



OECD FRUIT AND VEGETABLES SCHEME

16th Meeting of Heads of National Inspection Services



PROCEEDINGS

The Meeting was hosted by the Agricultural Food and Quality Inspection and was held in Warsaw, Poland on 20-23 May 2014.

OECD Fruit and Vegetables Scheme

Proceedings

of the

16th Meeting of the Heads of National Inspection Services

20-23 May 2014

Warsaw, Poland

Organised by

OECD

Hosted by

Agricultural and Food Quality Inspection in Poland

ORGANISATION
FOR ECONOMIC
CO-OPERATION
AND DEVELOPMENT



ORGANISATION DE
COOPÉRATION ET
DE DÉVELOPPEMENT
ÉCONOMIQUES

FOREWORD

The Meeting of the Heads of National Inspection Services plays a unique role within the framework of the OECD Fruit and Vegetables Scheme. The OECD invites the Heads of the national fruit and vegetables inspection services to meet in order to discuss the major problems, developments and challenges in the fruit and vegetables sector and the quality inspection system. They exchange information on the latest developments in inspection techniques and tools and harmonise the application of OECD quality standards. Information received from the meeting helps to identify new areas for discussion and facilitates the development of the future programme of work of the Scheme.

The fruit and vegetables quality inspection system is under revision in many Member countries. The international harmonisation of the implementation of these revised systems will be crucial in the near future to maintain the transparency and a good working environment in the international trade of fruit and vegetables. The globalised nature of the fruit and vegetables market also presents a challenge to inspection bodies. These perishable products may have to be transported long distance and the quality inspection methods should be able to guarantee high quality products at destination. Moreover, importing countries are faced with quality problems, which could be corrected at the point of export. Enhanced international co-operation between the inspection services and harmonisation of their practices would help to resolve these problems and to have a more efficient and cost effective inspection system.

Fruit and vegetables producers have to follow and fulfil more and more requirements laid down in national and international rules and regulations (e.g. phytosanitary and hygienic rules, residue levels, marketing quality, *etc.*) and apply private quality assurance systems in order to remain on the fruit and vegetables market. These numerous governmental and private checks and certifications mean a heavy burden on the producers' shoulders and may unnecessarily increase their expenditure. The idea of having an integrated quality inspection system would increase transparency through having one integrated quality certificate and reduce the amount of time and cost spent on the different inspections by the producers.

The rules of the OECD Fruit and Vegetables Scheme need to be revised regularly and new elements should be developed in order to adapt the Scheme to changing trade practices and to the demands of the Member countries. The type of packaging and presentation of fruit and vegetables have changed in the last decade. The OECD sampling methods need to be revised in order to avoid the increased sample sizes and maintain statistical confidence at the same time. There is also an increasing demand for training of inspectors in both the public and private sector. Developing distance learning tools, within the framework of the Scheme, could mean a cost and time efficient training method and could help developing countries in their capacity building.

This Meeting focused on traceability issues, in-depth discussions of tolerances in international marketing standards, as well as interpretation of skin defects, and the effects of pre- and post-harvest factors, storage and shelf life on fruit quality. The Meeting also discussed OECD Guidelines on Quality Inspection.

EXECUTIVE SUMMARY

The OECD Fruit and Vegetables Scheme organised the 16th OECD Meeting of the Heads of National Inspection Services in Warsaw, Poland on 20-23 May 2014, at the invitation of the Chief Inspector of Agriculture and Food Quality in Poland. The Meeting was attended by 38 delegates from 13 Member countries and 3 Observer countries. The UNECE Secretariat also participated.

The Meeting discussed traceability issues. Member countries shared their practice and gave an overview on the implementation of different traceability systems. In general, traceability has two levels; an electronic system and visual control. Traceability in the internal market is relatively easy. However at the export stage, when products are repackaged, resorted or re-graded, it is difficult to maintain traceability. In this case, it is the responsibility of the trader/packer to maintain the correct traceability documentation from the exporting country and therefore maintain traceability. At the import stage the importer should request the correct documentation from the exporter in order to ensure traceability.

Member Countries also discussed inspection methods and a revised sampling plan. A draft text and photos were presented to the Heads of the National Inspection Services. Delegates agreed that the guidelines should be user-friendly and the random sampling procedure should be present and promoted in the guidelines.

Furthermore, the meeting discussed the application of tolerances in international marketing/quality standards. The implementation of tolerances should be separated by exporting countries and importing countries. In general, for an exporting country, the tolerances on decay should be “zero”. Tolerances should be viewed in terms of progressive defects and non-progressive defects. For importing countries, currently the tolerances for decay vary from 0 to 3 %. This should be harmonised.

The effects of pre- and post- harvest, storage and shelf life on fruit quality were also discussed. These factors undoubtedly have an impact on fruit quality. Storing conditions, such as temperature, relative humidity and the composition of the storage atmosphere can be controlled depending on the type of the storage facility. The right relative humidity plays a key role in the maintenance of the freshness of the fruit. The storage atmosphere such as the CO₂ or ethylene concentration can influence the ripening process. Choosing the right conditions can also help to avoid different storage diseases, e.g. cold damage, superficial scalds, etc.

Delegates also discussed how to interpret skin defects. Skin defects can be treated differently depending on the edibility of the skin. The evaluation of these defects on the surface is based on whether the skin is edible or not. It is also important that in case of insect damage, the pest name should not be mentioned; the identification of the defects should be on the basis of the symptoms. It is also important to know that the same pest can cause different symptoms on different coloured fruits. The insect injury can also be a quality issue, regardless of the insect or pest being present in the produce. In case of produce where the skin is inedible, these defects are treated less strictly in general and are mostly a cosmetic issue.

Poland also introduced their Fresh Fruit and Vegetables Sector and the national quality inspection system. During the field trip, delegates were able to visit one of the major Polish apple producers group. The recommendations of the Heads of National Inspection Services will be submitted to the 2014 73rd Plenary Meeting for discussion.

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SECTION SUMMARIES

ROOM SESSIONS

Presentations in this section:

- An overview of the Polish Fresh Fruit and Vegetables Sector
- Update from International Organisations involved in standardisation and inspection of fruit and vegetables
 - *OECD Fruit and Vegetable Scheme*
 - *United Nations Economic Commission for Europe (UNECE)*

AN OVERVIEW OF THE POLISH FRESH FRUIT AND VEGETABLE SECTOR

By Ms. Marta Dziubiak, Ministry of Agriculture and Rural Development, Poland

Abstract:

Ms. Marta Dziubiak, representative of the Ministry of Agriculture gave an overview of the Polish fresh fruit and vegetable sector. Fruit and vegetables are grown over 500 000 hectares in Poland which is 3.7 % of all agricultural land area. It is the 2nd most important sector in the Polish crop production after cereals. The sector produces 15% of the value of the entire agriculture production and 34% of value of the crop production.

Fruit and vegetable production is concentrated in regions which have favourable natural and socio-economic conditions. As regards fruits, this is the Central and South-East part of Poland. Berry plantations covered the biggest area (380 000 Ha) followed by fruit tree orchards with 267 000 ha in 2013. In case of vegetables, the production is concentrated to the West, Central and South part of the country. In 2013, field vegetables were grown on 140 000 ha. Covered production was done on 5 000 ha.

The total Polish fruit production was 4.1 million tons which represented about 11 percent of the total quantity of fruits produced in the EU in 2013. The most important fruits in Poland are apples (85%) currant and sour cherries (both 5%) strawberry (4%) and raspberry (3%). As regards vegetables, the 5.3 million tons of Polish production gave around 8.5 % of the total EU production. The most important field vegetables are cabbage (26 %) carrots (18%), onions (14 %), beets (7%), tomatoes and cucumbers (both 6 %). Under coverage, the production is practically concentrated to two species; tomatoes (57%) and cucumbers (27%).

The characteristic feature of the Polish fruit and vegetables sector is still the high level of products intended for processing. This means that about 50 % of produced fruits and about 35 % of vegetables was processed in 2013. From the rest, 20 % of the produced fresh fruits were exported and 30 % was consumed internally. As regards vegetables the export was 10% and 55% was sold in the internal market.

The production of fresh fruit and vegetables was intensively growing. It has increased by 70 % between 2004 and 2011 and reached the value of 11 billion PLN (about 2.75 billion EUR). In the same period, the value of the exported fruit and vegetables increased by 86 % and reached 2.2 billion EUR. The foreign trade balance of fruit and vegetables is positive. The most important destinations are Russia, Germany, UK, France, Ukraine, Lithuania and Belarus.

The most important distribution channels for fruit and vegetables are the wholesale markets and retail direct selling which together cover half of the volume of traded products. Private trading warehouses and logistics platforms of big supermarket chains and other individual platforms represent 15 % of the market each. Producer groups and organisations and other marketing groups cover 20 % of the market.

AN OVERVIEW OF THE POLISH FRESH FRUIT AND VEGETABLE SECTOR

Presentation by Ms. Marta Dziubiak, Ministry of Agriculture and Rural Development, Poland

An overview of Polish Fresh Fruit and Vegetables Sector

Marta Dziubiak
Ministry of Agriculture
and Rural Development



OECD Meeting of Heads of National Inspection Services,
Warsaw, Poland, 20 – 23 May 2014

Production of fruit and vegetables occupies in
Poland 550 thous. ha (ca 3,7% of farmland area)

15% of value of whole agricultural production

34% of value of crop production

Fruit and vegetables sector is the 2nd most
important sector in Polish crop production
(after cereals)

Fruit and vegetables production is concentrated in
regions which have favourable natural and socio-
economic conditions:

- **fruit** – central and south-east part of Poland
(mazowieckie, lubelskie, świętokrzyskie, łódzkie
voivodeships)
- **vegetables** – west, central and south part of
Poland (kujawsko-pomorskie, wielkopolskie,
mazowieckie, łódzkie, małopolskie voivodeships)

Main regions of fruit production in Poland



Main regions of vegetables production in Poland



Area of cultivation and numbers of farmers

	Area (thous. ha)	Number of farmers
Fruit trees in orchards	267	198 000
Berries plantations	380	240 000
Field vegetables	140	11 000
Vegetables under cover	5	3 500

Fruit and vegetables production in 2013

Fruit - 4,1 mio tons (37 mio tons in EU-28)

including 3,5 mio tons fruit from trees production and 575 thous. tons from berries plantations

Vegetables – 5,3 mio tons (62 mio tons in EU-28)

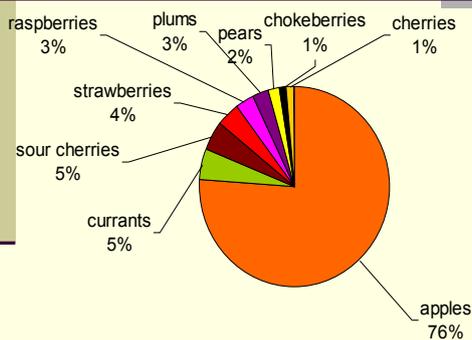
including 4,4 mio tons field vegetables production and 895 thous. tons vegetables under cover

