

FOOD AND ENVIRONMENTAL PROTECTION

NEWS LETTER



Joint FAO/IAEA Division
of Nuclear Techniques
in Food and Agriculture
and FAO/IAEA Agriculture and
Biotechnology Laboratory, Seibersdorf
International Atomic Energy Agency
Vienna

Vol 5, No. 1

January 2003



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TO THE READER

The Food and Environmental Protection subprogramme assists Member States in improving food safety and security using a wide range of nuclear and related techniques. Readers are familiar with the contribution made by food irradiation and radioisotope techniques but this issue reveals a range of techniques and showcases new applications and a more "holistic" approach to capacity building. For example, training workshops now emphasize irradiation as an integral component of HACCP and as a means to facilitate international food trade. A new CRP is evaluating the effectiveness of irradiation as a method to ensure microbiological safety and extend the shelf-life of prepared meals. Irradiation is also gaining acceptance as a phytosanitary treatment for food and agricultural commodities, and the combination of irradiation and low temperature for the control of mites in table grapes appears particularly promising.

A feature article in this issue deals with the high rate of detention of fresh agricultural commodities from Latin America and the Caribbean. Sistema Internacional sobre Contaminantes y Residuos en Alimentos (SICRA) is the Spanish version of INFOCRIS and was developed in co-operation with the Latin American Section of the IAEA's Department of Technical Co-operation specifically to tackle this important regional problem. The use of Spanish facilitates communication about risk and tackles the difficult task of risk management by providing the decision makers with timely and relevant information. SICRA uses the Division's Extranet application to distribute the work of translation and accelerate content acquisition through strategic partnerships. The tactic of developing regional case studies and making them available as distance learning modules has received wide support and will be aggressively pursued at workshops and in training courses in 2003.

The importance of well trained analysts and quality management cannot be over emphasized in technology transfer. The Training Workshop on Advanced Instrumental Techniques in Pesticide Residue Analysis held at Seibersdorf in October 2002 drew an immediate response from counterparts. Feedback from participants sends a clear signal: timely and relevant training on advanced analytical techniques is needed urgently by national food control laboratories. Similarly, the FAO/IAEA information system ADPRES received acclaim from beta testers. Calls to cover all contaminants and residues and to georeference the results will be implemented as a priority in 2003.

With best wishes for 2003,
Ian Ferris

B. FEATURE ARTICLES

The International Database on Insect Disinfestation and Sterilization

(<http://www-ididas.iaea.org/>)

The International Database on Insect Disinfestation and Sterilization or IDIDAS was developed jointly with the Division's Insect Pest Control Section to collect and share knowledge about radiation doses for disinfestation and sterilization of arthropods. To date, information has been collected on 296 species that were subjected to irradiation. The majority belong to the Lepidopteran and Dipteran orders. IDIDAS includes representatives from 73 families including 8 insect and 2 arachnid orders. Preliminary analysis suggest that, apart from some exceptions, similar doses of radiation often apply for species within the same genus. Thus there is generally no need to develop radiation data for all species. To facilitate comparisons a taxonomic tree was added to the database search form. Users can simply click on the Genus of interest and obtain a list of available records including the availability of disinfestation and sterilization data.

The World-Wide Directory of SIT Facilities or DIR-SIT was added to aid the retrieval of information on all mass rearing facilities of sterile pest insects, ticks and mites. The database compiles information on production size, radiation process, quality control parameters, dosimetry, programme objective, trans-boundary shipment, field release data, and the facility full address. The content of the directory is under the responsibility of the facility's editor, who may update the information over the Internet to fulfil the new requirement of their programme. While the main users of IDIDAS are editors and scientists, a property search form (grid search) was added for scientific institutes to retrieve information of interest. The properties search link is found at the foot of the database search. The grid search classifies according pests, climate, distribution, plant host, animal host, insect related and vectored diseases. Thus IDIDAS is catering for a wide range of potential users.

