



PROPOSAL FOR A NEW FIELD OF TECHNICAL ACTIVITY

PROPOSER:

SAC

DATE OF CIRCULATION:

2023 - 04 - 14

CLOSING DATE FOR VOTING:

2023 - 07 - 07

A proposal for a new field of technical activity shall be submitted to the Office of the CEO, which will process the proposal in accordance with [ISO/IEC Directives, Part 1, Clause 1.5](#).

Furthermore, a proposal will be considered as complete if every information field is complete and follows the guidelines for proposing and justifying a new field of activity given in the [ISO/IEC Directives, Part 1, Annex C](#).

TITLE

(Please see the [ISO/IEC Directives, Part 1, Annex C, Clause C.4.2](#))

Integrated Pest Management (IPM) for Crops [Click or tap here to enter text.](#)

SCOPE

(Please see the [ISO/IEC Directives, Part 1, Annex C, Clause C.4.3](#))

Standardization of integrated pest management in crop production process, including management services, effectiveness assessments, testing and analysis and other related standards which involved in the process of monitoring and forecasting, prevention and control and emergency measures.

- Excluded: — Tractors and machinery for agriculture and forestry (covered by ISO/TC 23)
— Common names for pesticides and other agrochemicals (covered by ISO/TC 81)
— Personal safety -- Personal protective equipment (covered by ISO/TC94)

Note: Crops refer to all kinds of plants cultivated in agriculture, including food crops, cash crops, industrial raw material crops, feed crops, etc.

PURPOSE AND JUSTIFICATION (Please use the field immediately below or attach an annex.)

(Please see the [ISO/IEC Directives, Part 1, Annex C, Clause C.4.13](#))

In many countries, agriculture is the foundation of the national economy and plays a strategic role in a country's economic development. The sustainable development of agriculture and food security are related to the development of national economy and social stability, and also important parts of global governance. Crops are not only the essential sources of the food supplies for all the countries, but also provide raw materials for industrialization. However, due to changes in the global climate and farming system, crop disease and pest control are more important than prevention in many countries, and the application and promotion of key technologies and products need to be improved. As a result, crop diseases and pests are still at a high rate, posing a threat to global food security, economic development and ecological environment. According to relevant data, annually up to 40 percent of global crop production is lost to pests¹. The yield loss estimates at a

global level for wheat (21.5%), rice (30.0%), maize (22.5%), potato (17.2%) and soybean (21.4%) due to pest². Each year, plant diseases cost the global economy over \$220 billion and invasive insects at least \$70 billion³. Between 720 and 811 million people in the world faced hunger in 2020⁴. 64% of agricultural land is at risk of pollution due to unscientific and irrational use of pesticides⁵.

IPM for crops is the focus of both the developed and developing countries, therefore, the countries all over the world formulated and issued laws, regulations or technical guidelines related to crop pests and diseases according to national conditions, such as Plant Protection Act and Integrated Pest Management in USA, Pest Management Services - Requirements and Competences in European Union, Code of Best Practice for Pest Management in the United Kingdom, Agricultural Pests Act in South Africa, the Regulation for the Prevention and Control of Crop Diseases and Insect Pests in China and so on. For crops that are in high demand and widely cultivated in the worldwide, due to the different geographical conditions, economic and technological development level in different countries, there are certain differences in the practices, methods and effects of IPM, which is worthy to share and discuss. To a certain extent, coordination should be maintained, and scientific, reasonable and widely used general standards should be formulated to promote industrial development, technological innovation and trade and achieve the following UN Sustainable Development Goals (SDGs):

SDG1: "End poverty in all its forms everywhere"

SDG2: "End hunger, achieve food security and improved nutrition and promote sustainable agriculture"

SDG15: "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss"

[1] Climate change fans spread of pests and threatens plants and crops | |New FAO study

[2] Serge Savary, Laetitia Willocquet, Sarah Jane Pethybridge, Paul Esker, Neil McRoberts & Andy Nelson, The global burden of pathogens and pests on major food crops, Nature Ecology & Evolution.

[3] Climate change fans spread of pests and threatens plants and crops | |New FAO study

[4] 'Tremendously off track' to meet 2030 SDGs: UN chief | | UN News

[5] Fiona H. M. Tang, Manfred Lenzen, Alexander McBratney & Federico Maggi, Risk of pesticide pollution at the global scale, Nature Geoscience.

PROPOSED INITIAL PROGRAMME OF WORK(Please use the field immediately below or attach an annex)

Please see the [ISO/IEC Directives, Part 1, Annex C.4.4 and C-4.5](#))

For each item, the initial work programme shall define the deliverable type and target dates. The initial work programme shall also assign priorities to the different items.