Cultivated mushrooms – 270 thous. tons

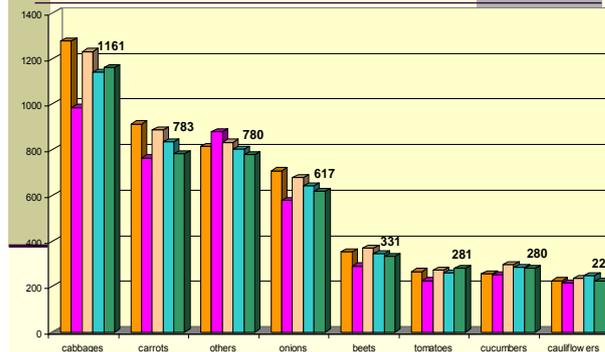
Fruit production in Poland in 2009-2013 (thousands of tons)



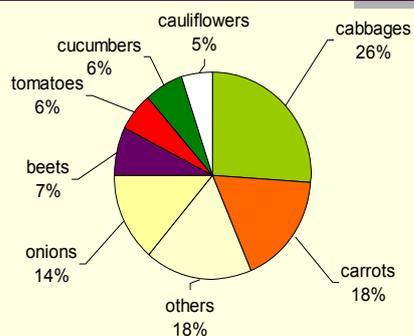
Structure of fruit production in Poland in 2013



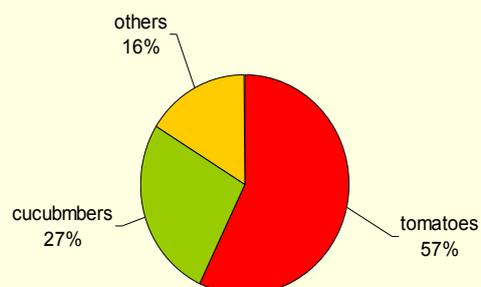
Vegetables production in Poland in 2009-2013 (thousands of tons)



Structure of field vegetables production in Poland in 2013



Structure of production of vegetables under cover in Poland in 2013



Use of fruit and vegetables (1/3)

The characteristic feature of Polish fruit and vegetables sector is still high level of products intended for processing

ca 50% of fruit and 35% of vegetables production is intended for processing

mostly: apples, sour cherries and berries (currants, raspberries, strawberries, chokeberries)

for export 20% of fruit production
 10% of vegetables production
 and processed products

for internal markets 30% of fruit production
 55% of vegetables production

2013/2014 processed fruit products production 973 thous. tons
 processed vegetables products production 1092 thous. tons

Use of fruit and vegetables (2/3)

Production value of fruit and vegetables has increased by 70% between 2004 and 2011 and reached 11 billion PLN

Value of exported fruit and vegetables (fresh and processed) has increased by 86% between 2004 and 2011 and was 2,2 billion EUR (which accounted for 15% of value of all agri-food products exports).

The foreign trade balance of fruit and vegetables products is positive

The most important exported products from Poland:

apples, mushrooms, concentrated apple juice,
 frozen: strawberries, sour cherries and currants (black and red),
 chilled and frozen raspberries, frozen vegetables,
 fresh vegetables (onion, cabbage)

Destination: Russia, Germany, UK, France, Ukraine, Lithuania, Bielarus

Use of fruit and vegetables (3/3)

- Distribution channels on local markets and export:
- 50% - wholesale and retail direct selling
- 15% - private traditional warehouses
- 15% - logistic platforms of big supermarkets chains and other individual platforms
- 20% - producer groups and organisations, marketing groups

Consumption of fresh and processed fruit and vegetables in Poland

Fruit consumption – av. 42,06 kg/person per year

Vegetables consumption – av. 59,7 kg/person per year

(Poland's population 38,5 mio inhabitants)

Organization of fruit and vegetables sector in EU

Common Agricultural Policy (CAP) of European Union includes Common Markets Organization (CMO) – uniform rules for the placing on the market of agricultural products in EU

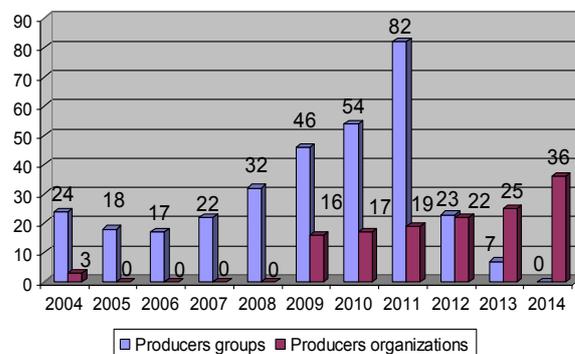
In fruit and vegetables sector – CMO provides financial support for 2 types of organized forms of enterprises:

- producers organizations and
- producers groups which are temporary entities, which have to transform into organizations. From the 1st of January 2014 there is no possibility to create new producers groups.

Producers groups can obtain high level of financial support for administrative activity and investments (from EU and national budgets).

Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organization of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007

Number of producers groups and organizations created in 2004-2013



Organization of fruit and vegetables sector in Poland



184 producers groups

134 producers organizations Σ 318

above 7 thousands of members

Value of marketed production by PGs and POs in Poland constitutes 20% of total fruit and vegetables production value

Minimum number of members 5

Minimum value of marketed production

200 000 PLN (groups)

500 000 PLN (organizations)



**UPDATE FROM INTERNATIONAL ORGANISATIONS INVOLVED IN STANDARDISATION AND
INSPECTION OF FRUIT AND VEGETABLES**

OECD FRUIT AND VEGETABLES SCHEME

By Mr. Csaba Gaspar, OECD Trade & Agriculture Directorate

Abstract:

Mr. Csaba Gaspar, on behalf of the OECD Secretariat gave an overview on the OECD Fruit and Vegetables Scheme. The Scheme is one of the oldest activities of the OECD and was established in 1962. Its objective is to facilitate international trade through the harmonised application and interpretation of international F&V standards.

The Scheme is implemented at OECD as one of the four programmes of the Codes and Schemes. It is a voluntary, self-financing programme. It is open for all UN or WTO Member countries which willing to fulfil all requirements of the programme. The Scheme facilitates international trade through the harmonised application and interpretation of international F&V standards. The core activity of the Scheme is to provide framework of an export quality inspection system.

Activities

Standards

The OECD standards are adopted from other international standardization bodies such as the UNECE or the FAO/WHO Codex Alimentarius Commission. Currently the OECD applies the Codex Standard on Pomegranate and Bananas.

Inspection rules and certificate

The OECD Fruit and Vegetable Scheme establishes inspection rules for the implementation of conformity checks on fresh fruit and vegetables. The primary purpose of the inspection rules is to ensure that the quality and classification of the exported product are in conformity with the benchmark international standard applied by the OECD. These rules are unique in international level and serve as a basis of many national fruit and vegetables inspection systems for export as well as at other stages of marketing.

Peer reviews

Peer Reviews is one of the benchmark activities of the OECD. Since 2007, the Scheme also undertakes voluntary peer reviews on fruit and vegetables quality inspection systems in Member countries. The Peer Review is a systematic examination and assessment of performance of national fruit and vegetables quality inspection systems by experts from other countries under the umbrella of the OECD. The ultimate goal of the peer review is to help improve policy making, adopt best practices and comply with established international standards and principles. The peer reviews furthermore provides confidence in the infrastructure and systems relating to inspection systems on fresh fruits and vegetables.

Meeting of Heads of National Inspection Services

The OECD Meeting of Heads of National Inspection Services facilitates discussions between inspection services on major issues, developments and challenges in the fruit and vegetables sector and quality inspection system. It provides an update on the latest developments in inspection techniques and tools. It takes place within each biennial programme of work and budget.

Publications

Explanatory brochures

The OECD explanatory brochures comprise explanatory notes and illustrations to facilitate the common interpretation of standards. They are valuable tool for the inspection authorities, professional bodies and traders interested in the international trade of fruit and vegetables. The newest publications also include a USB key with the high quality electronic version of the brochures. Currently the OECD explanatory brochures are available for 28 products in hard copies as well as in electronic versions.

Guidelines

The OECD guidelines provide tools for the inspection services as well as to the private sector as regards the implementation of a quality inspection system, such as inspection methods for internal quality, notification of nonconformity etc.

Capacity building activities

The Scheme organizes International Training Courses and Workshops subject to available funds. These training courses are focused on the introduction of the OECD quality inspection procedures, the interpretation of international standards by the OECD explanatory tools, the introduction of inspection authorities and latest developments and challenges in the quality inspection. The Codex Secretariat is regularly invited to participate and to contribute to these workshops and other capacity building activities in developing countries.

Distance Learning Tools

The Scheme is exploring the possibility to develop distance learning tools on quality inspection. The aim of the project is to provide advice, assistance and sufficient training tools on standards, guidelines, methodologies for the countries. The OECD and the FAO Secretariat is examining the possibility to develop jointly an e-learning tool on quality inspection based on the OECD Guidelines on Quality Inspection.

Economic and market analysis

The Scheme regularly provides economic and market analysis of selected fruit and vegetables products. This work gives an overview on trends, trade volume/value on international trade as well as analyses for production and consumption. The analysis is done by experts at the invitation of the OECD Secretariat.

OECD FRUIT AND VEGETABLES SCHEME

Presentation by Mr. Csaba Gaspar, OECD Trade & Agriculture Directorate

The OECD Fruit Vegetables Scheme

Csaba Gaspar
OECD Trade and Agriculture

16th OECD Meeting of the Heads of National Inspection Services
20-23 May 2014, Warsaw, Poland

OUTLINE OF THE PRESENTATION

- General overview
- Mandate
- Activities
- Draft Strategic Plan

GENERAL OVERVIEW

- One of the four programmes within the Codes & Schemes;
- Established in 1962;
- Part II programme – self financing;
- Voluntary – currently 25 Members;
- Membership open to all UN members & WTO;

MANDATE

Trade facilitation...

..Through the harmonised application & interpretation of international F&V Standards.

ACTIVITIES

Core work:

- Provides framework for the export quality inspection system:
 - International Standards;
 - Inspection Methods;
 - Conformity Certificates;

Complementary work:

- Peer reviews;
- Market Analysis;
- Guidelines;
- Explanatory Materials;
- Capacity building;
- Meetings of the Heads of National Inspection Services;

OECD Meeting of Heads of National Inspection Services

Objectives :

- To facilitate discussions between inspection services on major problems, developments and challenges in the fruit and vegetables sector and quality inspection system.
- To provide an update on the latest developments in inspection techniques and tools, and to harmonise the application of the OECD Scheme.
- To present developments in the fruit and vegetables sector and quality inspection system in the Host Country.
- Recommendations to the Plenary Meeting.



International F&V Standards

Until 1998, the OECD developed fruit and vegetables standards.

Today, the Scheme applies international standards adopted from:

- UNECE;
- Codex Alimentarius Commission.

(Annex I to the Council Decision on the Scheme [C(2006)95].)

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OECD Inspection Methods

- The basis of the Scheme's activities.
- Unique in international trade.
- Applied by many countries and EU Member States and recommended by the UNECE.
- Revised Inspection Methods (2013).
- Development of OECD Guidelines on Quality Inspection (2014) – **FEEDBACK FROM THE HEADS OF NATIONAL INSPECTION SERVICES**.