IDIDAS is still under development. The continued growth and development of IDIDAS depends on the timely contribution of data including photographs and comments. Please contact Neil Heather (nheather@gil.com.au) if you have contributions related to quarantine, Abdeljelil Bakri (A.Bakri@iaea.org) sterilization or DIR-SIT data, or Ian Ferris (I.G.Ferris@iaea.org) for system related issues.

Sistema Internacional sobre Contaminantes y Residuos en Alimentos (SICRA)

Pesticide and microbial contaminants are a major cause of detention of agricultural produce and seafood exported from Latin America and the Caribbean. In 1999, the subprogramme together with the Latin American Section began implementing risk based approach to assist Member States in developing a more integrated approach to capacity building. The first technical co-operation project to pilot this approach was ECU/5/021 "Monitoring the Fate of Pesticide Residues". Work focused on hazard identification in the Guays catchment, which is the centre of Ecuador's banana and shrimp exports. In co-operation with CSIRO a first tier screening was undertaken using the Pesticide Impact Ranking Index or PIRI (<http://www.cmis.csiro.au/envir/Research/PesticideRisk/>). A key element in the strategy was the dissemination of information through stakeholder workshops and more generally using the Internet.

SICRA (<http://www-infocris.iaea.org/SP/>) the Spanish version of INFOCRIS, provides an ideal Internet tool to improve awareness of successful case studies. SICRA uses a common set of Divisional resources to address issues from production to consumption. The focus is on providing convenient access to relevant analytical methodologies. Information is associated with the contributing author or editor who enter information directly over the Internet under a system of password protection. Like journal articles, the quality of the information is maintained by peer review except that this is on a global scale using convenient email links. Contributions are voluntary and are based on the assumption that only through sharing of individual expertise can the growing number of contaminants be adequately addressed. SICRA is structured on entities as contaminants may be chemical or biological in nature. Entity records are displayed in a compendium multi-media format to improve comprehension. Currently there are 628 entities and 24 editors. Most entities comprise pesticides though microbiological and radionuclide contaminants are growing in importance. SICRA draws heavily on common Divisional resource modules including glossary, references, news, methodologies and frequently asked questions (FAQ). Slide shows and eArticles provide overarching utilities that define relationships among entities. There are several specialized databases. Foremost is the method validation reporting service (MVRS) that provides analysts with useful information that is not usually published in scientific articles yet is vital to analysts working in food control laboratories. DocMaster is a group editing environment that is being used to revise "Agricultural countermeasures in the event of a nuclear accident that support foster group co-operation".

Distance Learning or eLearning is a new initiative to utilize the Joint Division's collective Internet resources. eLearning provides analysts with a mechanism to keep up-to-date with rapid advances in knowledge. They can acquire the needed skills to improve food safety and security. eLearning has potential to bridge the knowledge and technology gaps that exist between what is known in centres of learning and what information and knowledge is needed to implement risk management. The Centro de Investigacion en Contaminacion Ambiental (CICA) San Jose, Costa Rica is a co-operative regional centre for this work. Although the ideal approach would be to provide the risk manager with direct access to the information and knowledge via the Internet, the system is also distributed on CD-ROM. SICRA and eLearning initiatives are being supported through projects with WHO and IUPAC.

SICRA is evolving continuously to meet client demands. Most recently, an "Irradiation" (Irradiacion) subfield was added for bacterial entities and a georeferenced "Distribution" (Distribución) field was added to provide on-the-fly mapping for all entities. If you would like to participate by commenting on or adopting a record contact Tatiana Rubio-Cabello (W.Tatiana.Rubio-Cabello@iaea.org) about microbial entities, Bruno Doko (M.B.Doko@iaea.org) about mycotoxins, Ian Ferris (I.G.Ferris@iaea.org) about pesticides/radionuclides or Ruben Cardenas-Soria (R.R.Cardenas-Soria@iaea.org) about system related issues.

C. FORTHCOMING EVENTS

Training Workshops

The following workshops are planned for 2003. The workshops will be organised if the appropriate number of qualified candidates are nominated.

