

History of the Division of Agrochemicals 1976–2001

NANCY N. RAGSDALE

Agricultural Research Service, U.S. Department of Agriculture, George Washington Carver Center,
 5601 Sunnyside Avenue, 4-2108, Beltsville Maryland 20705-5140

The Division of Agrochemicals began in 1951 as the Pesticides Subdivision in the Division of Agricultural and Food Chemistry. This subdivision gained probationary divisional status in 1969 as the Division of Pesticide Chemistry, and full status was approved in 1970. In 1985 the name was officially changed to the Division of Agrochemicals to encompass new approaches to pest control including biotechnology in addition to behavior- and growth-modifying chemicals. The Division's activities are primarily focused on the subject areas of chemistry that are the most relevant to pest management and to other methods for enhancing or modifying agricultural productivity including analytical chemistry, synthetic organic and inorganic chemistry, formulation chemistry, biological chemistry, natural product chemistry, environmental chemistry, toxicology (including human and environmental risk assessment factors), biotechnology, and, now, fertilizers. In 2000 the ACS Council officially dissolved the Fertilizer Division and all of their members were welcomed to join the Agrochemicals Division, forming a Fertilizers Subdivision.

GOVERNANCE

The Division operates under a set of bylaws. In Spring 1999 a revised set of bylaws was discussed and approved at the general governance meeting. In Fall 1999 these were accepted for submission to the ACS Committee on Bylaws and subsequently approved. The governing structure has remained essentially the same since 1976. The divisional officers include a Chair, Chair-elect, Vice Chair, Secretary, and Treasurer; the Vice Chair, Secretary, and Treasurer are elected annually. Traditionally the Secretary and Treasurer are renominated and thus usually serve several terms. The Vice Chair becomes Chair-elect the following year, and the year after that, becomes Chair, thus serving one year in each of these offices. The Chair-elect serves as Program Chair. Until the ACS instituted the current on-line program development management system for national meetings, the Program Chair position was the true test of fire for survival to the office of Chair. Currently three individuals and three alternates are elected in staggered succession to the ACS Council, each for a three-year term. There is an executive committee composed of the officers, the immediate past chair, councilors, and 15 elected members. When the Fertilizers Subdivision is officially formed, their officers will become part of the executive committee. As of Spring 2001, the executive committee has been expanded twice since 1976. In 1984 it was increased from 8 to 12 elected members, each having a three-year term. In 1990 it was expanded to 15 elected members. Job descriptions have been developed for all of the officers and councilors as well as the executive committee. Until Spring 1989

the Division held separate meetings for the program committee, executive committee, and the general business session. These all took place during the ACS National Meeting and consumed a great deal of time with a great deal of repetition from one of these divisional meetings to the others. In 1989 a proposal passed that these three meetings would run sequentially on the Sunday at the beginning of the National Meeting. Thus, what is called the combined governance meeting was initiated at the Fall 1989 meeting, and this meeting structure, which was found to be quite efficient, has been followed since that time.

MEMBERSHIP

The Division of Pesticides was organized to bring together people interested in the chemistry of pesticides and provide a forum for consideration of all aspects of pest management chemicals. This has been expanded somewhat with the change in the name of the Division as well as the addition of membership from the former Fertilizer Division. The 2000 membership of the Division indicated that 69% hold degrees (bachelor, master, and doctorate) in chemistry and 31% in non-chemistry fields. In Spring 2000 the composition of the membership was as follows: 45% in manufacturing (chemical industry), 16% in independent contracting/consulting, 16% in academia, 10% in government, and 13% in other areas, retired, or unemployed.

In Fall 1981, the composition of the Division was reported as 47% in manufacturing (industry), 21% in academia, 20% in government, and 12% in other areas, retired, or unemployed.

Membership in the Division showed steady increases from 1976 to 1993. In 1976 it was ~1000; by 1993 it was 2084. A membership decline began at that time and has continued to the present so that in Spring 2000 there were 1630 members. The Division stands to gain ~250 members from the former Fertilizer Division; however, there is still concern about an overall decline. This trend undoubtedly reflects trends in the agrochemical industry. Sales have been somewhat flat, companies have consolidated, and overall employment in this field has been reduced. In addition, there are also fewer scientists in academia and government that view agricultural chemistry, particularly pest management chemistry, as their primary area of endeavor.

PROGRAMMING

The Division has participated in all of the National Meetings beginning in 1976 with the exception of Spring 1980, when the Division held a special conference in June. In the fall of 1980 the Division voted to participate in all National Meetings

in the future, and there have been no exceptions. Typical National Meetings are composed of general sessions consisting of oral and poster presentations, symposia, and award symposia. The first poster session was in Spring 1986. Starting in Fall 1990, the Division's poster presentations have usually been included in the ACS Sci-Mix in addition to the Division's program. Programs at the National Meeting are very diverse, reflecting the wide variety of topics in the area of agrochemicals. The membership, working through the program committee, has been very active in developing symposia in addition to those associated with awards. The Division published a set of guidelines on planning and holding a symposium. Information from minutes, newsletters, and previous history accounts (1) indicates there were 230 such symposia from Spring 1976 through Spring 2001. In addition, there were ~55 symposia associated with awards. This represents an incredible amount of work on the part of the Division's members to bring topics of current interest to the forefront. Certain of these symposia pertain to general topics that are of continuing interest. For example, the topic of synthesis became what is called a "standing symposium" in Fall 1984, and a symposium on synthesis is held at every National Meeting. Other topics such as metabolism and residues have been highlighted in symposia at regular intervals also. The 230 non-award-associated symposia presented from 1976 through Spring 2001 may be broken down as follows (recognizing that there are frequently overlaps as well as a degree of subjectivity in making such assignments): Synthesis, 33; Residues, 17; Metabolism, 20; Analytical, 17; Environmental, 35; Mode of Action/Toxicology, 18; Biotechnology, 4; Resistance (Pest and Host), 7; Formulations/Delivery, 8; Regulation/Regulation Procedures/Risk Assessment, 18; Informational/Other, 53.