(Annex II to C(2006)95).

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OECD Conformity Certificate

- It attests that the consignment conform with the standard applied under the Scheme,
- Verified by the official control service. Certificate of the final product – (vs. private quality assurance systems).
- It is applied by many countries (e.g. EU members)
- **[TRACEABILITY OF ORIGIN]**

(Appendix I to [C(2006)95])

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OECD EXPLANATORY BROCHURES - GENERAL OVERVIEW & VALUES

- Reference guidelines in the OECD quality inspection system;
- 50 years experience ;
- Approval by consensus ;
- Pragmatic approach (trade facilitation);
- Uniform content and high quality;
 - OECD Layout for Explanatory Brochures
 - OECD Guidelines on Development Explanatory Brochures
- Currently available for 26 products;
- Hard copies + E-Versions.

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OECD BROCHURE ON POMEGRANATE

- First international Standard on Pomegranate [CODEX STAN 310-2013] – 2013;
- First OECD Explanatory Brochure on Pomegranate – 2013/2014;
- First OECD Brochure based on a Codex Standard;
- First time when an OECD Brochure was developed in collaboration with Codex countries.



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NEW OECD LAYOUT

Reference to the applied standard

On the following pages, the official text of the Pomegranate Standard [CODEX STAN 310-2013, version 2013] is included in blue bold. The OECD explanatory text of the Standard is included in black italic.

Official standard text (blue bold)

1.1 Minimum Requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, the pomegranates shall be:

- whole;

Pomegranates must not have any damage or injury affecting the integrity of the product.

However, insect or predator damage is permitted, provided the cut on the back of the fruit and the affected area is not damaged.

Reference to the illustrations

OECD general explanatory notes (black italic)

- general
- product specific

Illustration No. 1: Details of the stem. 2: Details of the fruit. 3: Damage tolerance on stems of the fruit and...

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NEW OECD LAYOUT



OECD Peer Reviews

- Systematic examination and assessment of the performance of the F&V quality inspection system by experts from other countries under the auspices of the OECD Secretariat.
- Conducted on a non-adversarial basis, relies on mutual trust amongst the reviewers;
- Goal: improve policy making, adopt best practices and comply with internationally established standards.
- 6 OECD Peer Reviews (Hungary, Slovakia, Morocco, Turkey, the Netherlands and Spain)

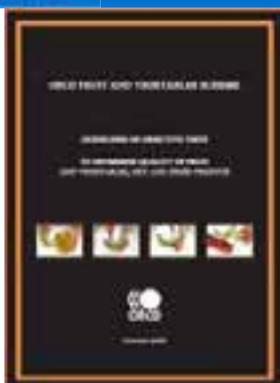


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OECD Guidelines

- Guidelines on Objective tests to determine quality of Fruit and Vegetables
- Guidelines on Notification of Non-conformity
- Guidelines on Risk Analysis
- Guidelines on Inspector's trainings
- Guidelines on Quality Inspection (under development)



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MARKET ANALYSIS

- Helps to evaluate/re-evaluate the importance of the produce;
- Identify need for explanatory materials;
- Content:
 - Overview on the product (varieties, production methods etc);
 - Statistics on consumptions, trade, etc.
 - Trends in the market;\

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CAPACITY BUILDING ACTIVITIES (TRAINING COURSES, WORKSHOPS...)

- East-Africa: OECD Workshops in Kenya, KEPHIS (2010-);
- South-Eastern Europe: OECD Workshop in Montenegro, OECD/Slovakia (2012);
- Asia: OECD/FAO Special Event on Pomegranate, CCFV, Thailand (2014);
- Slovakia: International Training Course (annual);
- Cooperation with other international organisations (UNECE and Codex Alimentarius Commission).



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STRATEGIC PLAN

- Under development
- Aim: Reassess priorities, give clear mandate on specific areas of work, provide strategic vision for the Scheme for the next 5-10 years/
- Main Areas:
 - Development and improvements in the application of standards;
 - Technical improvements to the OECD F&V inspection procedures;
 - Communication, promotion, cooperation;
 - Meeting structure

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www.oecd.org/tad/fv

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**UPDATE FROM INTERNATIONAL ORGANISATIONS INVOLVED IN STANDARDISATION AND
INSPECTION OF FRUIT AND VEGETABLES**

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (UNECE)

By Ms. Liliana Annovazzi-Jakab, UNECE

Abstract:

Ms. Liliana Annovazzi-Jakab gave an overview on the activities of the United Nations Economic Commission for Europe (UNECE). The UNECE was set up in 1947. Currently the Organisation has 56 Member States, but all UN Members can participate in its work. The UNECE is the only one of the 5 Regional Commissions to develop agricultural quality standards. This standardisation work covers fresh fruit & vegetables, dry and dried produce, seed potatoes and meat. UNECE cooperates extensively with many international governmental organizations (such as OECD, FAO, EU) and NGOs (observers) as well as works with professional organizations and the private sector (Including industry concerns helps develop standards that reflect trading practices.)

The UNECE standards are recommendations used on a voluntary basis to make trading easier. They also serve as benchmark for international trade. Moreover, many countries adopt them in their national or regional legislation. However, over the years UNECE has evolved into a platform for the development of agreed trading language/standards for global trade in agricultural produce with standards rooted in practical trade practices, rather than normative ideals and reflecting new technology in harvesting and processing; changes in consumer taste and perceptions; and changes in crop varieties and production practices.

As current challenges, the UNECE, national, regional, international regulators and the private sector have to take into account new import and export markets beyond the traditional. They have to deal with more and diverse players, more complex international supply chains and retailers that operate globally. Moreover, they have to address concerns of consumers about the origin of their food, its safety and quality and waste.

Over the years UNECE has also become a very important networking platform linking experts and expertise from many different areas: electronic business; trade facilitation; risk management and risk assessment; environmental concerns; supply chain management; transport issues; promotion and capacity-building. The aims are to increase competitiveness, inclusive sustainable development, link issues and actors and create jobs.

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (UNECE)

Presentation by Ms. Liliana Annovazzi-Jakab, UNECE

United Nations Economic Commission for Europe UNECE

UNECE: Commercial quality standards and more



Liliana Annovazzi-Jakab
UNECE

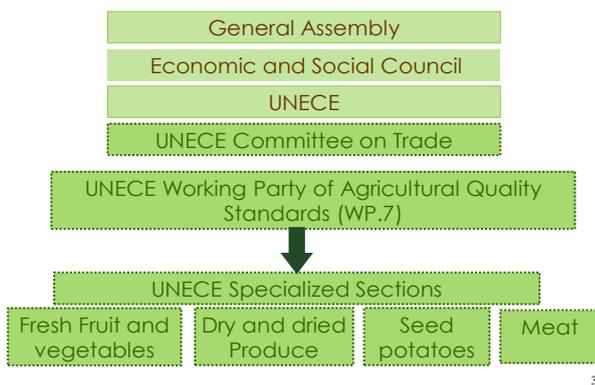
OECD Heads of Inspection Services Meeting
Warsaw, May 2014

United Nations Economic Commission for Europe UNECE



- UNECE was set up in 1947
- 56 Member States - all UN Member States participate in its work
- **UNECE only one of the five Regional Commissions to develop agricultural quality standards**

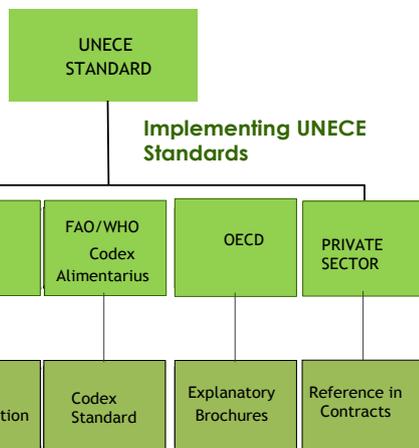
UNECE Commercial Agricultural Quality Standards



3

UNECE Commercial Agricultural Quality Standards

- UNECE cooperates extensively with many international governmental organizations (such as OECD, FAO, EU) and NGOs (observers)
- UNECE works with professional organizations and the private sector (Including industry concerns helps develop standards that reflect trading practices.)



UNECE Working Party on Agricultural Quality Standards

Four Specialized Sections:

- **Fresh Fruit and Vegetables** (around 60 standards; Explanatory brochures for Sweet Peppers, Pineapples, Chilli Peppers – Persimmon in progress)
- **Dry and Dried Produce** (close to 30 standards; Explanatory brochures for Whole Dried Chilli Peppers - Walnut in progress; colour scales and gauges)
- **Seed Potatoes** (1 standard)
- **Meat** (15 standards and 1 in progress, plus 2 updated egg standards)



UNECE Commercial Agricultural Quality Standards

UNECE standards are recommendations used on a **voluntary** basis to make trading easier.

UNECE standards are standards for use in international trade



RECENT EXAMPLES OF ADOPTIONS OF UNECE STANDARDS - FRESH FRUIT/VEGETABLES, NUTS, DRIED FRUIT AND MEAT - IN THE CIS and EASTERN EUROPEAN REGION

Russia: 13 meat standards based on UNECE standards



Russia and Customs Union: more than 27 standards for fresh fruit/vegetables,

Ukraine: Adopted most of UNECE standards for fresh fruit/vegetables

Tajikistan: Standards for dried apples, prunes, dried apricots (soon)

Moldova: National Agency for Rural Development promotes use of UNECE standards by individual farmers (Associations of Small Producers).

Concern: implementation of standards; training in their use; training in quality production methods (quality produce), storage and packaging.



UNECE Commercial Agricultural Quality Standards

What UNECE can offer:

Over the years UNECE has evolved into a platform for the development of agreed trading language/standards for global trade in agricultural produce

With standards rooted in practical trade practices, rather than normative ideals and reflecting new technology in harvesting and processing; changes in consumer taste and perceptions; and changes in crop varieties and production practices



UNECE Commercial Agricultural Quality Standards

CHALLENGES

Today, the UNECE, national, regional, international regulators and the private sector have to:

- Take into account new import and export markets beyond the traditional
- Deal with more, and diverse players, more complex international supply chains and retailers that operate globally
- Address concerns of consumers about the origin of their food, its safety and quality and waste



United Nations Economic Commission for Europe UNECE

CHALLENGES

Commercial quality standards do not always mean the same thing to all parties with a financial interest in trade:

- Producers - tool to measure success or efficiency of the production system
- Importers/Traders - business perspective where standards are a means for justifying a certain quality/price relationship
- Regulators – concerned with food quality and safety perspective; economic activity of the agricultural sector
- Consumers – several angles (e.g. safe/wholesome foods; environmental and waste concerns, quality/price relationship, etc.)



UNECE Commercial Agricultural Quality Standards

What UNECE can offer:

WIDER SCOPE

Over the years UNECE has also become a very important networking platform linking experts and expertise from many different areas: electronic business; trade facilitation; risk management and risk assessment; environmental concerns; supply chain management; transport issues; promotion and capacity-building.