FAO/IAEA Training Workshop on “Implementation of Quality Assurance/ Quality Control Measures in Pesticide Residue Analytical Laboratories”, FAO/IAEA Agriculture and Biotechnology Laboratory, Seibersdorf, Austria, April-June 2003

The objectives of the workshop are to introduce and explain in detail the QA/QC principles relevant to pesticide residue analysis according to the principles outlined in the ISO Standard 17025 and the GLP Guidelines, and to provide guidance for operation of instruments, selection of methods and planning experiments and surveys.

FAO/IAEA Training Workshop on “Testing the quality of pesticide products”, National Institute of Agricultural Science and Technology, 249 Seodundong, Kweonsungu, Suwon, October 2003

The objectives of the workshop are to introduce the concept of multi-pesticide analytical procedures, advanced laboratory methodology, instrumental techniques used in the analysis of pesticide formulations and elements of quality control/ quality assurance of the analytical procedures and laboratory operations.

Further details can be found in the Prospectuses of the workshops that are available on the Web-site of the FAO/IAEA Training and Reference Centre for Food and Pesticide Control (<http://www.iaea.org/trc>).

The courses are open to analysts from Member countries of FAO or IAEA, who perform analyses for official control of pesticide residues in food commodities.

The nominations together with the completed Questionnaire and Language Proficiency Certificate, issued by a language school or cultural institution or the British Embassy, should be returned to:

International Atomic Energy Agency
Wagramer Strasse 5, P.O. Box 100
A-1400 Vienna, Austria
Fax: +43 1 26007
Email: Official.Mail@iaea.org

With reference to: FAO/IAEA Training Workshop on Introduction to Quality Assurance/Quality Control Measures in Pesticide Analytical Laboratories.

Advanced nominations by facsimile or e-mail are welcomed.

Second FAO/IAEA Research Co-ordination Meeting (RCM) on “Use of Irradiation to Ensure Hygienic Quality of Fresh, Pre-Cut Fruits and Vegetables and other Minimally Processed Food of Plant Origin”, Belfast, United Kingdom, 14-18 April 2003

This meeting will be held at the Agriculture and Food Science Research Centre of the Queen’s University of Belfast. All 15 contract and agreement holders who have fulfilled the work research program will be invited to participate in this meeting. The purpose of the meeting is to evaluate the research work done since the first Research Co-ordination Meeting (RCM) in Rio de Janeiro, Brazil, November 2001. The results on the effect of irradiation in about 12 different pathogenic bacteria in more than 20 products will be analysed during that meeting.

Second FAO/IAEA Research Co-ordination Meeting (RCM) on “Quality Control of Pesticide Products”, Manila, Philippines, 17-22 February 2003

This meeting will take place at the Central Laboratory of the Bureau of Plant Industry in Manila. The RCM will be combined with a 1-day national workshop on ‘Method validation and quality control in pesticide analytical laboratories’. During the workshop the research contract and research agreement holders and the analysts working on the fields of pesticide formulation control and residue analysis in the Philippines, and other interested persons will present their results and experiences, and discuss related problems.

D. PAST EVENTS

First FAO/IAEA Research Co-ordination Meeting (RCM) on “Testing the Efficiency and Uncertainty of Sample Processing for Analysis of Food Contaminants”, Seibersdorf, Austria, 15-19 July 2002

The first RCM for this Coordinated Research Project was held at FAO/IAEA Agriculture and Biotechnology Laboratories in Seibersdorf. Fifteen laboratories were represented from Argentina, Australia, Belarus, Colombia, Costa Rica, China, Croatia, Hungary, India, Malaysia, The Netherlands, Slovenia, UK and Thailand at the meeting. The objectives of the CRP and the principles of the methodology to be applied were reported in the previous Newsletter.

During the first RCM, the participants presented their own sample processing procedure and the information relating to the analytical variability in their laboratory. The participants studied the methodology applied by the Agrochemicals Unit for the estimation of the uncertainty of sample processing, and discussed the methodology and results of a study, carried out in the Central Science Laboratory UK, for determining the stability of pesticide residues under ambient and cryogenic sample processing.

