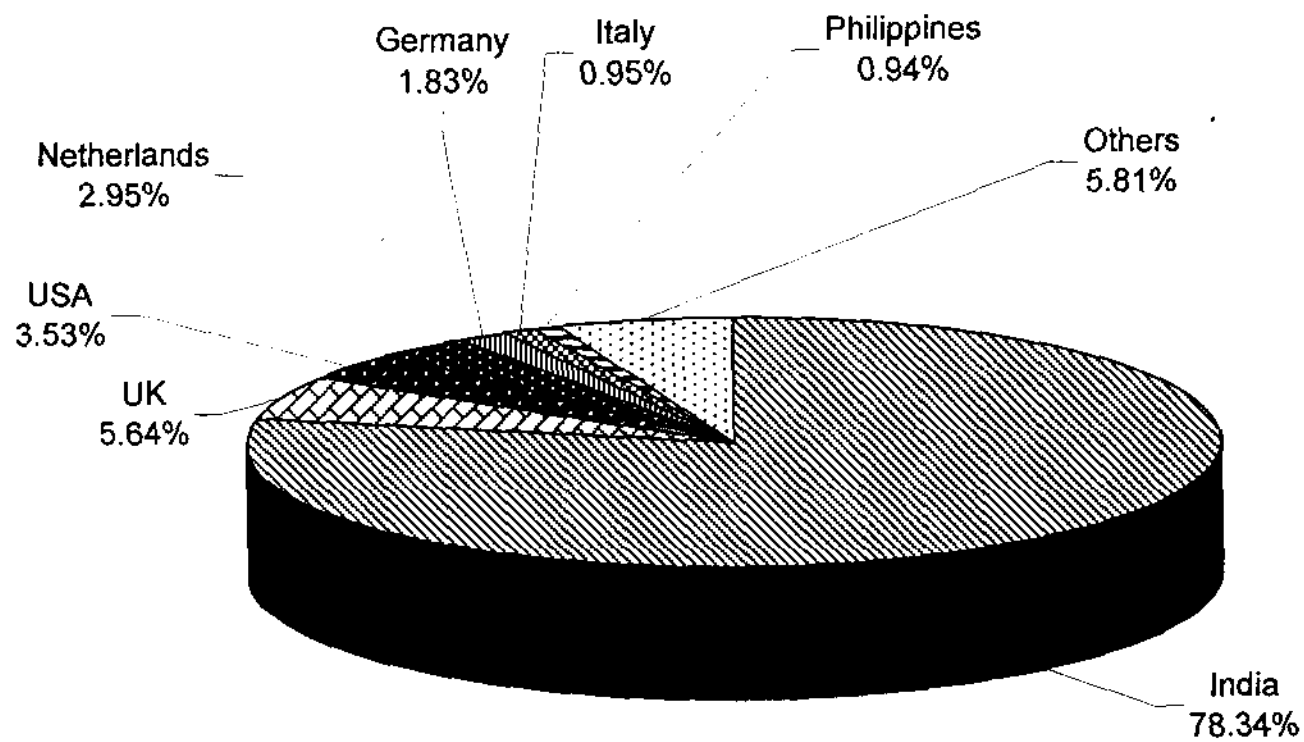


Fig. 2. Distribution of Indian research papers indexed in CAB Abstracts - 1998 by journal country

