BUSINESS PLAN

ISO/TC 34
Food products

EXECUTIVE SUMMARY

ISO/TC 34 is actually dealing with a very wide scope.

Scope: **Standardization in the field of human and animal foodstuffs as well as animal and vegetable propagation materials, in particular terminology, sampling, methods of test and analysis, product specifications and requirements for packaging, storage and transportation.**

Excluded from its scope are products covered by ISO/TC 54, *Essential oils* and ISO/TC 93, *Starch (including derivatives and by-products)*.

Under the responsibility of ISO/TC 34 and its SCs 715 International Standards have been developed and published at the time of writing of this Business Plan. ISO/TC 34 is only involved in the coordination of the SC work programme and in the development of standards of horizontal scope through working groups.

All these standards apply to products that account for worldwide trade of almost 800 billions US$.

Mainly involved in the development of test methods and products specifications, ISO/TC 34 contributed since its creation in 1947 to remove technical barriers to food and feed trade and to the safety of food and feed.

Despite being stable regarding its structure, ISO/TC 34 faced quite a number of modifications during the last years (reallocation of secretariats, changes in chairmanship) also facing modifications of its Business Environment (emergence of new fields of activity, etc.). All that implies a new and flexible way of working.

In order to face these new challenges, ISO/TC 34 is first to adapt its structure:

- create a Chairman Advisory Group for coordination, consistency and planning,
- rationalise the activities of the subcommittees in order to avoid, in particular, duplication of work and efforts,
- ensure adequate participation within subcommittees, particularly by the major producing countries,
- participate in TCs dealing with non-food use of food commodities,
- raise the level of interaction of ISO/TC 34 with other international organizations.

In addition to its current work programme, ISO/TC 34 has also to consider the need for standardization in developing areas of food and to adapt existing standards to its specificities (ISO 9001, life cycle analysis, etc.). The following document is therefore focussed on the identification of new topics that are to be addressed by ISO/TC 34 in order to match the modifications of its environment and not only on its current work programme.

1 INTRODUCTION

1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: ISO (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of IEC (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of ITU (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 140 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the International Standard.

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its Technical Committees are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

2 BUSINESS ENVIRONMENT OF THE ISO/TC 34

2.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal and social dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

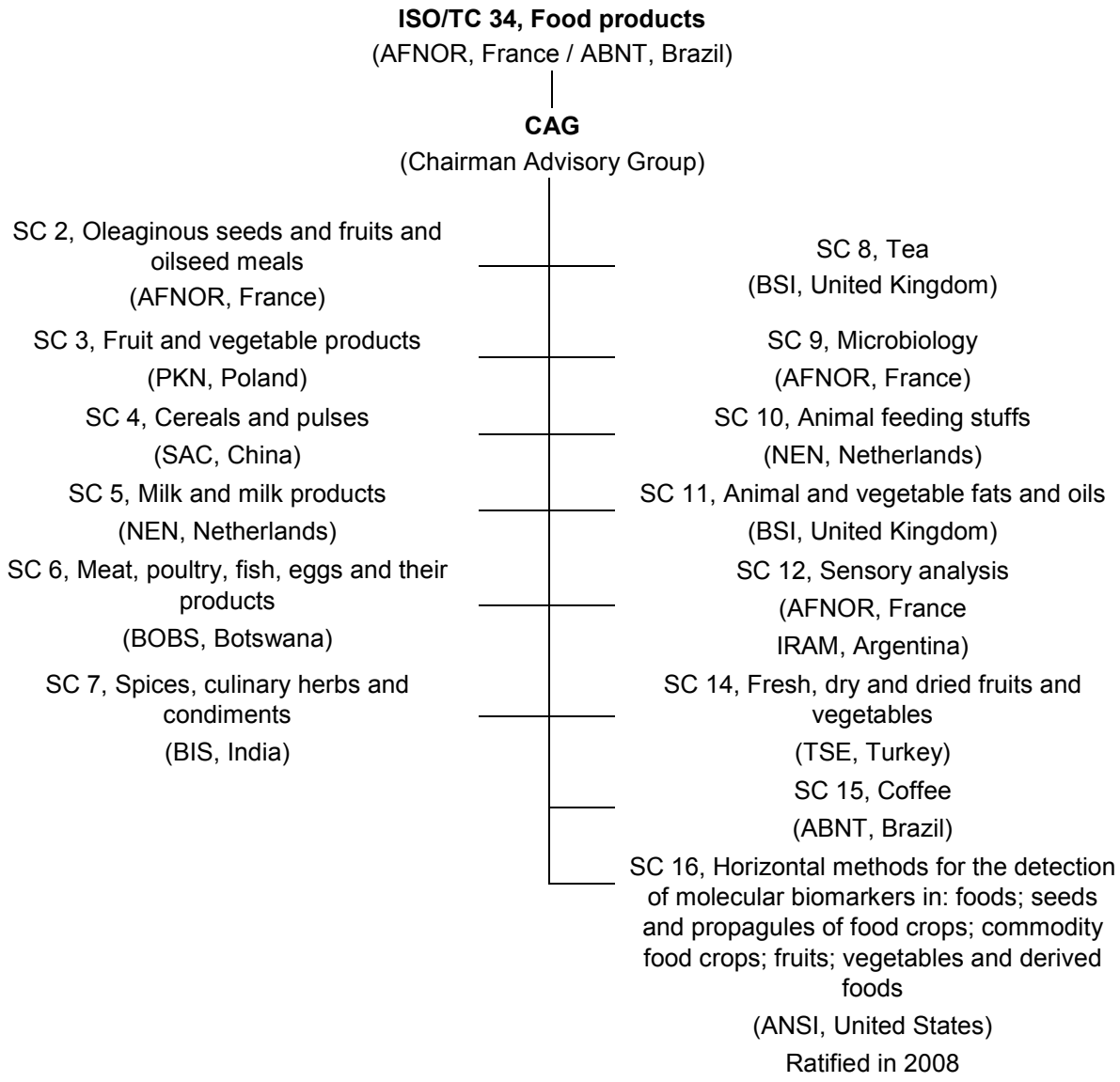
The state of the art in the field addressed by the scope of the ISO committee

The purveyance of food and feed of suitable quality and safety in sufficient amounts and therefore the possible export and the necessary import of food and feed are a focus of interest in each society. In that context, international standardization in food and feed sectors, whose fundamental aim is to promote the development of industry and trade, was one of the first topics chosen when ISO was established in 1947.

To answer this problematic, the field of activity of ISO/TC 34 and its subcommittees covers practically all those products of agriculture that are produced directly or after processing for human consumption and animal feeding. These are:

- oleaginous seeds and fruits and oilseed meals,
- cereals and pulses,
- fresh, dry and dried fruits and vegetables and derived products,
- milk and milk products,
- meat, poultry, fish, eggs and their products,
- animal and vegetable fat and oils,
- tea and coffee, and
- products that increase the hedonic value of foods, such as spices, culinary herbs and condiments.

In order to deal with all these topics, ISO/TC 34 is divided into several subcommittees:



The scope of the product-oriented subcommittees of ISO/TC 34 comprises: terminology, sampling, methods of test and analysis, product specifications and requirements for packaging, storage and transportation. In addition to these product-oriented subcommittees are three, horizontal subcommittees dealing with the development of standards specifying analytical and test methods in microbiology, sensory analysis and detection of molecular biomarkers.

ISO/TC 34 as such assists in channelling requests from parties to its subcommittees, and deals directly with standards for which there is a specific (horizontal) need.

For a detailed presentation see tables below.

Structure	Topics covered by the structure								
	Terminology Nomenclature	**Sampling and sample preparation**	**Methods of test and analysis**	**Product specifications**	**Packaging**	**Storage**	**Transportation**	**Management system**	**Material**
TC 34		X	X	X				X	
SC 2	X	X	X						X
SC 3			X						
SC 4	X	X	X	X		X			X
SC 5		X	X						X
SC 6			X	X					
SC 7	X	X	X	X		X	X		
SC 8	X	X	X	X					
SC 9		X	X						
SC 10	X	X	X						
SC 11	X	X	X						
SC 12	X		X						X
SC 14	X	X	X	X		X	X		
SC 15	X	X	X	X		X	X		

The most frequent demand submitted to ISO/TC 34 and its subcommittees, is to develop International Standards related to methods of test and analysis. This is reflected in the fact that approximately 65% of ISO/TC 34 standards describe methods for analysis and testing; 12% of them deal with product specifications; 9% contain recommendations and guidelines for storage conditions and transportation. Most product-oriented subcommittees of ISO/TC 34 have also developed one or more standards for sampling of their products, terminology and nomenclature.