Taking also into account the experience gained in the participants’ laboratories, the work programme for the first two years of the project was finalised and agreed upon by the participants.

Final FAO/IAEA Research Co-ordination Meeting (RCM) for the CRP on “Evaluation of Methods of Analysis for Determining Mycotoxin Contamination of Food and Feed”, Tygerberg, Cape Town, Republic of South Africa, 16 – 20 September 2002

The meeting participants included research contract/agreement holders and observers, originating from Argentina, Brazil, People’s Republic of China, Cuba, Canada, Egypt, India, Indonesia, Iran, Malaysia, Philippines, South Africa, United Kingdom, USA, and Uruguay.

The overall objective of this CRP was to assist national food control authorities and institutions to improve food safety and stimulate international trade in food by identifying and validating time and cost-efficient methods for detection and quantification of mycotoxins in food in order to effectively monitor the mycotoxin content of agricultural imports and exports.

The objective of this RCM was: (1) to compile results of research works carried out during the entire duration of activities under this project, (2) to prepare work plan outlines and timeframe of the activities to be completed, and (3) to determine the forthcoming events including, workshop, training, and future relevant research topics. The results of this CRP will be published as an IAEA-TECDOC.

First FAO/IAEA Research Co-ordination Meeting (RCM) on “Irradiation to Ensure the Safety and Quality of Prepared Meals”, Vienna, 10-14 June 2002

The first meeting was held in the IAEA Headquarters in Vienna, and was attended by Research Contract/Agreement holders from 14 countries: Argentina, People’s Republic of China, Ghana, Hungary, India, Indonesia, Israel, Republic of Korea, Malaysia, South Africa, Syria, Thailand, UK and USA.

The overall objective of this CRP is to evaluate the effectiveness of irradiation as a method to ensure microbiological safety and extend shelf-life of prepared meals, stored either under ambient, chilled or frozen and to evaluate the sensory quality of the treated products. Its specific objective is to use validated methods for microbiological determination of food and validated procedures for irradiation, process control, sensory evaluation, and to determine microbiological safety and quality of irradiated prepared meals or ethnic dishes.

The programme of the meeting included a general review on the global development of the food irradiation technology and the status of the Codex General Standard in irradiated foods, as well as analysis on methodologies used for determining pathogenic bacteria, nutritional values, sensorial evaluation of prepared meals and quality assurance procedures for radiation processing. During the meeting 3 protocols were developed: 1) Microbiological, 2) Sensorial, and 3) Irradiation process.

All Research Contract/Agreement holders presented a report on the work they planned to carry out under this CRP.

Final FAO/IAEA Research Co-ordination Meeting (RCM) on “Determination of Profiles of Human Bacterial Pathogens in Food for Export by Introduction of Quality Assured Microbiological Assays”, Mexico, 22-26 July 2002

This meeting was hosted by Universidad Autónoma de México (UNAM). It was attended by 11 participants who were contract and agreement holders (at present 9 contracts and 3 agreements). The participants were from Australia, Austria, Brazil, Chile, India, Indonesia, Mexico, Nigeria, Philippines, Republic of Korea, United Kingdom and Thailand.

The overall objective of this CRP was to assist national food control authorities and institutions to improve food safety and stimulate international trade in foods by determining profiles of (selected) human bacterial pathogens of concern to importers on (selected) raw materials and/or products, thereby increasing assurance in their food control measures and facilitating international trade. The purpose of the meeting was to evaluate the research work done under the entire CRP. After 5 years of research the participants fulfilled its original objectives. The results of this CRP will be published as an IAEA-TECDOC in the near future.

Final FAO/IAEA Research Co-ordination Meeting on (RCM) “Irradiation as a Phytosanitary Treatment for Food and Agricultural Commodities”, Vienna, Austria, 4-8 November 2002

The objectives of this CRP were: 1) to identify commodity/pest systems amenable to efficient use of irradiation technology, 2) to identify efficacy requirements and data needs acceptable to regulatory agencies, 3) to develop efficacy data for pest/commodities systems, 4) develop data on commodity tolerance to irradiation, and 5) to evaluate whether systems/combinations are amenable to irradiation technology.

