CODEX ALIMENTARIUS COMMISSION

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World Health Organization

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Agenda Item 10(b)

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PESTICIDE RESIDUES

43rd Session
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DISCUSSION PAPER ON HOW TO ADDRESS METHODS OF ANALYSIS FOR PESTICIDE RESIDUES BY THE CODEX COMMITTEE ON PESTICIDE RESIDUES

(Prepared by Australia)

Background

1. At the 42nd Session of CCPR, a discussion paper titled 'Analysis of the References to Pesticide Residues in CODEX STAN 229-1993 and various sections of Volume 2 of the CODEX Alimentarius' (CX/PR 10/42/15, March 2010) prepared by the Codex Secretariat raised a number issues regarding methods of analysis for pesticide residues.

2. After considering the issues, the Committee agreed (Alinorm 10/33/24 para. 193) to invite the Working Group on Methods of Analysis to prepare a discussion paper for the next session of CCPR to address the following issues:

1. The Committee's previous decision to not maintain CODEX STAN 229-1993, Rev. 1-2003 *Analysis for Pesticide Residues: Recommended Methods* but to maintain a list of suitable methods on the IAEA website;
2. The on-going maintenance of the IAEA repository of analytical methods for pesticide residues;
3. The implications of maintaining the list as either a resource list or as preferred/obligatory methods; and
4. The need to clearly define the status of listed methods in order to avoid possible confusion concerning the enforcement of MRLs for pesticide residues.

Discussion

3. Prior to consideration of the options and recommendations, it might be useful to examine the two current resource lists.

CODEX STAN 229-1993, Rev. 1-2003

4. CODEX STAN 229-1993 was published in 1993 primarily as a resource list of analytical methods suitable for the analysis of pesticide residues for compliance purposes. The standard was reviewed and updated in 2003 to take into consideration new technologies and methods enabling faster and more sensitive analysis and to include modern multi-residue methods applicable to a range of different sample matrices.

5. The title of the Standard is misleading in that the methods listed within have no special Codex recommended status. The scope of the Standard makes it clear that, based on practical experience of the CCPR, the listed methods may be considered for the determination of pesticide residues for regulatory purposes, but other validated methods may also be applied for that purpose.

6. Whilst there is little information available to the Working Group regarding how frequently member States and laboratories refer to the Standard, it is likely that the number of referrals will rapidly decrease with time, since the rapid development and application of new methods makes it very difficult continually update a hard copy Standard of listed methods. Maintaining the currency of the Standard would be resource intensive and problematic particularly when relying on the expertise and resources of volunteers.

7. These difficulties led to the Committee's earlier decision to not maintain the Standard but instead to maintain a list of suitable methods on the IAEA website.

8. Although retention of the Standard may have some value as a resource or reference document for laboratories at an entry stage in pesticide residue analysis, it may be more appropriate, given the availability of the IAEA webpage, to revoke the Standard rather than leaving it in its current state or attempting to revise and update it on a regular, say 5 year, basis.

The IAEA Database

9. In recognising the limitations of maintaining a hard copy Standard list of methods for pesticide residues, the FAO/IAEA Joint Division of Nuclear Techniques in Food and Agriculture offered to make available a web-based methods data bank which would enable the storage of analytical methods and which would act as a repository for all member country laboratories. The merit of this database is that it facilitates uploading of new or revised methods as they come on stream thereby ensuring currency of the analytical methods. This does however rely on the continued support of the IAEA and the willingness of member State laboratories to provide the new methodology details in a timely fashion. The design of the web page also enables users to provide comments on methods and to share common problems or analytical issues. It is unclear if the current design can provide statistics on how often the database is accessed by laboratories or member States.

10. The web-based database has been in operation for a number of years with the more recent updates provided at CCPR38. The retention and maintenance of the IAEA web page by the FAO/IAEA Training and Reference Centre for Food and Pesticide Control (TRC) is reliant on the continued availability of TRC staff to provide the facilities and resources to upkeep the currency of the database. Its usefulness further relies on on-going contributions, particularly from the more experienced and leading residue laboratories to provide updated methods particularly those that employ emerging methodologies such as the Quechers clean-up and LCMSMS techniques.

11. As reiterated by the representative of IAEA at 42CCPR (Alinorm 10/33/24, para. 193), the purpose of maintaining the IAEA database is to provide a platform for comments and the sharing of experience regarding methods for pesticide residue analysis. The database should be considered as a resource list of methods. The list was never meant to be a list of preferred or obligatory methods for Codex purposes.

Status of Listed Methods (Issues 3 & 4)

12. Neither the methods listed in CODEX STAN 229-1993, Rev.1-2003 nor the IAEA database are meant to have any recommended, preferred or obligatory status within Codex. There would appear to be little value in attempting to change the status of listed methods, particularly in a field where technology is constantly and rapidly changing.

Options Related to Issues 1 & 2

13. The options for dealing with Issues 1 & 2 include:

(i) Revoking CODEX STAN 229-1993 and retaining the IAEA web-based data base as the primary resource for validated methods suitable for the analysis of pesticide residues for compliance with Codex MRLs.

(ii) Updating CODEX STAN 229-1993 to reflect current methods applicable for pesticide residues and discontinuation of the IAEA database.

(iii) Updating CODEX STAN 229-1993 to reflect current methods applicable for pesticide residues and continuation of the IAEA database in parallel.

(iv) Deleting all referencing to analytical methods by CCPR thereby leaving the responsibility with laboratories to employ appropriate and validated methods.

14. Option 1 is considered the preferred option. It removes the requirement to maintain CODEX STAN to a level of currency that is useful to member State laboratories. Adoption of Option 1 is based on the assumption that the IAEA will continue to support and maintain the database and perhaps make it more interactive by monitoring the level and frequency of access of the database.

15. Option 2 is not preferred but may need to be considered if the web-based database is no longer supported by IAEA. It would require considerable resources by the Codex Secretariat and should only be considered if a number member States regard the Standard as an important and valuable resource.

16. Option 3 is both resource and cost intensive and it does not seem practical to maintain a parallel resource, particularly if the web-based repository is available and likely to be more current.

17. Option 4 is a consideration if it is established that both the CODEX STAN document and the web-based repository are rarely accessed. The level of access might be best established by a questionnaire to member States. It would seem appropriate to ensure that the maintenance of either a Standard list or repository of current methods is cost-effective in meeting the needs of member States.

Recommendations

18. The following recommendations are presented for consideration of the Committee. It is anticipated that the in-house Working Group on Methods of Analysis will discuss the issues before presenting final recommendations to CCPR.

19. It is recommended that;

1. CCPR recommend the revocation of CODEX STAN 229-1993, Rev.1-2003.
2. The IAEA database is maintained.
3. The introductory wording to the IAEA database be strengthened to make it very clear that the database is a resource list of methods considered suitable for pesticide residue analysis but the methods do not have a recommended, preferred or obligatory status within Codex.