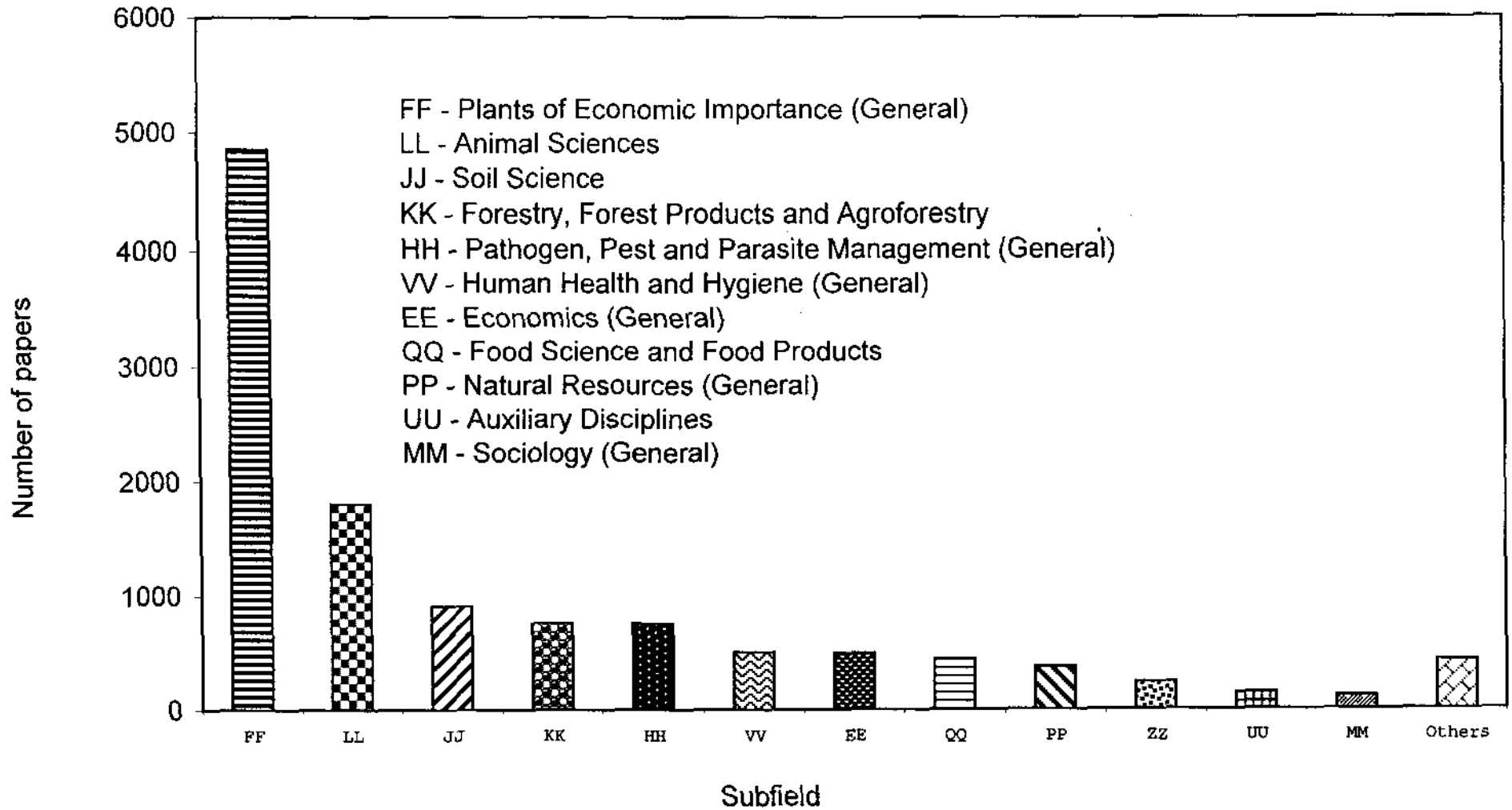


Fig . 3. Subfields vs. number of papers

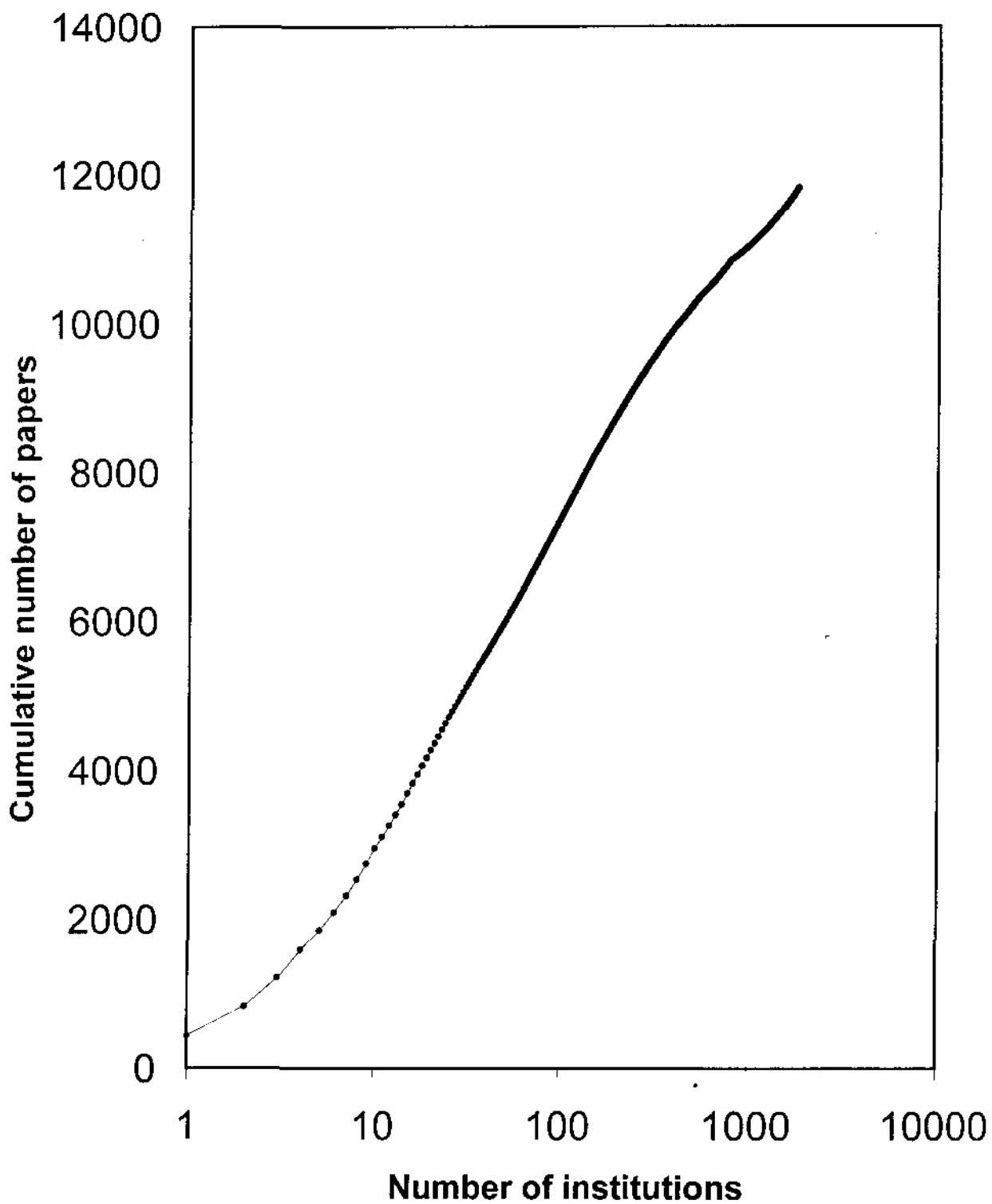


Fig. 4. Number of institutions