AIM: increase competitiveness, inclusive sustainable development, link issues and actors and create jobs





Example – PROMOTION
 "Impact of the UNECE Dry and Dried Produce Standards in international Trade"



Example – PROMOTION

Lectures on nutrition and health benefits; production and processing



Go nuts for health

Nuts, nutrition and health

18 June 2013

14:00

Salle VIII



Prof. Jordi Salas-Salvadó,
 Director, Human Nutrition Unit,
 Rovira i Virgili University, Reus,
 Spain



From trees to your table

Behind the scenes – production, science and processing

19 June 2013

14:00

Salle VIII

Mr. Sam Kelper
 Dried Fruit Association California, USA
Mr. Lothar Boers
 Eurofins Laboratories, Germany



UNECE Commercial Agricultural Quality Standards

Example – WIDENING THE SCOPE

Meet/Meat the challenges

29 September 2014



Topics:

- COMMERCIAL ASPECTS - WORLD MEAT TRADE IN 2014 - OVERVIEW
- CONSUMER RESEARCH INTO TO EATING QUALITY - COLLABORATIVE STUDIES
- TRACEABILITY
- QUALITY MANAGEMENT - ROLE OF STANDARDS



United Nations Economic Commission for Europe UNECE

Who said supply chains are boring?



UNECE Commercial Agricultural Quality Standards

Example – WIDENING THE SCOPE



New capacity-building projects

Focus: Participation in cross-border agricultural food supply chains

Examples - Events/outputs (planned) 2014:

- Collection of available and new training material (together with ESCAP, FAO, OECD, national authorities)
- Workshop October 2014 FYR Macedonia – jointly organized with REU FAO Budapest and other partners



UNECE Commercial Agricultural Quality Standards

Example – WIDENING THE SCOPE

Support to the implementation of the Trade Facilitation Roadmap in Greece

Example - Events/Actions planned/organized:

- May 2014 - Training workshop in Greece
- July 2014 – Study tour France
- November 2014 – study tour Spain



UNECE Commercial Agricultural Quality Standards

Summary Update FFV Meeting May 2014:

- **New standard:** Standard for Quince (FFV-62)
- **New Recommendation:** Lambs Lettuce (FFV-60)
- **Revised standards:** Fresh Figs (amended the Standard to reflect the work on the OECD explanatory brochure for figs. The amendments concerned introduction of maturity requirements and skin defects caused by pests.); Apples; Sweet Chestnuts; Chanterelles; Truffles; Apricots; Plums; Chicory; and Chinese Cabbage.
- **Apples:** discussed sizing provisions. Most delegations opted for keeping current wording in the Standard, as size uniformity differentiation by quality classes and presentation seemed to be important from the marketing point of view (will be taken up in 2017). Included miniature apple varieties in sizing and marking sections and list of varieties. Updated and restructured the List of Varieties bearing in mind their economic importance.

UNECE Commercial Agricultural Quality Standards

Summary Update FFV Meeting May 2014 (cont.):

- **Brochure for persimmons:** extension of trial period of the Recommendation needed and more time to develop Brochure and Standard.
 - **2015 session:** citrus fruit, early and ware potatoes, persimmons (incl. brochure), garlic, cherries, leek. Decision on work on fresh herbs.
 - Note was taken of the **current and planned OECD work** on brochures for garlic, cherries, Chinese cabbage, plums, chicory, table grapes, pears, leeks, tomatoes and bananas.
- Other:**
- Glossary of terms
 - Food waste and commercial quality standards
 - Translation of OECD explanatory brochures into Russian; more training for producers and traders in the interpretation and practical application of standards.

UNECE Commercial Agricultural Quality Standards

Summary Update FFV Meeting May 2014 (cont.):

- **Citrus fruit:** Working Group formed to prepare proposals (for 2015) on labelling provisions which minimize confusion in the market and ensure that citrus fruit varieties are correctly identified and labeled (list of mandarin varieties could assist their classification as clementines, satsumas or hybrids). Similar list could be compiled for oranges.
- **Watermelons:** introduced provisions related to "Extra" Class into the Standard; allowed watermelons of all quality classes to be presented in bulk; made provision on number of units optional. Revised text will be on 2016 agenda.
- **Other proposals** discussed with decisions postponed to the 2015 session: early and ware potatoes; and tomatoes

UNECE Commercial Agricultural Quality Standards

Upcoming meetings:

- WP.7: Dry and Dried Fruit, 16 -19 June 2014
- WP.7: Meat, 29 – 30 September 2014
With **Meet/Meet the challenges symposium**
29 September 2014
- WP.7: 3 – 4 November 2014



United Nations Economic Commission for Europe UNECE

THANK YOU

Liliana Annovazzi-Jakab
UNECE

Palais des Nations, Geneva,
Switzerland,
liliana.annovazzi-jakab@unece.org



SECTION I.

INTRODUCTION OF THE POLISH QUALITY INSPECTION SYSTEM

Presentations in this section:

- Fresh Fruit and Vegetable Inspection System in Poland
- Activities of the Agricultural and Food Quality Inspection (IJHARS) on the Polish fresh fruit and vegetable sector

FRESH FRUIT AND VEGETABLE INSPECTION SYSTEM IN POLAND

By Ms. Agnieszka Sudół from the Agricultural and Food Quality Inspection (IJHARS), Poland

Abstract:

Ms. Agnieszka Sudół from the Polish Agricultural and Food Quality Inspection (IJHARS) introduced the inspection system for fresh fruit and vegetables in Poland. Quality inspection of fruit and vegetables is carried out under the responsibility of the Ministry of Agriculture and Rural Development. Poland applies the relevant EU legislation on quality inspection of fruit and vegetables. In addition, specific rules on the implementation are defined in the Polish legislation.

The responsible authority for quality inspection of fruit and vegetables is IJHARS. Its objectives are to protect consumers and producers by assuring access to reliable information about agricultural and food products, preventing unfair market practice and facilitating trade with third countries as well as trade within the European market area. IJHARS is led by the Chief Inspector. The organisation consists of the Main Inspectorate together with a Central Laboratory and 5 Specialised Laboratories, as well as 16 Regional Offices in each Voivodeship (region). The Main Inspectorate is responsible for coordination and supervision of all activities. They also set up a traders database and develop the control plan on conformity checks of fresh fruit and vegetables. The regional (Voivodeship) inspection services are responsible, among others, for the implementation of quality control of fruit and vegetables, the issuance and withdrawal of the authorisation traders and entering data for the trader's database.

Fruit and vegetable quality inspection is implemented at the export and import stages, as well as, in the internal market. On average, IJHARS implements approximately 66 thousands inspections a year. Poland, like other EU countries, applies 10 specific EU marketing standards which cover the main traded commodities. The EU's General Marketing Standard is applied to the rest. Poland applies a risk assessment system for quality inspection. The basis of this system is the online Trader's Database which contains all necessary information on each trader as well as the results of previous inspections. Risk analysis is part of the inspection system and generated automatically based on entered information.

Internal inspection can be implemented on the basis of the inspection plan as well as on an ad-hoc basis. The planned inspection is based on information in the Trader's Database and risk analysis. The ad-hoc inspection is undertaken if the inspection service receives information on a significant number of non-conformity cases. The export and import control is performed continuously, based on the mandatory notifications received from the traders.

FRESH FRUIT AND VEGETABLE INSPECTION SYSTEM IN POLAND

*Presentation by Ms. Agnieszka Sudol from the Agricultural and Food Quality Inspection (IJHARS),
Poland*

IJHARS



INSPEKCJA JAKOŚCI HANDLOWEJ
ARTYKUŁÓW ROLNO-SPOŻYWCZYCH

FRESH FRUIT AND VEGETABLES INSPECTION SYSTEM IN POLAND

Agnieszka Sudol
Main Specialist

Warsaw, May 2014r.



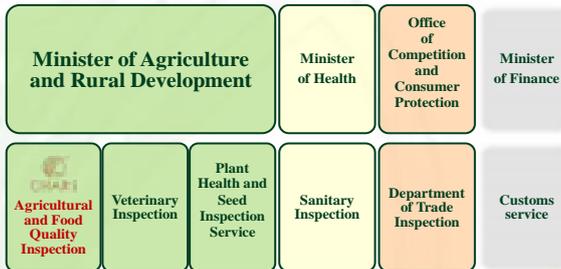
PRESENTATION CONTENTS

- Food inspection services in Poland
- Agricultural and Food Quality Inspection (IJHARS) – general information
- Fresh fruit and vegetables market supervision
 - ✓ Regulations & provisions
 - ✓ Main tasks
 - ✓ UE Marketing standards
 - ✓ Traders database
 - ✓ Types of controls
 - ✓ Internal market control



FOOD INSPECTION SERVICES IN POLAND

PRIME MINISTER



AGRICULTURAL AND FOOD QUALITY INSPECTION

Legal basis

Act of 21 December 2000
on the commercial quality
of agricultural and food products
(Official Journal of 2005 No. 187, item 1577, with amendments)

Commercial quality

means characteristics of agricultural and food product related to its organoleptic, physical-chemical and microbiological properties in scope of production technology, size and mass as well as requirements arising from production method, packaging, presentation and labelling, not covered by hygiene, veterinary or phytosanitary requirements



AGRICULTURAL AND FOOD QUALITY INSPECTION

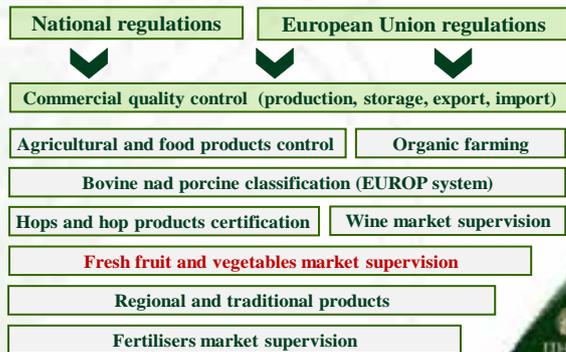
Objectives

- Protecting consumers and producers by assuring access to reliable information about agricultural and food products
- Preventing unfair market practices
- Facilitating trade exchange with third countries as well as trade on the European common market area



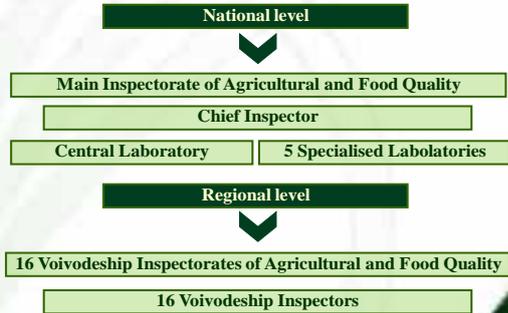
AGRICULTURAL AND FOOD QUALITY INSPECTION