Recently ISO/TC 34 has also developed standards dealing with management systems adapted to the food and feed sectors (ISO 22000, ISO/TS 22003, ISO/TS 22004, ISO 22005). It has been underlined that Food Safety Management System Standards shoud be managed as a group.

In order to provide useful documents for the stakeholders, ISO/TC 34 takes into account:

- the need for an ISO International Standard for a particular item,
- the relationships between existing national, regional and ISO Standards,
- the relationships between ISO Standards and other standards and guidance documents published by other international organizations,
- the implementation and use of ISO Standards (ISO systematic review).

Recent or expected technological changes and major innovations related to the agri-food sector, products or materials addressed by the scope of the ISO committee

From a general point of view, it should be noted that the world population is increasing; this trend generates bigger needs in terms of food and feed in particular in certain parts of the world.

Together with the increase in demand, is a modification of the expectations due to the ageing of the population and the increased concern with obesity in certain countries.

Therefore, new technologies are being developed to ensure sustainable development in the feed and food sectors (for example development of more effective agricultural and food technologies which are also less detrimental to the environment), and also, for example, to answer a request from the consumers for the maintenance of the nutritive value and taste of the products.

Another important trend is the rapidly changing global market. Food products have always travelled globally – e.g. the spice trade – but the amount and the scope of their global trade have increased substantially. International trade of a wide range of food and feed products has highlighted the question of food and feed safety and criteria are being developed, for example, the absence of a microorganism or the maximum tolerated number of microorganisms per quantity of product, in order to ensure the commercialization and the exchange of food products without endangering the health of the consumers. In order to check these criteria, test methods need to be developed.

In addition to that the objectives of the production of some products might be other than for animal or human consumption, thus generating a competition between the food and non-food sectors. The development of bio-energy is in this conditions changing the pattern of world trade (e.g. Biofuels).

Recent or expected changes and major innovations in the disciplines or practices addressed by the scope of the ISO committee

The recent occurrence of several incidents such as BSE or problems resulting from the use of colouring agents in food, put the stress on the need for traceability of the products and on the development of food safety management systems. Often supported by regulatory measures, these requirements are more and more often "outcome" oriented and less and less "means" oriented, therefore increasing the need for the development of (voluntary) standards giving examples of useful tools.

A major recent innovation in the food and feed sectors is the increased use of transgenic materials that implies the need to develop new methodologies, both qualitative and quantitative, for the detection and identification of genetically modified (GM) materials due to the demands of the consumers. It is foreseeable that the development of biotechnology-derived crops will be followed by the development of similar approaches in food animals.

To conclude, the development of a quality assurance system according to ISO 9001 within a food producing company is also one way to increase the trust of consumers and accreditation according to ISO 17025 and is becoming more important for food and animal feed laboratories. This standard for quality management urges laboratories to use standardized methods.

Categories of relevant stakeholders (for example, industry, government, public interest groups, investors, lending institutions, employees, customers, suppliers, contractors, media, consumers, local communities)

The span of stakeholders concerned with the standardization of food and feed products, either directly or indirectly, is very wide.

In most countries governmental regulations set provisions with respect to the safety and nutritional quality of food, including microbiological standards, limits for food additives, pesticide residues, contaminants, etc. These have to be followed by all operators in the food and feed chain in order to provide the consumer with an acceptable product.

Therefore the main stakeholders concerned with the work of ISO/TC 34 are:

- governments,
- seed (seed technology producers),
- farmers (private, state-owned and co-operatives),
- food manufacturers,
- animal feed producers,
- contract laboratories,
- merchants/retailers,
- exporters/importers,
- consumers.

It should be noted that it is in the interest of both farmers and manufacturers to follow International Standards in order to provide products that are more competitive and easier to sell in particular in the context of international trade and the emergence of new operators.

In addition to these “direct” stakeholders can be added trade associations or other safeguarding and environmental organizations, educational and research institutions, media, investors, etc.

The concerns and perceptions of relevant stakeholders

Over the last decades the use of fertilizers, pesticides, herbicides, veterinary drugs and other chemicals has increased significantly in the food and feed industry in particular to meet the increasing demand for food.

The use of additives and subsidiary materials and at the same time the occurrence of several illnesses, e.g. allergy or hypersensitivity to certain food constituents (for example lactose – in dairy products; gluten – in wheat, etc.), made people become more and more worried about their health and the environment. And even if, for example, the use of phytosanitary products is decreasing in some parts of the world or it is known that other factors have an impact, these consumers' requests remain.

These facts, together with the growing proportion of elderly people in some parts of the world and a global concern with obesity (i.e. nutrition), resulted in:

- the development of a request for bio-products and special food products satisfying different dietary purposes,
- a tendency to make agriculture more environmentally friendly and,
- a need for food safety.

In addition to that, commercial exchanges are becoming more and more cross-border (multisite studies, multinational companies, etc). In that context, industries and procudes need a common “language” approved by each of the partners involved in order to avoid conflits and multiplication of controls.

Social, safety, health, environmental or cultural issues related to the industry sector, products, materials, disciplines or practices addressed by the scope of the ISO committee

The following issues have an impact on the work of ISO/TC 34:

- increase of the world population,
- increased needs for food and feed products and change in the demand due to the ageing of the population (tailored and dedicated nutrition, fulfilment of special nutritional demands),
- more results oriented requirements and less means oriented requirements,
- development of private reference documents,
- request for more information on the products (labelling, communication, certification…),
- waste reduction and preservation of the environment,
- sourcing of agricultural products or the food industry,
- increasing speed of the launching of new food products.

Other relevant international, regional or national standards or voluntary initiatives

In the field of activity of ISO/TC 34, in addition to ISO, several other organizations are working, making coordination of work a core point for ISO/TC 34. These organizations can be classed into different categories and the main ones are listed hereafter.

First of all are international governmental organizations, the main one being the Codex Alimentarius Commission (CAC), which publishes international standards that are referenced in WTO disputes.
CAC is an intergovernmental organization created in 1963 by FAO (Food and Agriculture Organization of the United Nations) and WHO (World Health Organization) to develop food standards, guidelines and related texts such as codes of practice under the Joint FAO/WHO Food Standards Programme. The main purposes of this Programme are protecting health of the consumers and ensuring fair trade practices in the food trade, and promoting coordination of all food standards work undertaken by international governmental and non-governmental organizations. For that reason ISO/TC 34 and almost all its subcommittees are in liaison with CAC.

There exist also other public and private bodies that develop standards related to the work of ISO/TC 34. These include intergovernmental bodies such as the World Organization for Animal Health (OIE), the United Nations Economic Commission for Europe (UNECE) or private sector organizations and associations such as the International Dairy Federation (IDF) for milk and milk products, the International Association for Cereal Science and Technology (ICC) for cereals, the International Seed Testing Association (ISTA) for seeds, etc. It should be noted that based on a request from the CODEX Committee on Milk and Milk Products in 1961, ISO/TC 34/SC 5, Milk and milk products and IDF agreed to a cooperation on work in 1963. Based on that close and longstanding cooperation, ISO and IDF agreed additionally in 2000 to publish their jointly developed standards also jointly as ISO-IDF International Standards by ISO from 2001 onwards.

Then are also other standardization bodies. As part of the work programme of ISO/TC 34 is done within the framework of the *Vienna Agreement* between ISO and CEN, CEN (Comité Européen de Normalisation) is to be mentioned. It should be noted that several of its Technical Committees are mirroring some of ISO/TC 34/SCs. For example:

- ISO/TC 34 – CEN/TC 275 "Food analysis – Horizontal methods",
- ISO/TC 34/SC 2 (Oleaginous seeds and fruits and oilseed meals) and SC 11 (Animal and vegetable fats and oils) – CEN/TC 307 "Oilseeds, vegetable and animal fats and oils and their by-products – Methods of sampling and analysis",
- ISO/TC 34/SC 4 (Cereals and pulses) – CEN/TC 338 "Cereal and cereal products",
- ISO/TC 34/SC 5 (Milk and milk products) – CEN/TC 302 "Milk and milk products – Methods of sampling and analysis";
- ISO/TC 34/SC 9 (Microbiology) – CEN/TC 275 "Food analysis – Horizontal methods",
- ISO/TC 34/SC 10 (Animal feeding stuffs) – CEN/TC 327 "Animal feeding stuffs – Methods of sampling and analysis".