The meeting was attended by 13 participants from 11 countries: Brazil, Chile, Iran, Philippines, Poland, People’s Republic of China (2), Malaysia, Syria, Thailand, Turkey and USA (2).

Excellent progress was made by all participants on their research projects. There was extensive exchange of views on these findings especially as these related to the methodologies for insect rearing and infestation of test commodities, the evaluation of treatment effects, the control of the irradiation process and the significance of the measures used to establish treatment efficacy for the recommended dose. The wide experience of some members of the CRP on the control of identical or similar insects in other or similar commodities and their expertise in relevant areas of insect radiation biology, regulatory approaches to problems in quarantine control and food quality evaluation also contributed to the productive discussions at the meeting.

The group reported some extensive studies on the response of mites to irradiation, including the first ever study of an eriophyid mite. The methodologies developed to handle these tiny pests are a significant achievement and the doses found for the different developmental stages are important new findings, e.g., combined treatment: irradiation + low temperature for *Brevipalpus chilensis* under commercial conditions.

The first commercial shipment of cut flowers using irradiation as part of a quarantine treatment was also successfully completed between Thailand and Australia. The treatment combined irradiation with a chemical dip and cold storage for Dendrobium orchids.

It is important to emphasize that one of the projects under this CRP resulted in the first approval and commercial use of irradiation against a non-fruit fly pest (sweet potato weevil) and another produced a final rule for an irradiation treatment for another non-fruit fly pest, mango seed weevil.

Finally the CRP also reported first large-scale tests for several non-fruit fly pests, e.g. codling moth and some studies on packaging materials.

Workshop on “Irradiation as a Critical Control Point to Ensure Microbiological Safety of Food”, Texas, USA, 5-16 August 2002

This Training Workshop was hosted by Texas A&M University, College Station, Texas, USA. The Workshop was attended by 17 participants from 14 countries: Argentina, Brazil, Chile, Egypt, Hungary, Indonesia, Lithuania, Malaysia, Philippines, South Africa, Thailand and Turkey. The Workshop was fully funded by the host government through the financial support of the National Academy of Sciences.

The purpose of the Workshop was to inform food inspectors/food control officials of the principles of food irradiation, its effect on various spoilage and pathogenic microorganisms in food, irradiation technology and techniques, dosimetry for food irradiation, wholesomeness of irradiated food, current national and international standards and regulations, recent development related to acceptance and application of irradiation as a sanitary treatment for food, especially as a critical control point under HACCP to ensure microbiological safety.

The Group Training consisted of lectures, demonstration, discussions, case studies with emphasis on irradiation as an integral component of HACCP and as a mean to facilitate international trade in food. The participants felt that the information which they received from the training would be highly valuable to the work which they are responsible for in their countries.

ICPM Standard Committee Meeting on Guidelines for the Use of Irradiation as a Phytosanitary Measure, Rome, Italy, 12-14 November 2002

A Workshop was held in November 2001 in Mexico to develop an International Standard for Phytosanitary Measures (ISPM): Guidelines for the Use of Irradiation as a Phytosanitary Treatment (see issue Food and Environmental Protection Newsletter, Vol. 4 No.1, January 2002) which was reviewed by the Interim Commission on Phytosanitary Measures Standards Committee in a meeting held at the International Plant Protection Convention Headquarters in Rome, May 2002. The draft was approved by the Standard Committee mentioned and was distributed to the governments and international organizations for comments (June-September 2002). The IPPC Secretariat collected the comments and elaborated a final draft which was presented again to the ICPM Standards Committee for consideration in their last meeting 12-14 November 2002. Finally, these Guidelines were approved and they will be presented to the ICPM meeting for consideration and possible adoption in April 2003.