Main Tasks

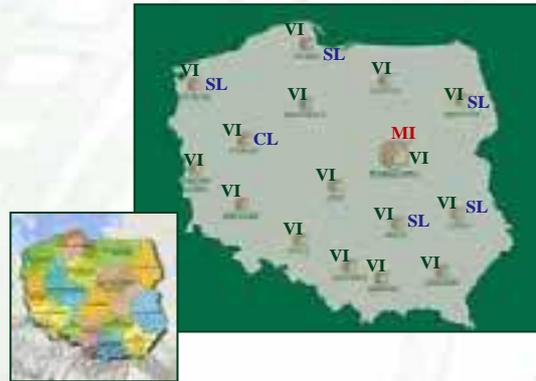


AGRICULTURAL AND FOOD QUALITY INSPECTION

Organisational structure



AGRICULTURAL AND FOOD QUALITY INSPECTION



FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

European Union regulations for fresh fruit and vegetables

➔ Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organization of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 (OJ L 347, 20/12/2013, p. 671–854)

➔ Commission Implementing Regulation (EU) No 543/2011 of 7 June 2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors (OJ L 157, 15.6.2011, p.1-163)

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

National regulation for fresh fruit and vegetables

➔ Act of 19 December 2003 on the organization of fruit and vegetables markets, hops market, dried fodder market and markets of flax and hemp grown for fiber (O.J. 2011, No 145, item 868 with amendments)

According to the Act of 19 December 2003 on the organization of fruits and vegetables markets, hops market, dried fodder market and markets of flax and hemp grown for fiber, Agricultural and Food Quality Inspection has competences for control of commercial quality of fresh fruit and vegetables in Poland

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Main tasks

THE CHIEF INSPECTOR	VOIVODESHIP INSPECTORS
Coordination and supervision of all activities	Carrying out commercial quality control of fresh fruit and vegetables
Setting up a database on traders of fruit and vegetables	Issuing and withdrawing the authorisation for the trader to use the specimen in the labelling of each package
Working out the plan of checks on conformity of fresh fruit and vegetables	Entering data on Polish traders to the database

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Main tasks

- ➔ Conformity checks on the national market
- ➔ Conformity checks at the point of export
- ➔ Conformity checks at the point of import
- ➔ Setting up a database on traders placing the fresh fruit and vegetables on the market

Each year, Agricultural and Food Quality Inspection carries out on average 66 000 quality controls of fresh fruit and vegetables at all marketing stages

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

UE Marketing standards

Controls carried out by the Agricultural And Food Quality Inspection include control of compliance with the requirements of the **specific marketing standards** and the **general marketing standard**

The **specific marketing standards** are set out for the following products:

➤ *apples, citrus fruit, kiwifruit, peaches and nectarines, pears, strawberries, table grapes*

➤ *lettuces, curled leaved and broad-leaved endives, sweet peppers, tomatoes*

Fruit and vegetables not covered by a specific marketing standard shall conform to the **general marketing standard**

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Traders database

Member States shall set up a database on traders in fruit and vegetables, which shall list, under the conditions established in Commission Implementing Regulation (EU) No 543/2011, traders involved in the marketing of fruit and vegetables for which EU standards have been laid down

Traders shall provide the information that Member States consider necessary to set up and update the database

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Traders database

Trader means any natural or legal person who holds fruit and vegetables subject to marketing standards with a view to: displaying or offering them for sale, selling them, or marketing them in any other manner, or actually carries out any of the activities referred to above mentioned as regards fruit and vegetables subject to marketing standards.

The activities cover: distance selling whether by internet or otherwise, such activities carried out by the natural or legal person for itself or on behalf of a third party, and such activities carried out in the EU and/or by export to third countries and/or import from the third countries

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

The database contains for each trader:

➤ Specific number, name and address

➤ Information needed for classification in one of the risk categories, in particular, position in the marketing chain and information concerning the importance of the company

➤ Information concerning findings made during previous checks of each trader

➤ Other information considered necessary for checks such as information concerning the existence of a quality assurance system or self-check system related to the conformity to the marketing standards

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

National legislation on the database of traders:

➤ Act of 19 December 2003 on the organization of fruit and vegetables markets, hops market, dried fodder market and markets of flax and hemp grown for fiber (O.J. 2011, No 145, item 868 with amendments)

➤ Regulation of the Minister of Agriculture and Rural Development of 28 December 2012 on traders exempted from the obligation to provide information to the voivodship inspector of agriculture and food quality, and traders entered into the database (O.J. 2013, No 0, item 74)

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Traders database

In accordance with the national legislation, the database should contain information on the Polish traders who:

➤ are required to comply with EU standards for fresh fruit and vegetables

➤ are not subject to the exemptions from the application of marketing standard

➤ in the preceding calendar year have placed on the market fresh fruit or vegetables in an amount of 100 tonnes and above

➤ were controlled in the compliance with marketing standards for fresh fruit and vegetables (even when they placed on the market fresh fruit or vegetables in an amount of less than 100 tonnes)

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Traders database

The on-line database of Polish traders of fresh fruit and vegetables was created by the Main Inspectorate of Agriculture and Food Quality

The database is coordinated by the Main Inspectorate of Agriculture and Food Quality

All data are entered by Voivodeship Inspectorates of Agriculture and Food Quality

The database consists of information on particular Polish traders of fresh fruit and vegetables and data about previous control results at all marketing stages

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Traders responsibilities

According to the national legislation, Polish traders who (in the preceding calendar year) have placed on the market fresh fruit or vegetables in an amount of 100 tonnes and above, are obliged to submit to the Voivodeship Inspectorate of Agricultural and Food Quality, information about:

- starting activities in placing on the market fresh fruit and vegetables covered by the requirements of the EU marketing standards
- quantity of fresh fruit and vegetables marketed in the previous calendar year
- each change of identification data, such as name, surname, place of activity and the address or name, and the type and the scope of its activity
- the cessation of activities on the fresh fruit and vegetables market

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Types of controls

TYPES OF CONTROLS OF FRESH FRUIT AND VEGETABLES

DOMESTIC MARKET

➤ PLANNED CONTROLS

➤ AD-HOC CONTROLS

FOREIGN TRADE

➤ EXPORT

➤ IMPORT

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Internal market controls

Planned controls of fresh fruit and vegetables are carried out several times a year according to the control guidelines which are worked out in the Main Inspectorate and transmitted to the Voivodeship Inspectorates

Voivodeship Inspectorates carry out commercial quality control of fresh fruit and vegetables and enter control results into the database of trader

Each control is carried out on the basis of a risk analysis

The risk analysis is generated automatically by the database with respect to each trader

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Traders levels of risk

The table shows risk levels for different traders. A legend indicates:

- Red: high risk = control is required
- Orange: medium risk = control is possible
- Green: low risk = control is not required

 In the table, one cell is red, one is orange, and one is green. Arrows point from these cells to the legend.

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Other controls

Ad-hoc controls of fresh fruit and vegetables are performed in case of getting information about significant quantity of non-conformity with the standards for fresh fruit and vegetables, on the market

Controls of fresh fruit and vegetables at the point of export and import are performed continuously

FRESH FRUIT AND VEGETABLES MARKET SUPERVISION

Internal market controls results (2013)

Number of monitoring visits – 734, including:

Types of inspected traders:

supermarkets;
wholesalers; producer
groups; distribution
centers; small, medium
and large retail stores;
local markets

316 - planned controls

418 – ad-hoc controls

Total number of inspected
lots of fresh fruit and
vegetables – 2 996
(1 006 793 kg)



Agricultural and Food Quality Inspection

Main Inspectorate

30, Wspólna Str.
00-930 Warsaw
Poland

Tel. (00 48 22) 623-29-00

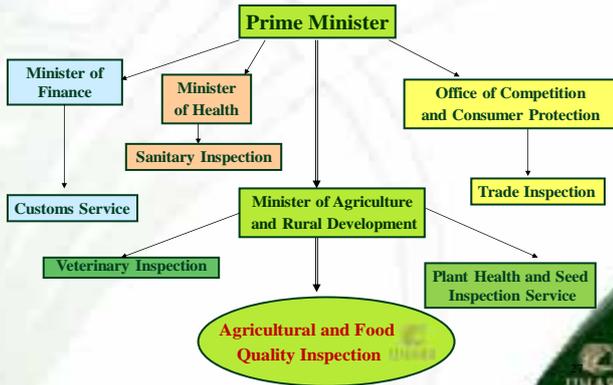
Fax (00 48 22) 623-29-99

e-mail: asudol@ijhars.gov.pl

www.ijhars.gov.pl



Food inspection services in Poland



**ACTIVITIES OF THE AGRICULTURAL AND FOOD QUALITY INSPECTION (IJHARS) ON THE POLISH
FRESH FRUIT AND VEGETABLE SECTOR**

By Ms. Katarzyna Trojnar, Agricultural and Food Quality Inspection (IJHARS), Poland

Abstract:

Ms. Katarzyna Trojnar from Agricultural Food Quality Inspection (IJHARS) made a presentation on the activities of IJHARS related to the Polish fresh fruit and vegetable sector. They are the responsible authority for fruit and vegetable quality inspection at all marketing stages.

Poland is an exporting country with the number of inspections around 73 000 in 2013. In this year, exports were mainly to Eastern European countries. At the same time, the number of import inspections was around 700. The main products imported were watermelons, pomelos, garlic and citrus fruits from countries such as China, Ukraine and Turkey.

Export and import inspections are implemented on the spot at about 800 places in the country including traders' premises, 15 border check points (of which 4 are seaports and 1 airport) and 114 customs chambers. Currently, 120 inspectors in IJHARS are responsible for fresh fruit and vegetable controls.

The inspection is based on common rules of the EU. EU legislation is complemented by internal procedures, general guidelines and guidelines for inspectors. The inspections are implemented selectively, with appropriate frequency on the basis of risk analysis. This risk assessment system is set up by the Main Inspector of IJHARS. All information on the export and import inspection is collected in the Integrated Computer System. This is the basis of the risk assessment system. In the future, the import and export notifications can be sent by the trader to the authorities via this integrated system as well.

The minimum frequency of inspection for products that fall under the scope of the SMS is 70% and for GMS products, this is 50%. This frequency can be reduced in case the lot is accompanied by a Conformity Certificate issued by an approved third country. In this case, the minimum inspection frequency is 10% for both SMS and GMS products. In case of approved traders, the SMS and GMS products are inspected randomly. Moreover, the inspection authority organises a monitoring visit once a year or quarter based on the characteristic of the trader.

The risk assessment has two phases. In the first phase, the Integrated Computer System generates the risk level of the lot such as low, medium or high risk. In the second phase, in the first two risk levels, the inspector can decide to implement inspection. In the high risk group this is compulsory. In case of positive result of the inspection, a Conformity Certificate is issued. In case, the product does not meet the quality requirements, Poland follows the protocol of non-compliance.

The cost of the inspection is covered by the Polish Government in case the product meets all the requirements of EU standards, but has to be reimbursed by the trader in case of non-conformity.