To conclude on this point it should be noted that for one of the work items of ISO/TC 34 (Food safety management systems) also exists a private initiative GFSI (Global Food Safety Initiative) that is performing a benchmark of the corresponding ISO Standard versus existing private reference documents (BRC, IFS, SQF 2000 and Dutch HACCP scheme).

Real or potential technical barriers to trade related to the scope of the ISO committee, due to diverging national, regional or other standards and/or technical regulations. If possible, an estimation of their financial impact on trade should be provided

The technical barriers to trade can be classed in different categories. The main ones are the specifications that differ nationally from International Standards. For example, in some countries national standards and regulations differ from those that are specified in International Standards in veterinary and phytosanitary rules). Other barriers also exist; these can be:

- presentation/composition/labelling requirements;
- lack of standardized methods of analysis for certain parameters;
- sampling plans;
- long and costly product certification;
- private reference documents.

These kinds of situations enhance the need for harmonized world wide accepted standards.

Other regulatory and legal issues, such as the existence of international, regional and national legislation/regulations, product bans, coverage by patents, etc.

In addition to the points listed above are technical barriers that fall outside the scope of this Technical Committee but nevertheless result also in difficulties in international trade, such as fixed minimum purchase prices, export subsidies, restrictions/prohibitions, import licensing, intervention measures, quarantine laws, time consuming controls, information technology or intellectual property.

2.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC:

In 1961, approximately 1,3 billion hectares of arable land were engaged to feed the world's population. Since then, the world's population has doubled (from 3 to 6 billions) but the area of arable land has not changed remarkably (it was 1,38 billion hectares in 1998). In spite of these facts the amount of available food per capita per year increased in the world average.

These data demonstrate well how enormous the development that has taken place over the last 40 years within the food and feed industry was. This rapid growth in production was the consequence of different factors such as, in particular, the breeding and dissemination of cultivars and species having higher yields, the use of phytosanitary products in the agriculture and food industry or the development of preservation techniques for food.

According to an FAO estimation, the world population will grow to 8,4 billion in the next 20 years, while significant change in the amount of arable land is not predicted. So, expectations regarding quantities produced will not decrease. How to optimise the production (less loss by quality, process,…) should be taken into account in ISO/TC 34 works. However, the way of development mentioned before cannot be continued in the future. Possible increases in quantities of food and feed by the use of chemicals are getting exhausted, some undesirable effects of their overstrained use have already appeared and therefore people are becoming more and more concerned with chemicals. Demand for the development of international standards specifying reliable, sensitive

and selective methods for the detection and determination of residues of the above-mentioned materials is increasing.

ISO/TC 34 Standards are used by contract laboratories, food and feed producers and official government laboratories. This means, for example, that thousands of analyses per day are conducted in accordance with ISO Standards.

Total international trade in the sector/products/materials (in US$) over the last known 3 years

World trade of agricultural products (US$)

2002	2003	2004
583 billons	674 billons	783 billions
Source World Trade Organization, publication 2007		

World Milk Production (million tonnes)

	2002	2003	2004
Milk from other animals[a]	93	96	98
Cow milk	509	517	521
Total Milk Production	603	614	620
[a] **includes e.g. buffalo, sheep, goat and camel milk**			
Source ZMP/IDF 2007			

Cow milk production is and remains about 84 % of the total World milk output though on World scale level though some but minor changes have been notified.

World Industrial Liquid Milk and Fresh Dairy Products Production (million tonnes)

	2002	2003	2004
Milk drinks, Yogurts, Desserts	14,7	14,8	15,6
Ordinary Liquid milks	95,5	98,7	103,0
Total Liquid Production	110,2	113,5	118,6
Source ZMP/IDF 2007			

The processing of milk in dairy factories for the liquid market is going up constantly despite changes in consumption. An example is the consumption of milk with low fat or skimmed milk which increases due to health recommendation and promotion by authorities. Furthermore the emerging market is showing growth, for example in the new member states of the EU (enlarged in 2004 and will be again in 2007).

World Industrial Butter and Milk Powder Production (million tonnes)

	2002	2003	2004
Butter	4,13	4,25	4,13
Whole Milk Powder	3,42	3,53	3,81
Skim Milk Powder	3,18	3,16	2,78
Source ZMP/IDF 2007			

World butter production increased and felt back again but this phenomenon has been shown more. The decline mostly can be attributed to a reduced milk supplies in the EU, more cheese production and reduction of the fat content of milk being produced. The Production of Whole Milk Powder is increasing which mostly is due to EU regulations. Due to a reduction of butter invention price, fat is becoming more attractive as ingredient. Contrarily, the production of skim Milk Powder is declining due to the modest growth of milk production.

In general the milk production but also the processing of liquid milk and milk products and its consumption is a growing market world wide. The increase can be attributed to the still growing World population but also and especially to the growth in emerging countries. A constant change and improved processing of other or different milk products keeps milk and its product attractive for consumers. As such milk and its products are still considered as one of worlds most important basic food product and as such the dairy industry represents one of the most important sectors within the food industry.

Based on that the standardization and keeping of reliable methods of analysis and sampling is of great importance for renewing, trading and assuring the good quality of milk and its products all over the World.

World trade of tea (1000 US$)

	2002	2003	2004
Total import	1 419 982	1 663 692	1 501 265
Total export	2 132 505	2 162 608	2 440 850
Source Information courtesy of the International Tea Committee, London			

Between 2002 and 2004 the tea trade increased in the world, the imports overall by 6% and the exports by 14%. Tea production also grew by almost 7%.

Among SC 8 members the representation of the main exporters is remarkable as more than 85% of the total exports is provided by them, while the importers show lower interest in international standardization of tea, the 43 members of SC 8 imported 51% of the world total in 2004.

Total trade of animal feeding stuffs (not including unmilled cereals) (x1000 US$)

	2002	2003	2004
Total import	24 218 649	27 180 208	32 641 113
Total export	23 103 167	26 026 248	29 957 162
Source International Trade Centre – UNCTAD - WTO			

Imports and exports in the sector/products/materials (in US$) by major geographical regions and/or by countries over the last known 3 years

General (billions US$)

	Exports		
	2002	**2003**	**2004**
Europe	249	301	368
Asia	106	119	143
North America	101	110	131
Central and South America	68	75	80
Africa	28	35	28
Commonwealth of Independent States	22	24	24
Middle East	9	10	9
TOTAL	583	674	783
Source World Trade Organization, publication 2007 (change in classification between 2003 and 2004)			

	Imports		
	2002	**2003**	**2004**
Europe	261	318	382
Asia	132	146	174
North America	83	90	117
Central and South America	33	33	26
Africa	22	28	31
Commonwealth of Independent States	29	35	26
Middle East	23	24	27
TOTAL	583	674	783
Source World Trade Organization, publication 2007 (change in classification between 2003 and 2004)			

World Industrial Cheese Production (million tonnes)

	2002	**2003**	**2004**
Europe (25)	7,7	7,7	7,9
North America	4,5	4,2	4,4
Rest of World countries	3,4	3,8	3,8
Total Cheese Production	15,6	15,7	16,1
Source ZMP, IDF 2007			

Industrial cheese production is showing a slow but continuing growth. The major production regions are Europe and North America having both areas a good speed of growth.

Tea (1000 US$)

	Exports		
	2002	**2003**	**2004**
Asia	1 579 261	1 589 324	1 716 978
Africa	554 334	570 137	1 716 978
Europe	354 371	435 782	499 460
South America	45 024	38 898	44 651
North and Central America	4 297	2 753	9 057
Oceania	7 200	7 000	7 000
TOTAL	2 544 487	2 643 894	2 949 367
Source Information courtesy of the International Tea Committee, London			

	Imports		
	2002	**2003**	**2004**
Europe	647 999	678 493	751 399
Asia	480 389	578 007	395 917
Africa	487	80 443	271
North and Central America	234 504	259 554	286 191
Oceania	56 603	67 195	67 487
South America			
TOTAL	1 419 982	1 663 692	1 501 265
Source Information courtesy of the International Tea Committee, London			

Between 2002 and 2004, tea imports increased in all regions, the growth was about 5-20% in the American regions and Europe, and the lowest (about %) in Asia. The exports also increased in Asia, Africa and Europe, but were stagnant in North and Central America, South America and Oceania. It is interesting that the exports significantly increased in South America (by 85%) but in spite of this fact the exports of the region did not exceed 1% of the world total.