The Informational/Other category includes a very broad array of topics such as "Bioregulators and Natural Products", "Chemical Sensitivity: Problems for Scientists and Society", "Safe Handling of Pesticides", and "Applications of Geographical Information Systems and Remote Sensing in Pest Management".

In addition to the programs at National Meetings, the Division has held special conferences based on topics that not only are of special interest to the members but are also likely to attract interest outside our membership. During the period from 1976 to 2001 the following special conferences have been held: The Pesticide Chemist and Modern Toxicology, 1980, Downingtown, PA; New Concepts in Pesticide Chemistry, 1984, Snowbird, UT; Biotechnology of Crop Protection, 1987, Snowbird, UT; Food Safety and Pesticide Residues, 1990, Point Clear, AL; Natural and Derived Pest Management Agents, 1992, Snowbird, UT; Molecular Genetics and Evolution of Pesticide Resistance, 1995, Big Sky, MT.

The Division has been active in support of and participation in international meetings including the 1979 Ninth International Congress of Plant Protection in Washington, DC, several Pacific Basin conferences, and the 1997 North American Chemical Congress in Cancun, Mexico. In 1999 the Division jointly sponsored the Second Pan-Pacific Conference on Pesticide Science with the Japan Pesticide Society in Honolulu, HI. The 1994 IUPAC Eighth International Congress of Pesticide Chemistry, held in Washington, DC, was organized and run in close collaboration with the Division and with the Meetings Department of ACS. This Congress was a great success, and the surplus funds that resulted from a large attendance and a well-run meeting came to the Division and served as the basis of an Educational Endowment Fund.

AWARDS

Continuing a practice that began at the time the Division was organized, the International Award for Research in Agrochemicals has been presented at National Meetings in recognition of outstanding contributions to research in the field of agrochemicals. From 1976 to 1986, this award, presented at the Fall National Meeting, was sponsored by Burdick and Jackson. In the fall of 1987, the sponsorship expanded to Baxter, Burdick and Jackson. At the Fall 1993 meeting, the sponsorship changed to DuPont, and in 1994, presentation of this award was added to the Spring Meeting as well with sponsorship by American Cyanamid, which has now become BASF. Thus, there is now an International Award for Research in Agrochemicals given at each National Meeting. Another award, that of Fellow, initiated early in the history of the Division, has also continued. Since 1976 the Division has recognized 30 members as Fellows in recognition of their contributions to the Division, the ACS, and agrochemical science. Beginning with the Fall 1988 National Meeting, the Division has sponsored the Sterling B. Hendricks Memorial Lectureship Award at each Fall Meeting. This award is given by the Agricultural Research Service of the U.S. Department of Agriculture to honor the memory of Dr. Hendricks and to recognize scientists who have made outstanding contributions to the chemical science of agriculture.

At the Fall 1985 National Meeting an announcement was made of an award to recognize young scientists. This award applies to predoctoral students or graduates of less than one year and is given at the Spring Meeting. A Young Scientists Recognition Symposium is held at that meeting in association with the award. Beginning in 1998, the Division's Educational Endowment Fund has provided travel awards to graduate students to make presentations at Fall National Meetings. The fund also supports an award for the development of educational material promoting public awareness of the benefits of agrochemical research.

PUBLICATIONS

Picogram. The "Picogram", which is published semiannually, is the Division's newsletter. At the Division's Fall 1991 combined governance meeting, the motion was passed that the abstracts of the upcoming National Meeting be included as part of the "Picogram". This enhanced an already valuable publication that gave information to members on upcoming programs, news, and administrative structure.

Books. Since 1976, publication of books resulting from symposia, special conferences, and other meetings has been an important aspect of the Division's activities. The ACS Symposium Series has been the major publisher of these books. A number were published by the ACS as reference books, and some were in an ACS series that was considered popular press. Other publishers handled a small number. Royalties from these books have come to the Division and served as an important resource to fund future symposia. Available information is incomplete, but there are numbers for some years between 1976 and 2001. From 1983 to 1985, 15 books were published; from 1990 to 1992, 16 books were published; and from 1994 to February 2001, 28 were published with 6 currently under contract as this history is written. Thus, for the data available, there have been 59 books published; there are more for those years lacking the information. Some of these books have been very popular. For example, those on Good Laboratory Practices, resulting from two symposia, have gone into second printings. The most recent information indicates that the Division's rate of publication and royalties are diminishing. This is undoubtedly

related to the agricultural economy and the number of scientists in the field of agrochemicals.

SOCIAL INTERACTIONS

The concept of patrons that help support a number of divisional activities such as programs and hospitality at National Meetings has crystallized during the 1976–2001 period. Patrons consist of agrochemical industries as well as contract laboratories and consulting groups. Patron support is vital in sustaining the high quality of our Division's scientific, professional, and related activities each year. A hospitality table has become a vital part of our Division's presence at National Meetings. One to three Division members are present and can provide information and recruit new members. The Division's books published through ACS have been displayed on the table and serve to stimulate sales. In addition, there is information about upcoming meetings of interest to members and additional copies of the "Picogram".

CONCLUSION

The Division of Agrochemicals has grown in many ways since 1976. We have presented a tremendous amount of information through many channels. Most importantly, we have worked together as a unit in all of these endeavors and look forward to doing so in the future.

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LITERATURE CITED

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