E. STATUS OF EXISTING COORDINATED RESEARCH PROJECTS (CRPs)

Use of Irradiation to Ensure Hygienic Quality of Fresh, Pre-Cut Fruits and Vegetables and other Minimally Processed Food of Plant Origin

This CRP was initiated in 2001 with 12 research contacts and 3 research agreements. Since last year progress has been made in determining the feasibility of using irradiation to improve the microbiological quality of produce without affecting the sensorial and nutritional properties. (See Forthcoming Events of this issue)

Classification of Soil Systems Based on Transfer Factors of Radionuclides from Soil to Reference Plants

The overall objective of the CRP is to improve agricultural countermeasures for nuclear or radiological emergencies by characterising ecosystems on the basis of soil-to-plant transfer factors (TFs). Contract holders have determined TFs for radionuclides in a range of plants and agroecosystems. Data support the hypothesis that soils with a high TF for one crop will invariably result in a relatively high TF for other crops and vice versa. In other words, TFs measured for a few indicator species can estimate TFs for other plants in a given ecosystem. In most cases, TFs fall within the range of reported values. Variability is high but progress is being made in identifying the sources of variation. Dr. Neil Crout (Neil.Crout@nottingham.ac.uk) is currently compiling available data on TFs and developing a function specification for a new database on TFs to be jointly cosponsored by FAO, IAEA and International Union of Radioecologists (IUR). To ensure continuity, participants should continue copying data to Dr. Martin Frissel (frisselm@bart.nl).

The final RCM of this CRP is planned for Crete 22-26 September 2003. Participants should request an application form from Stella Attakpah (S.Attakpah@iaea.org) if they have not already received one.

In a related development, a contract has been awarded to Dr. Brenda Howard (Centre for Ecology and Hydrology, UK) to revise Guidelines for Agricultural Countermeasures Following an Accidental Release of Radionuclides. Please contact Dr. Howard (bjho@ceh.ac.uk) if you have any relevant information that you would like considered. If you have an Internet connection you can comment directly on countermeasures reported in TRS363. If you wish to participate contact Ian Ferris (I.G.Ferris@iaea.org). He will send you a username and password and instructions how to access and comment on specific countermeasures.

Irradiation to Ensure the Safety and Quality of Prepared Meals

The CRP was initiated at the end of 2001. It has 12 Research Contracts and 3 Research Agreements. The first meeting was held in Vienna, 10-14 June 2002, where the participants presented the progress reports and future research plans. (See Past Events of this issue)

Quality Control Of Pesticide Products

Seventeen analysts from 14 countries are taking part in this project that aims to develop uniform detection conditions for the determination of the active ingredient content of commercial pesticide formulations in order to increase the output of the laboratories and reduce the cost of analysis.

The annual progress reports due have been received from most of the participants. The work was carried out according to the work-plan. Two contracts were terminated and one participant did not apply for renewal.

CRP on Alternative Methods to Gas and High Performance Liquid Chromatography for Pesticide Residue Analysis in Grain

The final reports were received from most of the participants. The results of this CRP and the CRP on "Validation of Thin-layer Chromatographic Screening Methods for Pesticide Residue Analysis in Fruits and Vegetables" will be summarized and published in a special issue of the *Journal of Environmental Science and Health* in 2003.

F. INTERNATIONAL CONSULTATIVE GROUP ON FOOD IRRADIATION (ICGFI)

Excerpts from the 19th Annual Meeting

The 19th Annual Meeting of ICGFI was held at IAEA Headquarters, Vienna, Austria, 12-14 November 2002. Twenty-nine designated experts from 20 member governments, 1 representative each from Codex and the European Commission, and 7 representatives of 4 non-governmental organizations attended the Meeting. Dr. Alicia O. Lustre, the Chairperson opened the Meeting. At the opening Dr. James Dargie, Director, Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture made a welcome statement on behalf of the Directors General of FAO and IAEA. The following were the major decisions and follow-up actions arising from the 19th ICGFI Meeting:

1. Formation of a New Organization:

The Meeting considered the recommendations of the ICGFI Transitional Committee convened at IAEA Headquarters, Vienna, 15-17 January 2002 to develop a blueprint of the new body to succeed ICGFI following its final phase of two years starting 9 May 2002. The Committee recommended an International Commission on Food Irradiation (ICFI) with a new Vision, Mission and Objective as an independent inter-governmental organization with FAO, IAEA and WHO acting as advisory organizations. The Meeting discussed the modalities of establishing such an organization. Preliminary consultations with the Office of Legal Affairs of the three UN organizations pointed to the difficulties that would arise in establishing a new organization under an international legal agreement with the member governments. The Meeting therefore decided to explore the possibility of establishing the new organization within the existing framework of ICGFI with broader participation from the constituents of the three UN Organizations and the Codex Alimentarius Commission.