While in imports Europe takes the first place (45-50% of the world total), in exports Asia has the leading role, these countries provide almost 60% of the world total.

Animal feeding stuffs (not including unmilled cereals) (x1000 US$)

	Exports		
	2002	**2003**	**2004**
Europe	9.410.745	10.591.746	13.037.358
South America	6.659.254	7.726.792	9.071.784
North America and Central America	4.869.025	4.935.943	4.873.086

Asia	1.260.282	1.834.165	1.869.483
Oceania	780.046	805.187	981.136
Africa	123.815	132.415	124.315
TOTAL	23.103.167	26.026.248	29.957.162
Source International Trade Centre – UNCTAD - WTO			

	Imports		
	2002	**2003**	**2004**
Europe	13 062 100	14 978 436	17 729 061
Asia	7 010 540	7 726 054	8 984 734
North America and Central America	2 233 732	2 393 818	2 708 626
South America	850 381	953 378	1 253 659
Africa	900 360	809 687	1 065 774
Oceania	261 536	318 835	321 259
TOTAL	24 218 649	27 180 208	32 641 113
Source International Trade Centre – UNCTAD - WTO			

Total international trade in new sector/product/material growth areas (in US$) over the past three years

One of the new sector growth area is the production and use of genetically modified organisms. By 1999 there were more than 40 million hectares of genetically modified crops, with total production valued above 27 billion US$. These transgenic crops include for example varieties expressing genes conferring resistance to viruses, insects, herbicides, or post-harvest deterioration, and accumulation of usefully modified storage products, including several cases where there was no source of the desired trait in the gene pool for conventional breeding.

World Surface Grown with Genetically modified Crops (1 000 ha)

Crop	**2001**	**2005**
Maize	9 800	19 184
Soya bean	33 300	54 064
Cotton	6 800	9 592
Source: ISAAA (International Service for Acquisition of Agri-biotech Applications) Report 2006		

Estimated number of companies (world-wide) operating in the sector or producing the products/materials over the past three years

No data received.

Estimated employment (world-wide) in the industry sector over the last known 3 years

	Number of people involved in agriculture		
	2003	**1990**	**%**
Europe (except Russia)	30 millions	49 millions	- 39
Russia	41 millions	Not known	Not known

Asia	1 960 millions	1 825 millions	8
North and Central America	51 millions	56 millions	- 9
South America	61 millions	70 millions	-13
Africa	460 millions	380 millions	21
Oceania	7 millions	6 millions	17
Source FAO statistical yearbook, publication 2006-2005			

Figures could only be found for people involved in the agriculture. In order to cover the scope of ISO/TC 34, people working in the food and feed industry should be added.

Concerning the distribution of the population it should be noted that 75% of the population involved in agriculture is in Asia and that Asia is one of the 3 regions (with Africa and Oceania) in which an increase can be observed. However the regions that are the most involved in international trade (see Imports and exports in the industry sector/products/materials) are Europe and America in which the population is decreasing.

Estimated percentage of products in the marketplace self-declared or certified to the ISO committee's International Standards over the past 3 years

In order to have certifications there first need to be standards that can be used as basis for the certifications; the main ones being product specification standards. In practice, not all ISO/TC 34 subcommmittees develop product specifications. These are:

SC 4 (that developed 4 product specification standards)

- ISO 7301:2002, Rice – Specification
- ISO 7970:2000, Wheat (Triticum aestivum L.) – Specification
- ISO 11051:1994, Durum wheat (Triticum durum Desf.) -- Specification
- ISO 13690:1999, Cereals, pulses and milled products – Sampling of static batches

SC 7 (that developed 43 product specification standards; some of which are)

- ISO 973:1999, Pimento (allspice) [Pimenta dioica (L.) Merr.], whole or ground – Specification
- ISO 2253:1999, Curry powder – Specification
- ISO/TS 3632-1:2003, Saffron (Crocus sativus L.) – Part 1: Specification
- ISO 5560:1997, Dehydrated garlic (Allium sativum L.) – Specification
- ISO 5565-1:1999, Vanilla [Vanilla fragrans (Salisbury) Ames] – Part 1: Specification
- ISO 7540:2006, Ground paprika (Capsicum annuum L.) – Specification

SC 8 (that developed 4 product specification standards)

- ISO 3720:1986, Black tea – Definition and basic requirements
- ISO 6079:1990, Instant tea in solid form – Specification
- ISO 9884-1:1994, Tea sacks – Specification – Part 1: Reference sack for palletized and containerized transport of tea
- ISO 9884-2:1999, Tea sacks – Specification – Part 2: Performance specification for sacks for palletized and containerized transport of tea

SC 14 (that developed 17 product specification standards; some of which are)

- ISO 6755:2001, Dried sour cherries – Specification
- ISO 7701:1994, Dried apples – Specification and test methods
- ISO 7702:1995, Dried pears – Specification and test methods
- ISO 7703:1995, Dried peaches – Specification and test methods

SC 15 (that developed 2 product specification standards)

- ISO 9116:2004, Green coffee – Guidelines on methods of specification
- ISO 10470:2004, Green coffee – Defect reference chart

No data are available concerning the use of these standards for certification.

In addition to that are also Food Safety Management Systems Standards (i.e. ISO 22000:2005) that can be used for certification. A survey has been made within ISO/TC 34 through one of its experts and if the data are very difficult to gather as some Certification Bodies have policies that restrict access to information about the companies that they certify, the list made nevertheless covers 70 countries with over 1 050 certifications.

Real examples of increased income and/or cost savings achieved through implementation of the ISO committee's International Standards.

About 70 % of ISO/TC 34 Standards specify methods of test and analysis, whose effects on income and/or cost savings are difficult to measure. However their impact is clear as the implementation of internationally harmonized methods of test and analysis avoids renalysis and therefore saves time and money as does the use of fast methods or miniaturised methods.

It should also be noted that the use of validated methods of test and analysis avoids in-house validation studies.

Estimated number of organizations (world-wide) requiring compliance with the ISO committee's International Standards by suppliers, contractors and other service providers.

No data received.

Estimated number of cases of governmental adoption of the ISO committee's International Standards into legislation, regulations or procurement requirements.

No data received.

Total number of the ISO committee's International Standards cited as normative references in International Standards of other ISO committees.

No data received.

Total number of national adoptions of the ISO committee's International Standards.

No data received.

3 BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC 34

How the benefits are related to trends in the business, technological, environmental and social environment of the field addressed by the work of the ISO committee.

The main benefit from ISO/TC 34 work is its contribution to the settling of confidence among the different stakeholders operating in the feed and food sectors. A request becoming more and more important, in particular from consumers, considering the problems encountered recently in the feed and food sectors. In practice all ISO/TC 34 Standards are concerned. For example:

- Management Systems Standards ensure that the foods are safe at the time of consumption,
- Terminology ensures that the different partners communicate without any risk of misunderstanding,
- Methods of test and analysis ensure that the test results provided are reliable and comparable,
- Product specifications ensure that the minimum requirements are the same all over the world and facilitate fair practices in international trade of commodities.

How the standards developed by the committee led to or are expected to lead to cost savings through implementation of them / How the standards have removed or are expected to remove technical barriers to trade and open markets in various regions of the world.

In addition to the benefit mentioned above, harmonization of test methods combined to the development of product specifications reduces the number of analysis to be performed in order to export to several different countries, therefore opening new markets and reducing costs.

Furthermore as the methods of test, up-to-date and answering the needs (regulations as well as consumers' expectations), are publicly available it reduces the cost of the development of products thus contributing to cost saving. The development of internationally accepted standard methods for the detection and determination of genetically modified organisms in food and feed products can be effective tools to remove technical barriers to their trade.

Finally the development of International Standards for Safety Management Systems ensures that the foods are safe at the time of consumption. With the same reference document all around the world, this avoids, for example, multiple certifications.