The proposed work programme will include, but not limited to:

- 1) To formulate comprehensive management standards for IPM of Crops, which cover key parts of IPM, such as monitoring and forecasting, prevention and control, early warning and emergency treatment of crop pests and diseases.
- 2) To formulate service guideline of IPM.
- 3) To develop key technologies and methods for IPM.
- 4) To formulate the principles and methods for evaluating the effectiveness of IPM.
- 5) Other guidance documents required to support the above standards.

The following is a list of priority international standards to be developed in this proposal:

- 1) Principles of crop pests and diseases control
- 2) Guideline on crop pests and diseases control services
- 3) Guideline for quality evaluation of crop pests and disease control services
- 4) Key technologies and methods for physical control of crop pests and diseases
- 5) Guideline for artificial control of crop pests and diseases
- 6) Acoustic detection method of fruit borer
- 7) Guideline for introduced natural enemy and biological control management
- 8) Technical parameters and performance requirements of crop pests and diseases monitoring equipment
- 9) Methods of sexual attraction monitoring of crop pests
- 10) Guideline for the management of crop pests and diseases inspection and testing laboratories
- 11) Guideline for prevention and control of major pests and diseases in wheat
- 12) Guideline for prevention and control of major pests and diseases in rice
- 13) Guideline for prevention and control of major pests and diseases in corn

- 14) Guideline for prevention and control of major pests and diseases in potato
- 15) Guideline for prevention and control of major soybean diseases and pests
- 16) Method of rice blast resistant varieties layout

RELATION OF THE PROPOSAL TO EXISTING INTERNATIONAL STANDARDS AND ON-GOING STANDARDIZATION WORK

- The proposer has checked whether the proposed scope of the new committee overlaps with the scope of any existing ISO or IEC committee or JTC1 sub-committee
- If an overlap or the potential for overlap is identified, the affected committee has been informed and an agreement has been reached between proposer and committee on
 - i. modification/restriction of the scope of the proposal to avoid overlapping,
 - ii. potential modification/restriction of the scope of the existing committee to avoid overlapping.
- If agreement with the existing committee has not been reached, please explain why the proposal should be approved.

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- Have proposals on this subject been submitted into an existing committee and rejected? If so, what were the reasons for rejection?

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LISTING OF RELEVANT DOCUMENTS (SUCH AS STANDARDS AND REGULATIONS) AT INTERNATIONAL, REGIONAL AND NATIONAL LEVEL

(Please see the [ISO/IEC Directives, Part 1, Annex C, Clause C.4.6](#))

IPM is an area of worldwide concern. Here are some of the standards developed by organizations or countries

International Standardization Organization (ISO)

- ISO 257:2018 Pesticides and other Agrochemicals — Principles for the Selection of Common Names
- ISO 765:2016 Pesticides Considered not to Require Common Names
- ISO 1750:1981 Pesticides and other Agrochemicals — Common Names (including Addendum and Amendments)
- ISO 6322-3:1989 Storage of Cereals and Pulses — Part 3: Control of Attack by Pests
- ISO 22000:2018 Food Safety Management System
- ISO 19932-2013 Equipment for Crop Protection — Knapsack Sprayers — Part 1: Safety and Environmental requirements
- ISO 16119-1:2013 Agricultural and Forestry Machinery — Environmental Requirements for Sprayers — Part 1: General

The International Plant Protection Convention (IPPC)

- International standards for phytosanitary measures (ISPM) 01,02,09,17,19,22,27,31,35,36

Food and Agriculture Organization (FAO)

- Desert Locust Guidelines 3. Information and Forecasting
- Desert Locust Guidelines 5. Campaign Organization and Execution
- Prevention, Preparedness and Response Guidelines for Spodoptera Frugiperda
- Community-based Fall Armyworm (Spodoptera Frugiperda) Monitoring, Early Warning and Management
- International Code of Conduct on Pesticide Management

European Union

- PP1/227(1) - Definition of a Plant Protection Product (EPPO Standards)
- PP1/306(1) - General Principles for the Development of Co-formulated Mixtures of Plant Protection

Products

Besides, some Regulations made by the European Parliament and of the Council:

- Regulation (EC) No 1107/2009 is the Legislation Concerning the Placing of Plant Protection Products (PPPs) on the Market in the European Union
- Regulation (EC) No 1185/2009 of the European Parliament and of the Council of 25 November 2009 Concerning Statistics on Pesticides
- Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 Concerning the Making Available on the Market and Use of Biocidal Products

The United Kingdom

- Code of Best Practice for Pest Management

The United States

- Plant Protection Act
- Regional Standards for Phytosanitary Measures (RSPM)
- ANSI A300 (Part10) - 2016: Integrated Pest Management

Australia and New Zealand

- AS CN1-1953 Code of Recommended Practice in the Sampling of Agricultural Insecticides, Fungicides, and Pest Destroyers