2. Membership of ICGFI:

The membership of ICGFI during the final two years is 29 governments, namely, Argentina, Australia, Belgium, Canada, Chile, People's Republic of China, Croatia, Czech Republic, Egypt, Ghana, Hungary, India, Indonesia, Iraq, Italy, Republic of Korea, Malaysia, Morocco, New Zealand, Pakistan, Peru, Philippines, Poland, Portugal, Syria, Thailand, Turkey, United States of America and Viet Nam.

3. World Congress on Food Irradiation:

The Meeting decided not to co-cosponsor the First World Congress on Food Irradiation, Chicago, Illinois, 5-7 May 2003 as it would contravene the administrative and financial rules and regulations applicable to the Joint FAO/IAEA Division of Nuclear Techniques in Food Agriculture, which provides the Secretariat of ICGFI.

4. Publication of Brochure: Food Irradiation-A Global Food Safety Tool:

In co-operation with the International Food Information Council (IFIC) Foundation, Washington, D.C., a colour brochure was prepared and printed for the benefit of policy makers in government, the food industry and consumer organizations. Fifty copies each of this brochure were provided to all of ICGFI National Contact Points for distribution to food industries, food trade and consumer organizations. Those interested in receiving copies of this brochure may contact the Secretariat.

5. Draft Revised Codex General Standard for Irradiated Foods:

At the 34th Session of the Codex Committee on Food Additives and Contaminants (March 2002), because of the volume of comments received, the Committee agreed to suspend further discussion and to request a drafting group led by the Philippines and assisted by Australia, China, France, Germany, India, Japan, Korea, Poland, Sweden, Thailand, United Kingdom, United States, Consumers International, EC, ICGFI, FAO and WHO to revise the current Standard on the basis of written comments submitted and the committee's discussions for circulation, additional comment and further consideration at its next meeting in March 2003. The ICGFI maintained its earlier position to remove the upper dose limit of 10 kGy based on the Report of the WHO Study Group on High-Dose Irradiated Foods. The Chairperson (also the delegate of Philippines) who led the drafting group informed that a compromise Draft General Standard is being forwarded to the Codex Secretariat for consideration of the 35th CCFAC Meeting in March 2003.

6. Guidelines for the Certification of Foods Irradiated other than for Phytosanitary Purposes:

A Guideline for Certification of Foods Irradiated other than for Phytosanitary Purposes developed by ICGFI was submitted as an information paper to the 10th Session of the Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS), 25 February-1 March 2002. The 19th ICGFI requested the representative of Codex to include the Guideline in the Agenda of the next Session of CCFICS in Adelaide, Australia in December 2002. The representative of Codex (Dr. D. Byron) noted that this could be done on an ad hoc basis if such a request is made. The Meeting requested Mr. Gary Luckman (Australia) to submit the Guidelines to the Codex Secretariat and also represent ICGFI at the next CCFICS Meeting.

7. International Standard for Phytosanitary Measures:

Dr. Robert Griffin (FAO) informed the 19th ICGFI Meeting that the Standards Committee of the International Plant Protection Convention (IPPC) approved the “Draft Guidelines for the Use of Irradiation as a Phytosanitary Measure” which will be forwarded to the Interim Commission on Phytosanitary Measures (ICPM) for adoption at its next Session.