How they responded to or are expected to address relevant social, safety, health or environmental concerns.

For new technologies within the scope of ISO/TC 34, standardization work can provide assurances about the products which build consumer and user confidence. In that field, ISO/TC 34 has published for example several International Standards for the identification and the determination of genetically modified organisms therefore contributing to the enforcement of such regulations.

How they contributed or are expected to facilitate the harmonization of national and regional standards.

As such by endorsement at national level, International Standardization participates to the harmonization of national standards.

In the field of activity of ISO/TC 34, standards are also developed under the ISO-CEN Vienna Agreement with ISO or CEN lead. Therefore, these standards are harmonized at both regional (European) and national level of EU member countries. The latter is due to the fact that EU

member countries have to implement CEN standards on a national level while deleting their own identical national technical versions.

How they supported or are expected to support the implementation of other International Standards.

The main organization working in the field of activity of ISO/TC 34 is the Codex Alimentarius Commission (CAC). As a governmental organization CAC defines the rules/objectives and ISO/TC 34 provides the means to comply with them. This is particularly true for the methods of test and analysis for which CAC endorses the methods developed by other bodies. Currently more than 300 Codex methods are referencing ISO International Standards.

Other benefits expected from the work of ISO/TC 34

The globalization of world trade obliges countries to join forces to reduce costs, increase regional exports and increase regional revenues. Europe is the first example of the integration of countries, USA with Canada and Mexico is another, and Brazil, Argentina, Paraguay and Uruguay is also another. All these regions must adopt regional terminology, vocabulary and methods of analysis to facilitate trade.

International standardization can be the bridge between regions.

4 REPRESENTATION AND PARTICIPATION IN THE ISO/TC 34

4.1 Countries/ISO members bodies that are P and O members of the ISO committee

4.2 Analysis of the participation

The number of ISO members bodies that are P and O members of the ISO committee.

Globally ISO/TC 34 comprises 105 members with 53 Participating countries (P member) and 52 Observing countries (O member) representing 68% of the 155 members of ISO. For a detailed presentation of the whole TC, see table below (July 2007).

Structure	P member[a)]	O member[b)]	Total
ISO/TC 34	53	52	105
SC 2	18	21	39
SC 3	15	39	54
SC 4	18	34	52
SC 5	22	34	56
SC 6	15	38	53
SC 7	18	24	42
SC 8	16	26	42
SC 9	30	23	53
SC 10	21	27	48
SC 11	22	30	52
SC 12	16	33	49
SC 14	10	23	33
SC 15	20	33	53
SC 16	13	5	18

Structure	P member[a)]	O member[b)]	Total
[a)] participate actively in the work, with an obligation to vote on all questions formally submitted for voting within the technical committee or subcommittee, on enquiry drafts and final draft International Standards, and to participate in meetings [b)] follow the work as an observer, and therefore to receive committee documents and to have the right to submit comments and to attend meetings			

As expected, the technical committee itself has the most members (105).

With the exception of SC 14 (Fresh, dry and dried fruits and vegetables), the total number of member bodies in the subcommittees fluctuates between 42 and 56. The fact that the number of members is almost the same in all SCs can be explained by the fact that the members (countries) for all SCs are almost the same whatever the topic. It should also be noted that even for horizontal SCs, the total number of members is just half the one of the TC.

Efforts should therefore be done to increase the number of members.

As regards the proportion of P members, it is between 28% and 56% but with only 1 SC and the TC slightly above 50% (SC 9 (Microbiology) whose horizontal scope covers the field of interest of more than one subcommittee).

For the development and the appropriation of the International Standards it is important to increase the number of P members.

The participation among developed countries, developing countries and countries with economies in transition, and the possible reasons for the lack of participation by any of them.

The following table shows the percentage of developed countries / developing countries / economies in transition in ISO/TC 34 and its SCs. These figures are compared to the ratios observed at the world level.

	Percentage of		
	Developed countries* (high income)	**Medium developed countries*** (middle income)	**Developing countries*** (low income)
ISO/TC 34	32	51	17
SC 2	46	43	11
SC 3	39	46	15
SC 4	48	38	14
SC 5	45	44	11
SC 6	45	43	12
SC 7	45	45	10
SC 8	38	48	14
SC 9	47	43	10
SC 10	44	48	8
SC 11	46	48	6
SC 12	47	49	4
SC 14	30	45	25
SC 15	30	56	14
SC 16	61	39	0
World	**29**	**45**	**26**
Source World Bank list of economies (July 2007)			

Globally ISO/TC 34 and its SCs have a good representation of medium developed countries but in several cases a clear under-representation of developing countries and therefore an over-representation of developed countries. Indeed whereas the number of developed and developing countries in the world are approximately the same, in the SCs there are between 16 and 25 developed countries and between 2 and 8 developing countries.

Different explanations can be given:

- ISO/TC 34 has a relative participation close to the one observed at world-level because of its size that makes it very similar to the world.

- SC 14 (Fresh, dry and dried fruits and vegetables) and SC 15 (Coffee) have a repartition close to the one observed at world-level because of their topic and the fact that many great producers are developing countries.

- The proportion of developed countries is much higher in SC 2 (Oleaginous seeds and fruits and oilseed meals), SC 4 (Cereals and pulses), SC 5 (Milk and milk products), SC 9 (Microbiology), SC 11 (Animal and vegetable fats and oils) or SC 12 (Sensory analysis) than in the world either because of the general interest raised by some of these topics (SC 9 and SC 12 which are horizontal in scope) or because the major actors of international trade of these commodities are developed countries (SC 2 and SC 5).

Even if some technical explanations can be given to explain certain situations, the cost of participating in international standardization may explain the lack of participation of developing countries (i.e. making them participate only when there is a very important topic for them).

The participation based on regions of the world, and the possible reasons for any imbalance.

The following table shows the percentage of members per regions of the world in ISO/TC 34 and its SCs. These figures are compared to the ratios observed at the world level.

	Africa	**Asia**	**Europe**	**North America**	**Oceania**	**South America**
ISO/TC 34	28	20	33	4	2	13
SC 2	8	21	55	8	3	5
SC 3	14	24	50	2	0	10
SC 4	16	22	50	6	2	4
SC 5	13	20	51	4	4	8
SC 6	13	22	51	5	2	7
SC 7	15	19	53	5	0	8
SC 8	13	26	51	3	0	7
SC 9	13	17	55	4	4	8
SC 10	12	22	52	5	0	9
SC 11	7	23	53	6	3	8
SC 12	5	19	57	7	3	9
SC 14	19	29	47	0	0	5
SC 15	15	24	40	2	0	19
SC 16	0	28	55	11	0	6
World	**33**	**24**	**24**	**2**	**3**	**14**

Globally, an over-representation of European countries in the SCs is observed, while that of African countries is much lower than at world-level. This observation gives another perspective in the lack of participation that seems to come mainly from African countries and in a lesser rate from

South American countries. These regions of the world (comprising many developing countries) should be encouraged to participate in the works of ISO/TC 34 and its SCs.

The lack of participation by specific countries or regions known to have significant business, trade or experience in the field addressed by the scope of the ISO committee, and the possible reasons for this lack of participation.

ISO/TC 34 currently has 105 member bodies and all the main exporters and importers are members of the technical committee. As regards the regions it would be desirable to encourage African countries to join ISO/TC 34.

Related to SC 2 (Oleaginous seeds and fruits and oilseed meals), great exporters, Brazil and Paraguay, who are in the top exporters of the world, are not members at present. Due to the fact that America provides more than 70 % of the total exports, it would be beneficial to win them round to the membership. Among the main importers, the Republic of Korean should be persuaded to join SC 2.

In the case of SC 3 (Fruit and vegetable products), it should be noted that many countries with significant industry in the field of processed fruits and vegetables such as Germany, France, USA, etc. remain only O-members or even non-member.

As regards SC 4 (Cereals and pulses), among the top traders, Brazil is not member of the subcommittee. It would be useful if some more African countries and Asian countries could be persuaded to join SC 4.

With reference to SC 5 (Milk and milk products) Spain is only O-member and Algeria is non-member. It would be desirable to persuade them to join or participate in the subcommittee's work.

Among the main meat traders, New Zealand is not a member of SC 6 (Meat, poultry, fish, eggs and their products) but encouraging participation might be difficult considering the limited work programme of SC 6.

