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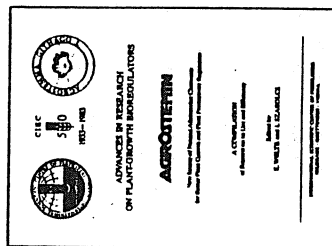
1985, 508 pages, 270 tables and 111 figures.
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Advances in Research on Plant Growth Bioregulators

Agrostemin

New Source of Natural Allelopathic Chemicals for Better
Plant Growth and Plant Productivity Regulation

A Compilation of Reports on its Use and Efficiency

edited by E. WELTE and I. SZABOLCS

Major effects of plant growth regulators are mediated through the biosynthesis, metabolism, translocation, and action of the endogenous hormones by controlling the pattern of growth and the distribution of assimilates within the plant. However, essential results applicable in farming are as yet relatively scarce. More basic research should be focussed on the regulatory role of these natural substances and on the mechanism of their action.

An interesting plant-growth regulator with allelopathic effects, studied recently by a group of Yugoslavian scientists, is the extract from the corn cockle seed (*Agrostemma githago* L.) called "AGROSTEMIN". Their findings seem to be very promising, having indicated that this bioregulator of natural origin exerts a broad spectrum of distinct activities. It is a complex of allelopathins and the result of comprehensive studies of the allelopathic relationship between cultivated plants and specific weed species.

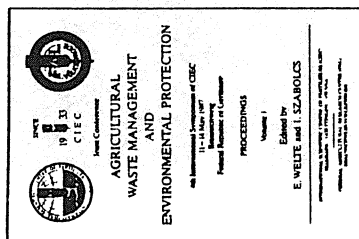
Allelopathic chemicals with proven beneficial effects could help to make the plant more vigorous for nutrient uptake and fertilizer use more effective and economical. This is of special interest in the developing countries, where labor is plenty, capital scarce, and fertilizer expensive.

Due to the positive results in the application of Agrostemin reported from field experiments of various cultivated plants and under controlled growth conditions CIEC's Editorial Board was encouraged to publish a special issue on this plant bioregulator with strong allelopathic effects by compiling all reports on this subject held at the 9th World Fertilizer Congress of CIEC of June 1984 in Budapest. This publication is supplemented by other related papers on the mechanism of the assimilate distribution affected by plant growth regulators.

It is hoped that this compilation will emphasize the need for more research in the field of allelopathic chemicals — a research sector which has really been neglected in the past and which deserves more attention in the future.

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Proceedings of 4th CIEC Symposium on

**Agricultural Waste Management and
Environmental Protection**

Joint Conference of the International Scientific Centre of
Fertilizers (CIEC) and the German Federal Agricultural
Research Centre (FAL)

held at Braunschweig-Voelkenrode, Fed. Rep. of Germany,
11 - 14 May 1987

edited by E. WELTE and I. SZABOLCS

Agricultural residues from both crop and animal farming constitute important sources of energy, plant nutrients, and organic matter. The amounts of such farm by-products have increased considerably as a consequence of agricultural intensification. In specialized systems, such as large-scale animal husbandry, the storage and disposal of farm slurries has even become a problem of environmental concern.

Similar difficulties are also encountered with organic wastes of nonagricultural origin when using them as fertilizers or soil amendments. Various procedures have been suggested to improve their conditioning and application. As with the farm residues, however, the treatment and utilization of urban and industrial wastes still leaves much to be desired from both the aspects of efficiency and ecology.

The purpose of this symposium was therefore to identify the most pressing problems in agricultural waste utilization and to consider waste treatment and application with particular reference to the environmental aspects involved. The meeting was aimed at an interdisciplinary panel of experts bringing together to evaluate the present state-of-the-art and to discuss possible future developments.

The topics of this joint conference were:

- amounts, sources, and value of organic residues in different agricultural systems; evaluation of properties and environmental implications,
- wastes of nonagricultural origin and their suitability for agriculture (urban waste, sewage sludge, wastes of food-processing industries, etc.),
- technologies and limitations of utilizing organic residues under environmental, ecological, and fertilizing aspects,
- treatment, processing, and handling of organic wastes (aerobic fermentation, anaerobic digestion, conditioning, solid-liquid separation, etc.),
- future developments and demands,
- legislative aspects and regulations.

Almost 200 representatives from 28 nations have participated in this very impressive symposium which has been sponsored by the German Federal Ministry of Food, Agriculture, and Forestry, Bonn, and the Ministry of Science and Arts of Lower Saxony, Hannover.

Here some commentary:

"The Proceedings of this Symposium should be a valuable help to agriculturalists and policy makers as a source of balanced information on a topic in which is increasingly the subject of controversy."

(Dr. H. TUNNEY, The Agricultural Institute,
Johnstown Castle, Wexford, Ireland)