8. European Parliament Draft Report on Commission communication on foods:

The 19th ICGFI meeting was informed about the European Parliament Committee on the Environment, Public Health and Consumer Policy Draft Report on the Commission communication on foods and food ingredients authorised for treatment with ionising radiation in the Community. The meeting considered that the views expressed misinform the public and agreed that on this basis, it was important to provide relevant information on the scientific basis for the current acceptance of the safety and wholesomeness of food irradiation and consumer benefits that can be derived from its applications. The comments of ICGFI have been communicated to the European Commission and to the designated expert of Belgium for forwarding to the relevant committees for information and appropriate action.

G. TRAINING AND REFERENCE CENTRE (TRC)

FAO/IAEA Training Workshop on “Advanced Instrumental Techniques in Pesticide Residue Analysis”, FAO/ IAEA Agriculture and Biotechnology Laboratory, Seibersdorf, Austria, 7-18 October 2002

This workshop was attended by 20 participants from Albania, People’s Republic of China, Cyprus, Costa Rica, Egypt, Hungary, Kenya, Republic of Korea, Lithuania, Malaysia, Nigeria, Philippines, Tanzania and Thailand.

The workshop provided an introduction and detailed explanation of the operation principles of TOF GC/MS, fast GC/MS, LC/MS/MS, SPME, and advanced extraction techniques. Statistical methods suitable for verifying the performance of analytical methods were shown through practical examples. The principles of HACCP and Certification Systems for fresh fruits and vegetables were discussed.

Training certificates were given to those participants who successfully completed the training programme.

Fellowship training

Six fellows from Nigeria and one from Malaysia are taking part in a combined theoretical and practical training on mycotoxin analysis. After having acquired the necessary practical experience, the fellows will perform small research projects to determine the uncertainty of various sample processing procedures, and to obtain information of the level of mycotoxin contamination in maize grown at various locations of Nigeria.

H. EMERGENCY PREPAREDNESS

Codex Alimentarius Guideline Levels for Radionuclides in Foods

The Codex Alimentarius guideline levels for radionuclides in foods are important for the regulation of food trade and dealing with a nuclear or radiological emergency. A consultancy was undertaken by Ray Hance 3-14 June 2002 with input from FAO, IAEA and WHO. The 1989 Guidelines were reconsidered for three reasons.

1. The International Commission on Radiological Protection has recommended a generic intervention exemption level of around 1 mSv for individual annual dose from radionuclides in major commodities.
2. The perceived threats of a war in which nuclear weapons are used and terrorist activity have increased so these possibilities must be considered in addition to accidental releases of radionuclides.
3. The earlier guidelines assumed a reference level of dose (5 mSv) and were applicable only for one year following a nuclear accident. This is illogical because the nature of the 'nuclear accident' was not specified and there may be confusion in applying them to concurrent accidents. There is no radiological reason why the Guidelines should not be generally applicable and in practice they have been widely used.

The revised draft Guideline has been accepted by the Codex Alimentarius Commission as new work and now enters the Codex step process.

Workshop on Practical Agricultural Countermeasures Following a Nuclear or Radiological Emergency

More than one hundred countermeasures have been identified that could ameliorate the impact of radionuclide contaminants on agriculture and related activities. The aim of the workshop is to brief participants on the EC's template approach (<http://www.strategy-ec.org.uk/cms/countermrs.htm>) and to develop materials that would enable this approach to be extended to other regions. The workshop is tentatively scheduled in conjunction with the 3rd RCM of the CRP "Classification of Soil Systems based on Transfer Factors of Radionuclides from Soil to Reference Plants". The venue is Crete, Greece and the date 27-29 September 2003. If you are interested in participating contact Ms. Attakpah (S.Attakpah@iaea.org) or Ian Ferris (I.G.Ferris@iaea.org) for further details.

I. PUBLICATIONS

Ambrus A. and Lantos J., Evaluation of the Studies on Decline of Pesticide Residues, J. Agric Food. Chem. 50. 4846-4851, 2002.

Food and Environmental Protection Newsletter Vol. 5, No. 1

The FEP Newsletter is issued twice a year by the Food and Environmental Protection Section,
Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture.

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Wagramer Strasse 5, P.O. Box 5,
A-1400 Vienna, Austria

Printed by the IAEA in Austria,
January 2003

03-00087