In the case of spices and condiments, which belong to the field of activity of SC 7 (Spices, culinary herbs and condiments), FAO data were available only for 3 different spices therefore it is hard to draw any conclusion. As regards these three products (pepper, pimento and vanilla) Malaysia, Brazil and Viet Nam as great exporters and Canada and Malaysia as great importers should be mentioned.

In the world-rank of exports related to SC 8 (Tea), the first ten main exporters are the members of the SC. Among importers, only USA is missing from the members of SC 8.

With reference to the field of SC 10 (Animal feeding stuffs), USA is non-member in spite of the fact that it is the first in the world exports. Brazil is also not a member of the SC. It would be useful to have both countries as members.

Concerning SC 11 (Animal and vegetable fats and oils) Brazil, a large producer of oils and fats, is not a member of this SC.

Concerning SC 14 (Fresh, dry and dried fruits and vegetables), considering its small number of members a very general action should be undertaken in order to increase globally the number of countries involved. This may also contribute to the defining of a work programme which at the moment has no work items.

As regards SC 15 (Coffee), most of all the USA should be encouraged to participate in international standardization.

The types of international organizations in liaison with the ISO committee.

The following organizations have a liaison status with ISO/TC 34 or its SCs:

AACC	International
AIIBP	International Association of the Manufacturers of Stocks and Soups
AOAC International	Association of Analytical Communities International
AOCS	American Oil Chemists' Society
ASIC	International Association on Coffee Science
CAC	Codex Alimentarius Commission
CET	European Tea Committee
CICILS	International Pulse Trade and Industry Confederation
CIIA	International Commission for Food Industries
COPA – COGECA	Committee of Professional Agricultural Organisations in the European Union (COPA) – General Confederation of Agricultural Co-operative in the European Union (COGECA)
EAAP	European Association for Animal Production
EC	European Commission
EFPRA	European Fat Processors and Renderers Association
ESA	European Spice Association
FAO	Food and Agriculture Organization of the United Nations
FEFAC	European Feed Manufacturers' Association
FOSFA	Federation of Oils, Seeds and Fats Associations Ltd.
GAFTA	The Grain and Feed Trade Association
IAPT	International Association for Plant Taxonomy
ICAR	International Committee for Animal Recording
ICC	International Association for Cereal Science and Technology
ICMSF	International Commission on Microbiological Specifications for Foods of the IUMS
ICO	International Coffee Organization
ICUMSA	International Commission for Uniform Methods of Sugar Analysis
IDF	International Dairy Federation
IFEAT	International Federation of Essential Oils and Aroma Trades
IFFO	International Fishmeal and Fish Oil Organisation
IFRA	International Fragrance Association
IFU	International Federation of Fruit Juice Producers
IGPA	The International General Produce Association Ltd.
IH & RA	International Hotel & Restaurant Association
IIF	International Institute of Refrigeration
IOOC/COI	International Olive Oil Council
IPC	International Pepper Community
ISTA	International Seed Testing Association
ITPA	International Tea Promotion Association
IUMS	International Union of Microbiological Societies
IUPAC	International Union of Pure and Applied Chemistry
NMKL	Nordic Committee on Food Analysis
OECD	Organisation for Economic Co-operation and Development
OICCC	International Office of Cocoa, Chocolate and Sugar Confectionery
OIML	International Organization of Legal Metrology
OIV	International Organization of Vine and Wine
RITENA	International Meeting of Animal Nutrition Experts
UNECE	United Nations Economic Commission for Europe

UNIDO	United Nations Industrial Development Organization
WCO	World Customs Organization
WHO	World Health Organization

If ISO/TC 34 wishes to engage in new work areas it may also have to consider expanding its liaisons.

Specific ISO member bodies, international organizations or regions of the world that the ISO committee would like to contribute to its work.

As a result of the above analysis, and considering the over-representation of European countries in the SCs and the lack of participation of African countries and in a lesser rate of South American countries, globally these regions of the world should be encouraged to participate in the works of ISO/TC 34 and its SCs.

Concerning specific organizations, it should be noted that in the feed and food sectors, organizations that are of interest for the works undertaken by ISO/TC 34 and its SCs are of two kinds: governmental and non-governmental. Even if ISO/TC 34 already has a wide network of liaisons (see above) with both governmental and non-governmental organizations, a particular attention should be given to governmental ones and in particular to Codex Alimentarius and OIE (World Organization for Animal Health).

Actually, the most important liaison organization of ISO/TC 34 is the Codex Alimentarius Commission (CAC) and in particular its Committee on Methods of Analysis and Sampling (CCMAS). In spite of their main difference, Codex is a governmental and ISO a non-governmental organization, as the field of their activity is the same it is important to avoid overlaps, as much as possible, and to foster cooperation.

A tentative framework for the liaison between ISO and Codex was worked out together by both organizations. Its main aspects were as follows:

- Codex Alimentarius includes provisions in respect of the safety and nutritional quality of food, including microbiological norms, provisions for food additives, pesticide residues, contaminants, labelling and presentations, and methods of analysis and sampling.

- ISO deals with terminology, sampling, methods of test and analysis, product specifications and requirements for packaging, storage and transportation.

ISO and Codex should strive to keep their liaison and cooperation up-to-date as to fulfil each-other but also globally requirements. ISO/TC 34 should also strive to develop a liaison with OIE due to their common interest and work programme.

To conclude, it should be noted that ISTA promotes and administers standards relating to the seeds and propagules of food crops and thus coordination with ISTA is desirable.

Any identified lack of participation or representation of the concerns of significant companies or other stakeholders via ISO member bodies, and the possible reasons for this lack of participation.

Considering the work programme of ISO/TC 34, one main gap in the participation is from retailers that work on their own reference documents within CIES. One objective of ISO/TC 34 should be to increase their representation so as to make work more relevant and, to avoid duplication of works, to promote its work programme within their structures.

Recommend outreach by NSBs to build up participation of relevant stakeholders.

Any efforts to improve representation and participation in the ISO committee, including actions to encourage participating ISO member bodies to better incorporate the concerns of specific stakeholders in their positions and delegations.

Considering the need for coordination with the Codex Alimentarius, discussions are to take place between ISO delegations and their Codex counterparts (governmental representatives) in order that each delegation be informed of the positions defended by the other on related topics.

5 OBJECTIVES OF THE ISO/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

5.1 Defined objectives of the ISO/TC 34

The main objectives of ISO/TC 34 are as follows:

Taking into account the Business Environment of ISO/TC 34, the following main topics are to be considered:

- Safety of food products
- Fair practices in trade
- Quality of products
- Sustainable development

For each of these topics, the objectives of ISO/TC 34 are two sided. If work has already been started, it should be further developed, otherwise, and in order to meet the new ISO/TC 34 challenges, new work should be undertaken.

1. The safety of food products.

It should first be noted that methods of test and analysis are of importance in this field. As 65% of ISO/TC 34 International Standards are such documents, this work should be continued (methods of test and interpretation of results). However as the companies that have to apply these documents are of very different sizes but nevertheless be in a position to use them, consideration should be given to the adaptation of existing documents to SME.

With concern to food safety, preservation should also be considered, in particular packaging and bio-preservation.

2. Fair practices in trade.

In order to achieve this objective, different aspects have to be considered but globally it is to ensure fair practices in trade between countries. Contribute to that: internationally recognized methods of test, product specifications and common vocabulary. If we look closely at ISO/TC 34 publications it can be seen that it constitutes the main part of them.

3. Quality of products.

Previously, it was noted that this expectation is increasing and can be talked two sided. Firstly the product should be defined. Based on that the product specification should become core point from which work should continue or start (nutritional value of food). Secondly, the process ensuring that no matter the quality of the product, the expected quality has been obtained. As this second is not

specific to the food and feed sectors, reference documents already exist in other fields (ISO 9001, etc.) and should be adapted to the food and feed sectors.

4. Sustainable development.

This topic covers in fact 3 aspects: economic, societal and environmental. Mainly covered specifically by other ISO/TCs, the contribution of ISO/TC 34 to this field can be done in two ways: adaptation of existing standards to the specificities of the food and feed sectors (life cycle analysis, etc.) and participation in the TCs dealing with non-food use of food commodities (biofuels, etc.).