China

- The Regulation for the Prevention and Control of Crop Diseases and Insect Pests
- GB/T 33311-2016 Agricultural Service. Quality Assessment for Crop Pest Control Service
- GB/T 32980-2016 Agricultural Service. Quality Requirement for Crop Pest Control Service
- GB/T 23416.1-2009 Safety technical specification of pest control for vegetables
- GB/T 23392.1-2009 Technical Specification for the Forecast of Diseases and Insects on

Cruciferous Plants

- NY/T 3302-2018 Comprehensive Technical Regulation for the Prevention and Control of Major Wheat Pests and Diseases during the Whole Growth Period

India

- Plant Protection Code (2020)
- Insecticides Rules (2020)
- IS6940: 1982(revised in 2017) Methods of Test for Pesticides and their Formulations

Pakistan

- Agricultural Pesticide Rules
- Agricultural Pesticide Ordinance Act
- Pakistan Plant Quarantine Rules (2019)
- Pakistan Plant Quarantine Act (1976)

More regions or countries are not listed here.

LISTING OF RELEVANT COUNTRIES WHERE THE SUBJECT OF THE PROPOSAL IS IMPORTANT TO THEIR NATIONAL COMMERCIAL INTERESTS

(Please see the [ISO/IEC Directives, Part 1, Annex C, Clause C.4.8](#))

The establishment of Integrated Pest Management (IPM) TC will help popularize and apply best practices and advanced technologies in IPM, so as to widely reduce the impact of crop diseases and pests worldwide, promote crop output, improve economic efficiency and ensure global food security production.

LISTING OF RELEVANT EXTERNAL INTERNATIONAL ORGANIZATIONS OR INTERNAL PARTIES (OTHER THAN ISO AND/OR IEC COMMITTEES) TO BE ENGAGED AS LIASONS IN THIS WORK

(Please see the [ISO/IEC Directives, Part 1, Clause C.4.9](#))

- Food and Agriculture Organization (FAO)
- ISO/TC 23 Tractors and Machinery for Agriculture and Forestry
- ISO/TC 34 Food Products
- ISO/TC 81 Common Names for Pesticides and other Agrochemicals
- ISO/TC 94 Personal Safety -- Personal Protective Equipment
- ISO SAG Smart Farming

FAO has issued a set of management guidance for three specific pests, such as desert locust, army worm and wheat rust. The TC proposal is not limited to specific pests and diseases control, but will cover all types of pests and diseases affecting crop production. On the other hand, TC proposal is a series of standards formulated based on the production process of specific crops, such as food crops, cash crops, industrial raw material crops and feed crops. It is more applicable and comprehensive.

GlobalGAP is a set of certification standards to ensure good agricultural practices. It establishes the basic framework and general guidelines for pests and diseases control, but does not specify specific operating specifications, technical parameters, test indicators, standard methods, etc. The TC proposal fills this gap.

ISO currently has four TCs covering the agricultural sector, namely ISO/TC 23 Tractors and Machinery for Agriculture and Forestry, ISO/TC 34 Food Products, ISO/TC 81 Common Names for Pesticides and other Agrochemicals, and ISO/TC 94 Personal Safety -- Personal Protective Equipment. In addition, the ISO Strategic Advisory Group (SAG Smart Farming) focuses on smart and digital farming, which does not overlap with the TC proposal's scope, content and objectives.

TC will establish liaison with relevant organizations or institutions when necessary.

IDENTIFICATION AND DESCRIPTION OF RELEVANT AFFECTED STAKEHOLDER CATEGORIES(Please see [ISO Connect](#))

	Benefits/Impacts/Examples
Industry and commerce – large industry	Large enterprises participate in or lead the formulation of standards, lead the development of the industry, and expand the international market for products, technologies and equipments
Industry and commerce – SMEs	SMEs participate in or lead the formulation of standards to enhance their influence
Government	Government will standardize market management and improve governance to ensure food security
Consumers	Meet consumers' demand for agricultural products' qualities.
Labour	Help crop producers to carry out planting in a scientific and effective way, improve crop yield and increase profits
Academic and research bodies	Via studies, applications and participates in the formulation of standards, scholars master and get familiar with the new trends and technologies of development, so as to improve their own research ability and level
Standards application businesses	Standardize and effectively carry out work

Non-governmental organizations	Through researches, applications and participations in the formulation of standards, it can effectively disseminate of methods and organizational philosophy to the community, and also expand the influence of organizations
Other (please specify)	N.A

EXPRESSION OF LEADERSHIP COMMITMENT FROM THE PROPOSER

(Please see the [ISO/IEC Directives, Part 1, Annex C, Clause C.4.12](#))

If the proposal is approved, SAC is willing to assume the secretariat of the new TC and is committed to providing all resources possible to carry out its management responsibilities.

- The proposer confirms that this proposal has been drafted in compliance with iso/iec directives, part 1, annex c**

SIGNATURE OF THE PROPOSER

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COMMENTS OF THE ISO CENTRAL OFFICE(IF ANY)

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