vs. cumulative number of Indian papers

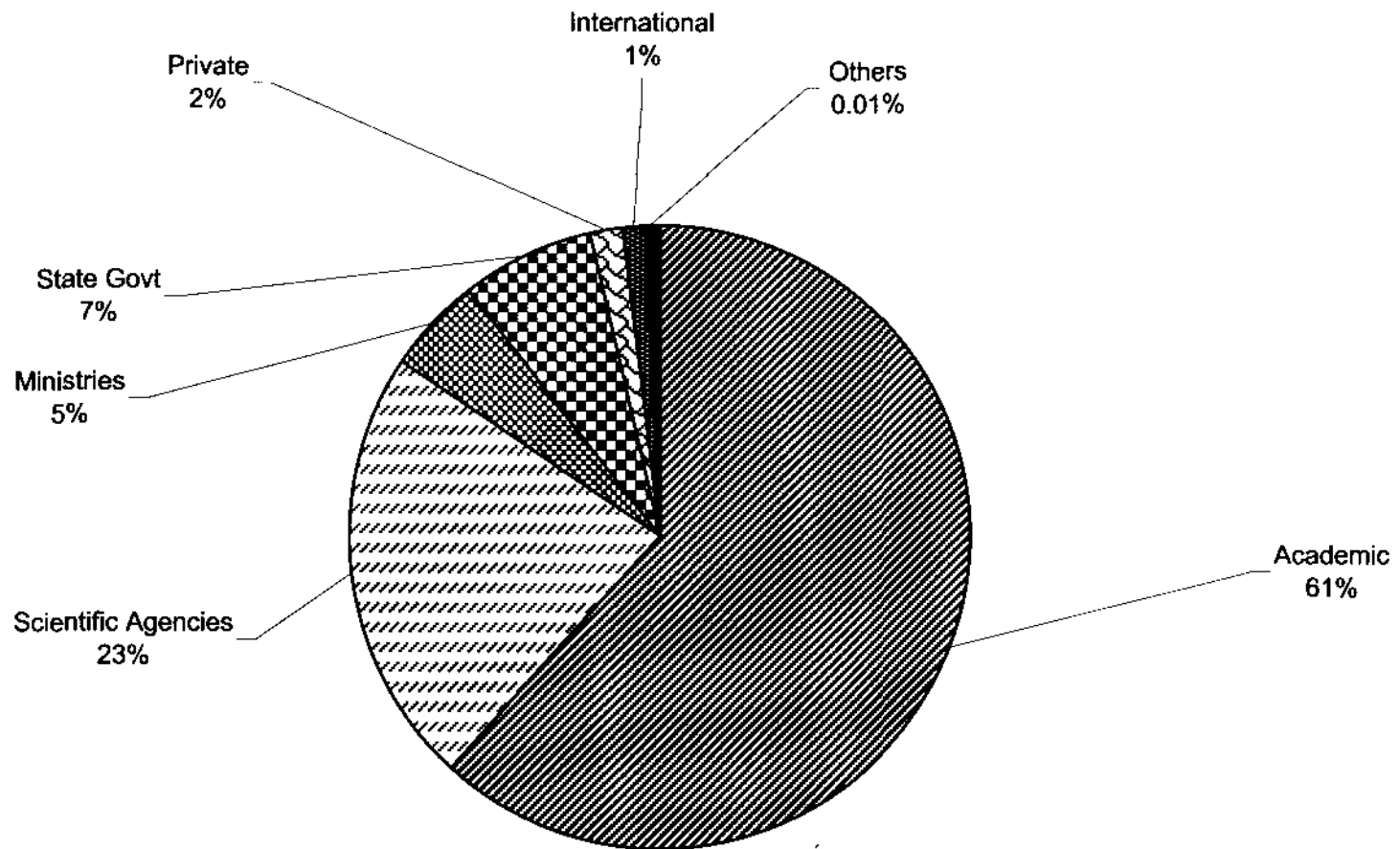


Fig. 5. Contributions to agricultural research by different types of organizations