Some subcommittees and working groups also reworded their main objectives:

WG 10:

- Begin other studies, such as technical vocabulary including terms and definitions that are frequently used in irradiation process.

SC 4 (Cereals and pulses):

- Providing maintenance on existing standards and ensuring that they meet present market requirements.
- Developing new standards that the international trade of cereals and pulses may still require.
- Improving the efficiency of standard making.
- Mobilizing the enthusiasm of SC 4 members in the global standardization work.
- Enlarging the scope of membership of SC 4.
- Enhancing the relationship with other international organizations.

SC 12 (Sensory analysis):

The main objectives of ISO/TC 34/SC 12 are as follows:

- give recommendations and advice to those companies that wish to implement sensory analysis and thus guarantee the introduction of **good practices** concerning sensory analysis;
- provide a technical **reference document** (principally methodological) upon which all the partners have agreed, this being a prerequisite for the actual use of the latter;
- provide **validation** tools within the framework of certifications and accreditations.

When beginning a new work, SC 12 tries to identify and associate the potentially interested partners and establishes temporary liaison with them.

5.2 Identified strategies to achieve the ISO/TC's defined objectives

To achieve the above mentioned objectives the following main actions are planned:

In order to achieve its objectives defined in 5.1, ISO/TC 34 envisages undertaking actions in different fields (internal organization of the TC, structure of the TC, external liaisons). These

actions are presented below and do not cover the orientations concerning the work programme (already presented in 5.1):

- Follow-up of the activities of the subcommittees in order to avoid, in particular, overlaps and parallel projects (mission given to the CAG).

- Organization of CAG meetings at least once a year and plenary TC 34 meetings every 2 years to ensure regular coordination of the work programme and effective technical discussions.

- Participation of the secretariat of ISO/TC 34 in subcommittee meetings if necessary.

- Setting-up of a dedicated horizontal subcommittee for horizontal methods for the detection of molecular biomarkers (ISO/TC 34/SC 16 was ratified by TMB resolution 41/2008).

- Setting-up of a structure able to manage the revision and interpretation of Food Safety Management System Standards.

- Confirmation of adequate participation in the TC, SCs and WGs in relation with the work programme (countries, stakeholders (consumers, retailers, certification bodies…)) in order to be able to take necessary actions to ensure market relevance of the documents published.

- Development of a dedicated action plan in order to promote participation of developing countries.

- Development of the cooperation with other international organizations: Codex Alimentarius Commission, FAO, WHO, OIE, CIES, etc by, for example cross-registration of interested SCs in the relevant structures of these organizations in order to be informed of the works undertaken and be able to comment on the documents drafted (integration, avoidance of duplication and conflict of the work).

- Development of the liaisons with other ISO/TCs of interest for the work of ISO/TC 34 and its SCs (nanotechnologies, Petroleum products and lubricants, Fisheries and aquaculture, etc.).

Some SCs strategies to achieve their own objectives (these are in line with the general strategies of the TC):

SC 4 (Cereals and pulses):

To achieve its specific objectives, SC 4 envisages to:

- Enhance the cooperation with other cereal organizations such as ICC and AACC in the fields of international experiments.

- Enlarge the P-participation to the SC as developing countries and many large cereals traders are not taking active part in the work of ISO/TC 34/SC 4 (USA and Australia are the largest cereals exporters in the world, and Japan is the biggest maize importer).

- Update the standards in order to utilize new developments in test technology (e.g. near-infrared spectroscopy (NIR) methods in cereals and pulses tests).

- Develop standards which the cereals and pulses trade requires (e.g. a series of standards on Maize – specification, quality evaluation of maize and its products, completing the standards concerning maize which are now in exiguity, since the world trade volume of maize reaches 105 million tons, accounting for 30% of all cereals together. Other standards such as the composition analysis, the physical-chemical characteristics determination, the variety identification and the standards like these are also needed to be developed.

SC 5 (Milk and milk products):

To achieve its specific objectives, SC 5 envisages to:

- Enhance its cooperation of work with IDF in developing and revising their international standards which are jointly pubished by ISO.

- Publish the presently still being separate but technically identical IDF and ISO Standards jointly after review approval via a shortened fast track procedure.

- Enhance its cooperation with and related to Codex Committees in cooperation with IDF in keeping the Codex standards and/or directives up-to-date.

SC 8 (Tea):

To achieve its specific objectives, SC 8 envisages to:

- Develop methods of analysis for important constituents of tea some of which, for example polyphenols has antioxidant properties and theanine has mental alertness properties, have health benefits.

- Further develop quality standards to include at lease some of these important constituents to differentiate between black, green and white teas.

These quality standards are critical for the international trade of tea between producers, commonly developing countries, and importers, mainly developed countries. These standards are also a means of determining the quality of tea and something which is becoming even more important is the health benefits of tea. This will be a critical factor in providing the basis for sustainable growth in the trade of tea.

SC 12 (Sensory analysis):

To achieve its specific objectives, SC 12 envisages to:

International Standards must be drawn up taking into account cultural idiosyncrasies, the "schools" of thought and the economic structures or conditions specific to each country. It is only on this condition that they will be used by the economic players.
In order not to reserve sensory analytical techniques exclusively for the specialists, who are the only ones able to use documents of a relatively general nature, practical and detailed requirements must be drawn up so that sensory analysis is applied both advisedly and efficiently by general sensory staff.

From a more practical point of view:

Use of available national, regional or other standards (such as CEN standards via the Vienna Agreement) as source documents on which to base International Standards.

The national standards of the member bodies are already a significant source of documents on which International Standards developed by ISO/TC 34 can be based. The other important sources of these International Standards are methods or reference documents developed by international organizations (IDF, ICC, AOAC, IUPAC, AOCS, etc.), which are in liaison with ISO/TC 34.

However, in the past few years the number of International Standards developed together with CEN or adopted from it via the Vienna Agreement has increased and this tendency will continue in the future. As such the ISO/CEN cooperation avoids duplication of work while also ensuring that the same standard is used on an international, regional and national levels. In such cases, particular attention should be given to the global relevance of the deliverables.

The way in which the ISO committee work will be conducted (for example, correspondence, physical meetings, teleconferences, e-mail, Internet, need for translation in meetings, etc.).

In order to work as efficiently as possible, ISO/TC 34 and its subcommittees already use all available modern methods. Despite the availability of all modern means, the need for organizing meetings with face-to-face discussions on (work) items still remains for ISO/TC 34 and its SCs. This is actually done by the different SCs and will be done by ISO/TC 34 as such.

Considering the size of ISO/TC 34 and the difficulty in organizing its meetings, these will be organized once per every two years. In the mean time, the coordination of ISO/TC 34 activities will be ensured by having frequent CAG meetings.

If the language of these meetings is now mainly English (interpretation has costs for the host), the need to ease as much as possible the participation of member bodies, implies that at least for the plenary meetings of ISO/TC 34 an interpretation in French is to be provided.

Necessary co-operation and liaisons with other ISO committees and/or external standards developing organizations.

Because of its work programme and field of activity ISO/TC 34 and its SCs should maintain liaisons with several other ISO/TCs. This to ensure that the point of view of the feed and food sectors is presented. These are:

- ISO/TC 23/SC 6, *Tractors and machinery for agriculture and forestry – Equipment for crop protection*
- ISO/TC 28, *Petroleum products and lubricants*
- ISO/TC 47, *Chemistry*
- ISO/TC 54, *Essential oils*
- ISO/TC 85, *Nuclear energy*
- ISO/TC 93, *Starch (including derivatives and by-products)*
- ISO/TC 176/SC 2 *Quality management and quality assurance – Quality systems*

This latter liaison is of particular importance in order to ensure consistency of Management Systems Standards. In that context ISO/TC 34 has also established a Joint Working Group with CASCO and is participating in the Joint Coordination Group on Management Systems Standards (JTCG-MSS).

- ISO/TC 234, *Fisheries and aquaculture*

Furthermore in order to promote the work done at the ISO level, ISO/TC 34 and its SCs should intensify the cooperation with other international organizations: Codex Alimentarius Commission, FAO, WHO, OIE, CIES, etc by, for example cross-registration of interested SCs in the relevant structures of these organizations.

Use of the various ISO deliverables (International Standards, Technical Specifications, Publicly Available Specifications, Technical Reports, International Workshop Agreements).