**ACTIVITIES OF THE AGRICULTURAL AND FOOD QUALITY INSPECTION (IJHARS) ON THE POLISH
FRESH FRUIT AND VEGETABLE SECTOR**

Presentation by Ms. Katarzyna Trojnar, Agricultural and Food Quality Inspection (IJHARS), Poland

IJHARS



INSPEKCJA JAKOŚCI HANDLOWEJ
ARTYKUŁÓW ROLNO-SPOŻYWCZYCH

Activities of Agricultural and Food Quality Inspection in the Polish fresh fruit and vegetables sector

Katarzyna Trojnar
Senior Specialist

Warsaw, May 2014c



PRESENTATION CONTENT

- > Activities of the Agricultural and Food Quality Inspection (IJHARS) in Poland – export/import characteristics
- > Conformity checks of fresh fruit and vegetables at export/import stage:
 - ✓ provisions
 - ✓ data collecting
 - ✓ planning and organisation
 - ✓ notifications
 - ✓ exemptions
 - ✓ methods of inspection
 - ✓ inspection costs
 - ✓ post-control documents
 - ✓ acceptance by customs



Activities of the Agricultural and Food Quality Inspection (IJHARS) in Poland

Agricultural and Food Quality Inspection (IJHARS)
carries out conformity checks **at every marketing stage:**

- > internal market (producers, packhouses, wholesale markets, retail level)
- > export and reexport to third countries (exporter's premises, border check points, customs chambers)
- > import from third countries (importer's premises in the place of destination, border check points, customs chambers)



Activities of the Agricultural and Food Quality Inspection (IJHARS) in Poland – export characteristics

Poland is an exporting country with the number of
inspection visits* about 73 000 per year (in 2013)

Main directions

the Eastern European countries:
Russia, Ukraine, Belarus

Main products

exported: apples, pears,
mushrooms, tomatoes
reexported: table grapes,
tomatoes, sweet pepper, citrus
fruit

*Number of inspection visits = 1 or more FFV lots



Activities of the Agricultural and Food Quality Inspection (IJHARS) in Poland – import characteristics

The number of inspection visits* of FFV imported to
Poland is about 700 per year (in 2013)

Main directions

China, Ukraine, Turkey

Main products

Imported: watermelons,
pummelos, garlic, citrus fruits

*Number of inspection visits = 1 or more FFV lots



Activities of the Agricultural and Food Quality Inspection (IJHARS) in Poland – places of inspection

Places of inspection (the number of localisations):

- > Eksport, reeksport ~ 700
- > Import about ~ 100
 - Including:
 - ✓ exporter's and importer's premises
 - ✓ 15 ports of entry (border check points)
(4 seaports: Szczecin, Świnoujście, Gdynia, Gdańsk,
1 airport: Warsaw - Okęcie)
 - ✓ 114 - Customs chambers



Conformity checks of fresh fruit and vegetables at export/import stage - provisions

Carried out on the basis of:

- Commission Implementing Regulation (EU) No 543/2011
- The Act on 19 December 2003 *on the organization of fruit and vegetables markets, hops market, dried fodder market and flax and hemp market grown for fiber* - Polish regulation
- internal procedures, guidelines and manuals for inspectors

Conformity checks of fresh fruit and vegetables at export/import stage – data collecting

All data about export/import notifications, conformity checks, exemptions and traders are collected in The Integrated Computer System IJHARS

- the kind of ERP system (enterprise resource planning systems)
- integrates 16 Voivodeship Inspectorates (online)
- generates risk analysis
- prepares reports
- in future – electronic notifications and connection with the Customs Service (information about Conformity Certificates or exemptions)

Conformity checks at export/import stage – planning and organisation

According to Commission Implementing Regulation (EU) No 543/2011 conformity checks in Poland are carried out:

- selectively
- with appropriate frequency
- based on a risk analysis

Conformity checks of FFV are carried out by the Voivodeship Inspectorates of Agricultural and Food Quality (inspection bodies) according to the criteria established by Main Inspector

Conformity checks at export/import stage – planning and organisation

Main Inspector of Agricultural and Food Quality (the coordinating authority) lays down in advance:

- the criteria for assessing the risk of non-conformity of lots
- the maximum number of lots which may be subject to an exemption from conformity checks (which do not need to be checked)

Specific marketing standards
SMS

General marketing standard
GMS

The criteria are established in internal procedures and included in the Integrated Computer System IJHARS

Conformity checks at export/import stage – planning and organisation

The risk analysis - criteria

- the type and size of the traders – based on the volume marketed at export/import stage
- the reliability of traders quality assurance systems or self-checking systems related to the conformity to marketing standards
- findings made during previous checks
- the nature of the product (SMS/GMS)
- the frequency of exemptions from conformity checks (lots/trader)

Conformity checks at export/import stage – planning and organisation

Conformity checks frequency

FFV lots with the *Conformity certificate issued by competent authorities of the approved third country* – according to article 14 and 15 CIR (EU) 543/2011

for SMS and GMS products
at least **10%** of lots notified by trader

other FFV lots (without the Conformity certificate)

for SMS products
at least **70%** of lots notified by trader

for GMS products
at least **50%** of lots notified by trader

Conformity checks at export/import stage – planning and organisation

Conformity checks frequency

the lots exported by approved traders → for SMS and GMS products check randomly + monitoring visits once a year/quarter

Conformity checks at export/import stage – notifications

WHO notifies ?

- > Exporter (trader) or authorised person/operator
- > Importer (trader) or authorised person/operator

WHERE to notify?

To the one of the 16 Voivodship Inspectorates or designated department depending on:

- > the location of trader
- > the place of inspection or
- > the place of customs clearance

Conformity checks at export/import stage – notifications

HOW to notify ?

- > using special notification form (paper version)
- > by mail, e-mail, fax or personally

Future work and challenges (in progress)

Electronic notifications send by traders online and implemented directly to the Integrated Computer System IJHARS

Conformity checks at export/import stage – notifications

Each lot of fresh fruit and vegetables covered by the EU standards – **must be notified**

Registration in the **Integrated Computer System IJHARS**

Risk analysis is generated for trader and each notified lot
Selective conformity checks

```

    graph TD
      A([NOTIFICATION]) --> B([VOIVODSHIP INSPECTORATE])
      B --> C([CONFORMITY CHECK])
      B --> D([EXEMPTION])
  
```

Conformity checks at export/import stage – exemptions

After registration in the Integrated Computer System inspector takes decision about:

- > exemption from conformity check or
- > conformity check

Decision is taken on the basis of:

- > the risk level generated by the system for each lot notified by trader
- > the frequency of exemptions from conformity checks – which has been already made for the trader

low risk = exemption is possible

medium risk = exemption or conformity check is possible

high risk = conformity check is required

Conformity checks at export/import stage – the Integrated Computer System IJHARS

Visualisation of the notification and risk level

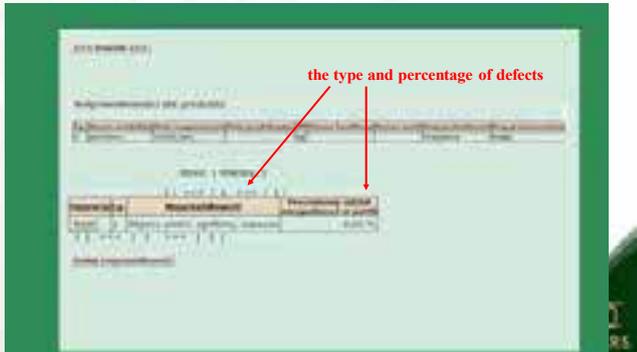
← frequency of exemptions for the particular trader

↓ notified products

← risk level

Conformity checks at export/import stage – the Integrated Computer System IJHARS

Visualisation of the conformity check results with *Protocol of non-compliance* - details



Conformity checks at export/import stage – acceptance by customs

Customs clearance conditions - export

- *Conformity certificate* issued by inspector, *or*
- Voivodeship Inspector informed customs services that *Conformity certificate* was issued, *or*
- Voivodeship Inspector informed customs services about exemption from conformity check

Customs clearance conditions - import

- *Conformity certificate* issued by inspector, *or*
- *Conformity certificate* issued by competent authorities of the approved third country
- Voivodeship Inspector informed customs services that *Conformity certificate* was issued
- Voivodeship Inspector informed customs services about exemption from conformity check

Thank you

ktrojnar@ijhars.gov.pl

SECTION II.

CHALLENGES FOR INSPECTION SERVICES: TRACEABILITY OF ORIGIN

Presentations in this section:

- What do we mean by traceability?
- How the system of traceability works in a major exporting country
- How the system of traceability is implemented in a private company
- The application of EU food inspection rules on traceability in the fruit and vegetable sector
 - *Presentation on EU Food Law*
 - *Practical implementation in a member country – Hungary*

WHAT DO WE MEAN BY TRACEABILITY?

By Mr. Csaba Gaspar, OECD Trade & Agriculture Directorate

Abstract:

As an introduction to this section, Mr. Csaba Gaspar from the OECD Secretariat gave an overview of the definition of traceability. There are many meanings of traceability depending on the context. In case of the food sector, the Codex Alimentarius Commission defined it as the ability to follow the movement of a food through specified stages of production, processing and distribution.

Setting up a traceability system can contribute to trade facilitation through accurate product description (for e.g., the country of origin) as well as contribute to the protection of consumers against deceptive marketing practices such as relabeling or repackaging.

Several Member countries of the OECD Fruit and Vegetables Scheme reported that tracking back to the true origin of the fruit or vegetables traded is one of the current challenges. Therefore, there is an ongoing discussion amongst Members to build traceability into the programme of the Scheme. However, this activity should be based on internationally recognised standards. The Meeting of the Heads of National Inspection Services is a great opportunity to receive information how traceability of fruit and vegetables lots are implemented and controlled in Member countries both in the governmental and the private sector and to identify potential work projects for the Scheme.

WHAT DO WE MEAN BY TRACEABILITY?

Presentation by Mr. Csaba Gaspar, OECD Trade & Agriculture Directorate



What do we mean by traceability

Csaba Gaspar
OECD Trade and Agriculture

16th OECD Meeting of the Heads of National Inspection Services
20-23 May 2014, Warsaw, Poland

DEFINITION OF TRACEABILITY IN THE CONTEXT OF FOOD INSPECTION

TRACEABILITY :

“Traceability/product tracing: the ability to follow the movement of a food through specified stage(s) of production, processing and distribution.”*

*FAO/WHO CODEX ALIMENTARIUS COMMISSION: CODEX PROCEDURAL MANUAL

OECD Trade & Agriculture

2

RATIONALE OF TRACEABILITY IN THE CONTEXT OF FOOD INSPECTION AND CERTIFICATION

“Traceability/product tracing is a tool that when applied in a food inspection and certification system can contribute

- To the facilitation of trade on the basis of accurate produce description (e.g. country of origin, organic farming, religious concerns such as kosher or halal), and
- To the protection of consumers against deceptive marketing practices”* (e.g. relabeling, repacking)

*FAO/WHO CODEX ALIMENTARIUS COMMISSION (2006): Food Import and Export Inspection and Certification Systems

OECD Trade & Agriculture

3

ISSUES FOR THE OECD FRUIT AND VEGETABLES SCHEME

- One of the current challenges for Members to trace back the true origin of fruits and vegetables traded.
- Improve the traceability of the country of origin of F&V is identified as a new possible mandate for the Scheme in the Draft Strategic Plan (2013, ongoing work):
 - Work should be based on internationally recognised standards;
 - Current proposals: Development of a guidelines on traceability or an email based notification system between Members;

OECD Trade & Agriculture

4

16th OECD Meeting of the Heads of National Inspection Services

Recommendations of the Heads of the National Inspection Services to the 2014 Plenary Meeting?