ISO/TC 34 develops principally International Standards. Few Technical Specifications or Technical Reports have been published so far.

Specific needs for pre/co-normative research to support the ISO committee's work program should be indicated so that an analysis can be made to detect any timing or funding difficulties.

As a number of ISO/TC 34 International Standards are methods of analysis, the determination of precision data is an important part of the standardization work. However, interlaboratory trials are expensive, take a long time and might generate problems in meeting the ISO target dates

Extension of time limits should be allowed for such purpose and in particular if problems arise and tests have to be repeated.

The specific structure of the ISO committee (TC, SCs, WGs) and why the ISO committee chose this particular structure should be explained.

ISO/TC 34, *Food products,* was established in the same year as ISO, i.e. in 1947. The basic structure of the Technical Committee (16 subcommittees) was developed over the first 25 years. In 1983, SC 1 was dissolved and in 2000 SC 13 and SC 14 were combined resulting in a structure comprising at the present 14 active subcommittees.

Globally the TC deals directly with horizontal topics through WGs directly under its responsibility and the SCs deal with the commodities or with horizontal topics needing the structure of an SC (large work programme, frequent maintenance of standards…) i.e. Microbiology (SC 9), Sensory analysis (SC 12) and Detection of biomarkers (SC 16). Finally in order to avoid any overlap in the development of the standards and to ensure coordination among the different SCs, a Chairman Advisory Group (CAG) has been set up in 2007.

The present the situation is presented in 2.1.

This organization ensures that the relevant competence is involved in the development of standards dedicated to a specific commodity whereas for horizontal topics (techniques) consistency among the different fields of application is ensured by a dedicated SC.

6 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC 34 WORK PROGRAMME

ISO committee chairperson, secretary, convenor or project leader/editor positions are vacant.

By the end of 2007 several chair, secretary, TPM positions have been reallocated (For example, ISO/CS, ISO/TC 34, SC 4 (Cereals and pulses), SC 5 (Milk and milk products), SC 7 (Spices,

culinary herbs and condiments)) which generates, even if the transition is well performed, a loss of experience or at least some delays in the development of the standards. In spite of all these reallocations 3 SCs still have to re-approve their current chair or to nominate a new one; these positions can be considered vacant.

It has to be noted that the progress of each project needs smooth communications between members and secretariat as well as all participants and the change in one or more of the core positions may have an impact on that.

Expert resources are not sufficiently available (for certain projects) / Specific expertise for a project is lacking, which could affect the project's development as well as the credibility of the resulting standard in the business community.

Globally it is important to have around the table the countries and the stakeholders concerned by the development of a specific standard. Otherwise the development and in the end the credibility of the document can be impacted. In other words attention should be paid to the adequation of the structure of the TC, SCs, WGs with the topic discussed (participation of the main exporting countries, the main importing countries, developing countries, relevant stakeholders…). Concerning ISO/TC 34 attention should be given, in particular, to the participation of developing countries, retailers, consumers and certification bodies.

This may help avoid the problems encountered by some SCs in finding the required five members to participate in the work. This was the situation in the former SC 13 and 14, which made necessary to merge these SCs together or on specific work items (the retirement of the project-leader hindered the development of ISO 16634).

Validation of a test method is dependent upon funding being available to undertake the necessary pre/co-normative research.

One of the factors that play an important role in the development of ISO/TC 34 standards is ring tests. As a large number of ISO/TC 34 standards are methods of analysis, difficulties in the organization of interlaboratory studies can have a negative impact on the development of ISO/TC 34 standards.

In practice, the costs, both for organizing and participating in the trial, that also limit the resources available for the trial, the time consuming procedures and the strict ISO time table generate difficulties in providing reliable ISO International Standards. As example:

- SC 3 (Fruit and vegetable products): No interest from the industry resulting in a lack of money for ring tests.

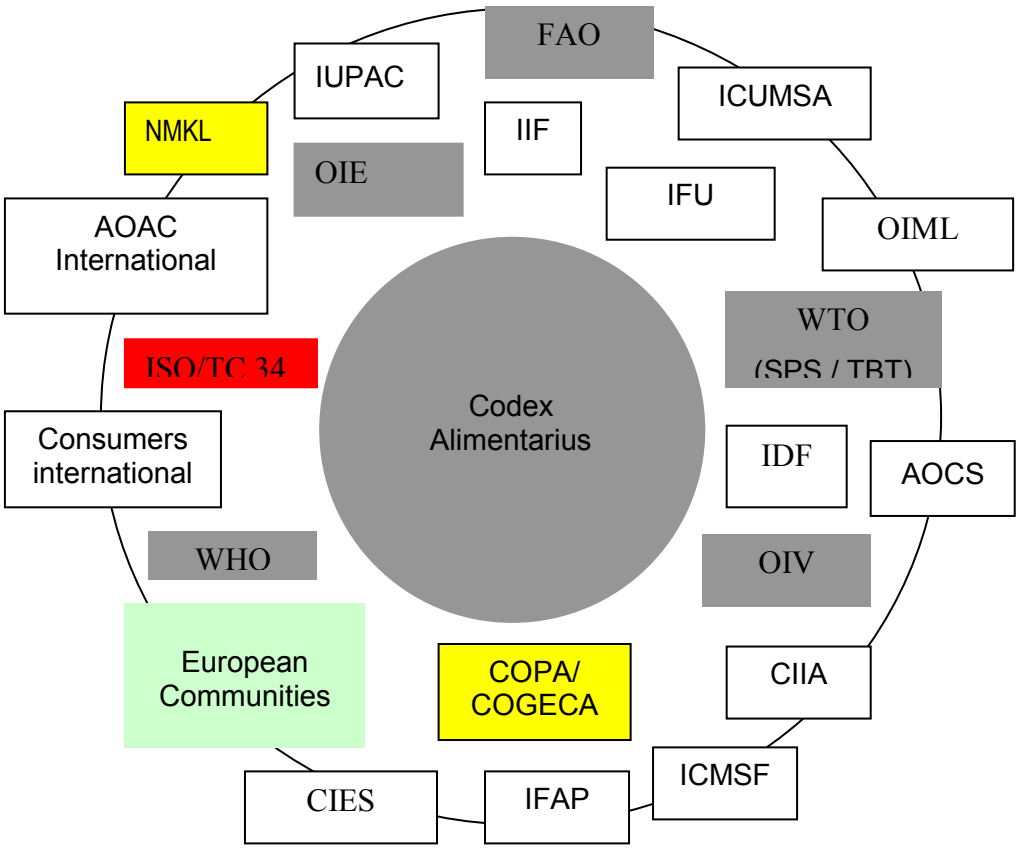
- SC 4 (Cereals and pulses): Validation of a test method is dependent upon funding being available to undertake the necessary pre/co-normative research.

- SC 5 (Milk and milk products): Despite all efforts and the new approach the standardization world constantly has to face facts. Most experts have a limited amount of time nowadays and they are disappearing regularly as the amalgamation of (dairy) organizations is nearly a constant ongoing process. Due to that it also becomes increasingly difficult to obtain the required minimum number of participants in interlaboratory tests.

Legal/regulatory issues, which in turn may necessitate modifications of the content and target dates for projects in the work program.

ISO/TC 34 and its SCs are working in the same field of several other organizations and in particular of governmental organizations. Their publications should be considered and be taken into account when preparing related ISO Standards. In addition to that, the Vienna Agreement between ISO and CEN has a special impact on the work of ISO/TC 34 and most of its SCs.

See below diagram for a general (non exhaustive) explanation:



Organizations working in the field of food and feed

Key
- governmental international organizations producing standards are in grey
- regional organizations producing regulations are in green
- standardization organizations are in red
- international professional organizations are in white
- regional professional organizations are in yellow
- acronyms are detailed under 4.2

7 STRUCTURE, CURRENT PROJECTS AND PUBLICATIONS OF THE ISO/TC 34

This section gives an overview of the ISO/TC's structure, scopes of the ISO/TCs and any existing subcommittees and information on existing and planned standardization projects, publication of the ISO/TC and its subcommittees.

7.1 Structure of the ISO committee

7.2 Current projects of the ISO technical committee and its subcommittees

7.3 Publications of the ISO technical committee and its subcommittees

Reference information

Glossary of terms and abbreviations used in ISO/TC Business Plans

General information on the principles of ISO's technical work