OECD Trade & Agriculture

5

OECD Trade and Agriculture



www.oecd.org/tad/fv



Contact

Csaba.gaspar@oecd.org

OECD Trade & Agriculture

6

HOW SYSTEM TRACEABILITY IS IMPLEMENTED IN A MAJOR EXPORTING COUNTRY

Mr. Cyril Julius, South African Inspection Service

Abstract:

Mr. Cyril Julius, representative of the South African Inspection Service, the Perishable Products Export Control Board (PPECB), gave an overview on the implementation of a traceability system for citrus fruits applied by PPECB. In South Africa, the requirements for traceability are compulsory and embedded into the South African Export Legislation for fresh produce. These rules are at least equivalent to the EC/USA/CODEX requirements. The traceability has two levels; an electronic system and visual control. The key to traceability is the Production Unit Code (PUC) or Farm Code. The aim of this code is to facilitate traceability back to the farm and keep record of how the product flows through the supply chain to the consumer. All the stakeholders of orchards, farms, packing houses, cold stores and all who hold or handle food for export have to be registered under the Ministry of Agriculture.

At the *farm level*, the producer keeps a record of actions carried out in each orchard e.g. chemicals used, spraying dates etc., as well as picking information (pick date, variety, orchard number, PUC). They issue a unique batch number for each lot. They also record where the produce will be packed. The *packing house* keeps information on the origin of the produce. They use the same batch number. The cartons have a unique number as do the pallets. These numbers are recorded on a consignment note which also includes fruit specifications (class, variety, market etc.) used for the quality inspection. The packing house keeps a record of the transporter and the point of delivery of the fruit. At the *cold store level* they keep a record of where the produce is sourced. They receive fruit specification information per pallet from the packing house electronically and manually. Pallets are scanned in the cold store for easy retrieval. The cold stores have also additional responsibilities, such as monitoring the fruit age, ensure loading out to the correct markets, and correct preparation of addendums for export certification. This addendum contains all information of the pallets/consignment to be exported which is attached to export certificates. The addendums are submitted to the PPECB for quality- and to the Ministry of Agriculture for phytosanitary inspection and certification. During the *export certification*, the information on the addendums is verified by PPECB per pallet. Currently this is a manual system, but the electronic system is under development and will be implemented from 14 October 2014. On export cartons several items of compulsory information have to be mentioned such as country of origin, packing house code, PUC, orchard number and pack date code. This information facilitates tracking and traceability of the produce.

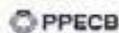
The Chair and delegates thanked Mr. Julius for the comprehensive presentation. During the question and answer session, it was explained that setting up this traceability system in South Africa took 5 years. It was clarified that traceability can be maintained as long as the fruit stays in the carton. After this, for example, during repackaging – it is the trader's responsibility to transfer traceability information to the new box.

HOW SYSTEM TRACEABILITY IS IMPLEMENTED IN A MAJOR EXPORTING COUNTRY

Presentation by Mr. Cyril Julius, South African Inspection Service

Legislation...

- Traceability requirements are compulsory
- Embedded in South African Export Legislation – fresh produce
- At least equivalent to EC/USA/Codex requirements
- Two levels
 - Electronic system
 - Visual (manual/documentation)



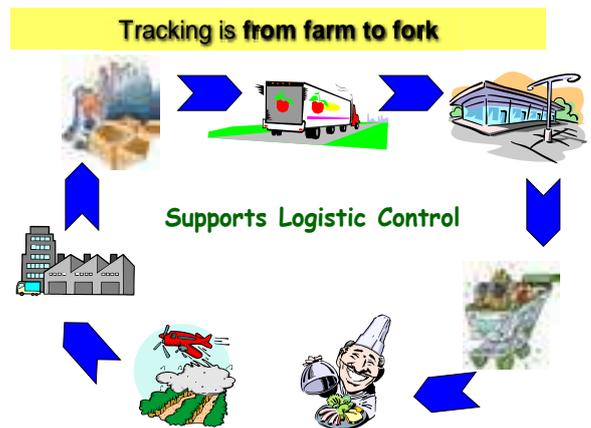
Traceability defined...

“traceability” means the ability to trace and follow a food product or any substance intended to be, or expected to be incorporated into a food product through all stages of production, packing, processing, packaging, **handling and distribution**”



Principles...

- Key to traceability is the Production Unit Code also known as the PUC or Farm Code
- Aim is to facilitate traceability back to the farm and to keep record of how the product flows through the supply chain to the consumer
- i.e. Tracking and Tracing



Tracing is from fork to farm



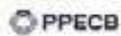
Legal requirements...

- Registration with DAFF of all:
 - Orchards
 - Production Units (Farms)
 - Packing houses
 - Cold stores
- Holding or handling food for export



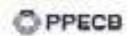
Export certification...

- Information on addendums are verified by PPECB per pallet and must be found in order before an export certificate can be issued
- Currently done manually
- In process – electronic system to be implemented from Oct 14

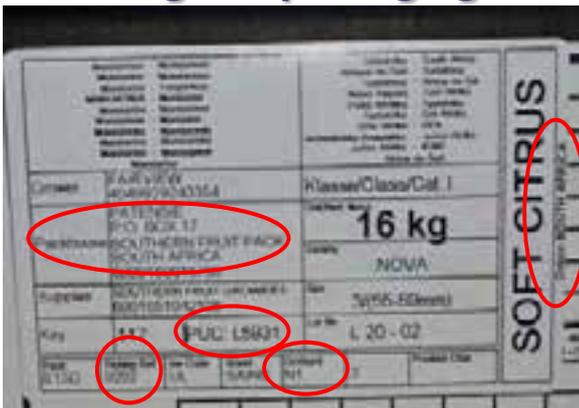


Markings on packaging...

- **On cartons:**
 - Country of origin
 - Packhouse code
 - Production Unit or Farm code
 - Orchard number
 - Pack date code
- All the above assist with tracking and tracing



Markings on packaging...



PPECB Passed for export ...



Traceable back to PPECB Inspector



HOW THE SYSTEM OF TRACEABILITY IS IMPLEMENTED IN A PRIVATE COMPANY

By Mr Karol Stec, Organisation of Commerce and Distribution, Poland

Abstract:

Mr. Karol Stec, the representative of the Polish Organisation of Commerce and Distribution made a presentation on how traceability is implemented in the private sector. The aim of these systems is to guarantee consumer safety and facilitate effective recall in the supply chain. There are several instruments in use in the private sector such as HACCP, ISO22005, BRC, IFS, and GlobalGap etc. Internal and external traceability have to be distinguished from each other. The first indicates how data is maintained on the product, within the company. External traceability means the transmission of information in the supply chain. As Poland is a member of the EU, the companies are subject to the EU Food Law and the specific regulations on fruit and vegetable quality inspection which lay down the principles of traceability. Based on EU legislation, the country of origin has to be labelled at the retail level.

Voluntary private quality standards such as GlobalGap also set up traceability systems. All certified producers are identified by a unique GlobalGap number. The origin of the produce can also be traced back through the system. Based on this, retailers can set up a network of reliable producers, thus reducing the product's safety risk.

The BRC Global Standard integrates ISO 9001, Codex Alimentarius Standards and Guidelines, as well as Good Manufacturing Practices (GMP) and Good Hygiene Practices (GHP). The BRC Standard comprises all stages of processing/manufacturing and contains the main prerequisites of traceability. The IFS is compatible with BRC in that it focusses more on the delivery chain.

The ISO 22000 refers to management practices but not to the products. It is composed of 6 sub-standards from which ISO 2006 is especially aimed at traceability. It refers to food as well as feed. The ISO therefore, is often applied simultaneously with BRC or IFS.

Several electronic systems are in use in the private sector in order to support traceability. The GS1 is a global standardisation organisation and active in over 100 countries. It is dedicated to designing and implementing global standards for use in the supply chain. The GS1 standards introduce a common language for business and provide a framework to support the traceability process. The GS1 Global Traceability Standard (GTS) is a benchmark in several best practice guidelines. They also developed the GTIN- Global Trade Item Number which helps to automate the trading process at any point of the supply chain. It is a global standard which allows companies to ensure compatibility with other systems used by other companies. It facilitates stock control and order replenishment as well as facilitates electronic communication systems across traders. It identifies traded items for data exchange between trading partners as a required component of a GDSN (Global Data Synchronisation Network).

Traceability and prerequisites are strictly respected in Poland. This is a result of the collective efforts of all supply chain participants as well as subsequent policy efforts applied by market supervision institutions. Official bodies and business operators cooperate effectively. They organise consultations and training sessions that take into account the opinions of business organizations.

HOW THE SYSTEM OF TRACEABILITY IS IMPLEMENTED IN A PRIVATE COMPANY

Presentation by Mr Karol Stec, Organisation of Commerce and Distribution, Poland

16th OECD Meeting of Heads of National Inspection Services

HOW THE SYSTEM OF TRACEABILITY WORKS IN PRIVATE COMPANY

KAROL STEC
DYREKTOR DS. KOORDYNACJI PROJEKTÓW

Polish Organization of Commerce and Distribution

Member of EuroCommerce, Polish Employers Confederation „Lewiatan”



POHiD's Mission and Tasking

Member companies representation vis a vis national and the EU public administration

Permanent cooperation with public inspection and market supervision institutions (working meetings, projects, trainings)

Generating and participation in cooperation projects to interlock organizations representing food delivery chain (Rural Economy Council, Polish Federation of Food Producers Federation, ECR Polska, GS1 network)

Participation in legislative projects to result in new legal acts referring to commerce in Poland and entire EU.

Media work and relations building pertaining to commerce and its image

Traceability - Target and Instruments



Crisis Management

- **Target** – Consumers Safety and Effective Recall in Supply Chain
- **Instruments** HACCP, ISO 22005, BRC, IFS, GlobalGAP...
- Internal Traceability** – products data in company
- External Traceability** – products data in supply chain – transmission of data

General Food Law: the base

Legal base: EU Regulations 178/2002, 1308/2013, 1223/2009, other industries-relating EU acts, national acts.

Definition from Regulation (EC) NO 178/2002

15. "traceability" means the ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution;

Article 18 Traceability

The principle „Step Forward, Step Backward” for food and feed business operators in the European Union.

Food Law for Fruit and Vegetables

Labelling and Documents

Commision Implementing Regulation (EU) No 543/2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007

Marking/labelling fruit and vegetables as a traceability instrument:

- general marketing standard
- specific marketing standards
- voluntary UNECE standards application to replace general EU standard
- fruit and vegetables traders data base
- products withdrawal (recall) procedure and its supervision



Food Law for Fruit and Vegetables

Marking of fresh fruit&vegetables in retailing

Fruit&vegetables General marketing standard	Fruit&vegetables Specific marketing standards
Country of origin	Country of origin Class Variety or commercial type



Voluntary Private Quality Standards Global G.A.P.

GlobalGAP = business-to-business standard for safe and sustainable food production)

Benefits from GLOBAL G.A.P.'s traceability system:

1. All GLOBAL G.A.P. producers are identified in its Database with a 13-digit number (GGN) (it allows you to monitor your producers and validate certificates).
2. Sources of certified products are available and the baseline requirements for food safety and hygiene are ensured.
3. One can set a network of reliable producers.
4. Product safety risk is significantly reduced.



Voluntary Private Quality Standards BRC GS; IFS; ISO 22000

1. BRC Global Standard: contains and integrates ISO 9001, Codex Alimentarius, GMP and GHP.

- comprises all stages of processing/manufacturing (not primary production)
- contains main traits of traceability

2. IFS:

- responds chains requirements and standards
- compatible with BRC (more biased to delivery chain and cooperation)

3. ISO 22000 (refers more to managing not to products):

- composed of 6 sub-standards (ISO 2006 especially aimed at traceability)
- refers both to food and feed

ISO 22000 may often be applied simultaneously with IFS, BRC, others (i.e. SQF)



Electronic Systems Support – Traceability GS-1

1. GS1 is a global organization of standards active in over 100 countries.

2. GS1 is dedicated to designing and implementing global standards for use in the supply chain.

3. GS1 standards introduce some sort of common language of business and provide the framework to support the traceability (business) process.

4. Best practice implementation guideline is based on the GS1 Global Traceability Standard (GTS).



Electronic Systems Support –Traceability GTIN –GS1 Standard

GTIN- Global Trade Item Number GS1 standard assigned to any item.

GTINs helps automate the trading process at any point in all supply chain.

GTIN is already established as the standard in every country for trade items:

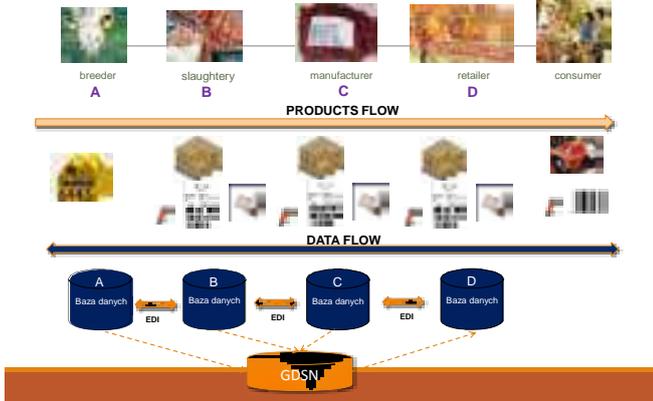
- Allows companies to trade goods and services knowing that the Identification will be compatible
- it is essential for accurate stock control and order replenishment
- it drives electronic communications systems like EDI, across trading partner
- it identifies traded items for data exchange between trading partners as a required component of a GDSN (Global Data Synchronisation Network)



Practical application – Standards GS1



„FROM FIELD TO FORK”
A DELIVERY CHAIN



„FROM FIELD TO FORK” A CONSUMER PERSPECTIVE-
ENHANCED INFORMATION ABOUT PRODUCT



Systems and Standards vis a vis Polish Retail

1. Marking and labelling of fresh fruit&vegetables - Specific marketing standards to impose:
 Information required by law and detailed by marketing standards:
 - Name and address of a company who packs and/or delivers
 - Name of product (if a „stuff” of a packaging is not visible)
 - Official name o the state product comes from (or habitual, undoubted informal name)
 - quality class
 Also:
 Supplementary data: name of variety or commercial type, size, number of pieces, net-weight etc..

Systems and Standards vis a vis Polish Retail

2. Each label on a gros-packaging as well as a single pack must be identifiable and traceable. Thus:
 - Internal code must make a product identifiable
 - Identifiability is a must in quality specification documents
 Auditing procedure must always check identifiability of products. Key instrument to contact suppliers effectively is special numer which both parties use while anything misfits norms of auditing system

Systems and Standards vis a vis Polish Retail

3. Global GAP certification number – GGN.
 Some distributors and retailers require Global Gap as a standard for fruit&vegetables. The GGN on a label confirms its validity, identifiability, etc. Also the range of certificate (list of products embraced).
 For client it is an info on the producer and company (via www).
4. In Poland law requires adding special registration numer for potatoes as well as the code of a country.
5. If recall procedure is introduced the GGN imposes blocade on POS.

Systems and Standards ... a visual sample





Traceability in Poland

Traceability and requirements entailed are restrictively respected in Poland. It is a result of all supply chain participants' strivings as well as a consequent policy applied by market supervision institutions. Official bodies and business operators cooperate effectively. They organise consultations and trainings respecting opinions of business organizations.



Thank You for Your Attention!

Karol Stec
Dyrektor ds. Koordynacji Projektów
www.pohid.pl

**THE APPLICATION OF EU FOOD INSPECTION RULES ON TRACEABILITY IN THE FRUIT AND
VEGETABLE SECTOR**

EUROPEAN UNION FOOD LAW

By Ms. Dorota Balińska Hajduk, Agricultural and Food Quality Inspection (IJHARS), Poland

Abstract:

Ms. Dorota Balińska Hajduk, Head of the Commercial and Quality Control Department of IJHARS gave an overview of the EU Food Law. The EC Regulation No 178/2002 of the European Parliament and of the Council of 28 February 2002 lays down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. According to the Law, and in order to ensure the safety of food, it is necessary to consider all aspects of the food production chain as a continuum from, and including, primary production and the production of animal feed up to and including sale or supply of food to the consumer because each element may have a potential impact on food safety.

The EU Food Law has established the definition of traceability which means the ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution.

In the EU, food and feed business operators have to be able to identify any entity from whom they have been supplied with food, feed, food-producing animal, or any substance intended to be, or expected to be incorporated into a food or feed. The operators also have to be able to provide this information to the competent authorities on demand.

The marketed food and feed product must have to be properly labelled or identified in order to facilitate traceability. In the fruit and vegetable sector this means appropriate labelling and the indication of particular information in the invoices and accompanying documents. The label has to bear the name and address of the packer and/or the dispatcher and the country of origin. These requirements are based on the specific EC regulation on fresh and processed fruit and vegetables (543/2011, 1234/2007).

**THE APPLICATION OF EU FOOD INSPECTION RULES ON TRACEABILITY IN THE FRUIT AND
VEGETABLE SECTOR**

PRESENTATION ON THE EU FOOD LAW

*Presentation by Ms. Dorota Balińska Hajduk, Agricultural and Food Quality Inspection (IJHARS),
Poland*



EU FOOD LAW - traceability

Dorota Balińska-Hajduk
Head of Commercial Quality Control Department

Warsaw, May 2014



EU Legislation

REGULATION (EC) No 178/2002 OF THE EUROPEAN
PARLIAMENT AND OF THE COUNCIL

of 28 January 2002

laying down the general principles and requirements of food law,
establishing the European Food Safety Authority
and laying down procedures in matters of food safety

(OJ L 31, 1.2.2002, p. 1)



EU Legislation

Food safety

A high level of protection of human life and health should
be assured in the pursuit of EU policies

In order to ensure the safety of food, it is necessary
to consider all aspects of the food production chain
as a continuum from and including **primary
production and the production of animal feed** up to
and including **sale or supply of food to the consumer**
because each element may have a potential impact
on food safety



EU Legislation

Definition of 'traceability'

'Traceability' means the ability to trace and follow
a food, feed, food-producing animal or substance
intended to be, or expected to be incorporated into
a food or feed, through all stages of production,
processing and distribution



EU Legislation

Article 18

Food and feed business operators shall be able to identify any
person **from whom they have been supplied** with:

a food

a feed

a food-producing animal

or any substance intended to be, or expected to be,
incorporated into a food or feed

!!!

Operators shall have in place systems and procedures which
allow for this information to be made available to the
competent authorities on demand



EU Legislation

Article 18

Food and feed business operators shall have
in place systems and procedures to identify
the other businesses **to which their products
have been supplied.**

!!!

This information shall be made available
to the competent authorities on demand



EU Legislation

Article 18

Food or feed which is placed on the market or is likely to be placed on the market in the EU shall be **adequately labelled** or **identified** to facilitate its traceability, through **relevant documentation** or **information** in accordance with the relevant requirements of more specific provisions

EU Legislation

In case of fresh fruit and vegetables traceability is ensured first of all by:



appropriate labelling

indicating particular information in the invoices and accompanying documents



Commission Implementing Regulation (EU) No 543/2011 of 7 June 2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors (OJ L 157, 15.6.2011, p.1-163)

EU Legislation – CIR (EU) No 543/2011

The labeling of fresh fruits and vegetables should consist of:



the name and the address of the packer and/or the dispatcher



the indication of the country of origin



any information about nature of produce and commercial specification, if required (name of variety, quality class, size, etc.)

Invoices and accompanying documents, excluding receipts for the consumer, shall indicate **the name and the country of origin** of the products and, where appropriate, the class, the variety or commercial type if required in a specific marketing standard, or the fact that it is intended for processing

Agricultural and Food Quality Inspection

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THE APPLICATION OF EU FOOD INSPECTION RULES ON TRACEABILITY IN THE FRUIT AND VEGETABLE SECTOR

A PRACTICAL IMPLEMENTATION IN A MEMBER COUNTRY

By Mr. Istvan Ecsedi, Fruit and Vegetables Quality Inspection, Hungary

Abstract:

Mr. Istvan Ecsedi, Head of the Hungarian Fruit and Vegetables Quality Inspection made a presentation on traceability checks in the Hungarian fruit and vegetables sector. These measurements have a strong political support as there is a large ‘virtual’ or black/grey market for fruit and vegetables, where the stakeholders do not follow the rules and try to avoid paying tax. These practices mean unfair concurrence for producers and can cause food safety risks for consumers.

The control measures are based on the general principles of the EU Food Law, as well as specific EU Regulations on the quality and labelling of fresh fruit and vegetables. The control is based on the accompanying documents of the fruit and vegetables lots which can be the CMR or Invoice. If the lot is not traceable based on these papers, it will be destroyed. Prior to destruction, the procedure employed includes identification of the client, sealing of the lot, identification of the mode of destruction and finally, issuance of the decision regarding the fine and destruction of the product. The destruction is always final, meaning placement of the product in a waste deposit or compost. In many instances, it can be used as animal feed (zoo). Charity is not possible as the unknown origin of the produce means high food safety risk.

These traceability measures are implemented in Hungary in coordination with all involved authorities such as food chain safety inspection, the police and customs. In many cases, it is implemented on the road. There are several challenges which need to be resolved. For e.g., where the lot number is specified, the need for translation in case of foreign drivers, the enforcement of the decision in foreign countries, a framework contract for destruction of the countries as well as the application of the same procedure on all marketing stages.

The Chair and delegates thanked Mr. Ecsedi for the presentation. It was mentioned that these measurements are not harmonised at the international level. These strong measures cannot be implemented in all countries, as lack of political support or fragmentation of the inspection system where many authorities should be involved.

**THE APPLICATION OF EU FOOD INSPECTION RULES ON TRACEABILITY IN THE FRUIT AND
VEGETABLE SECTOR**

A PRACTICAL IMPLEMENTATION IN A MEMBER COUNTRY

Presentation by Mr. Istvan Ecsedi, Fruit and Vegetables Quality Inspection, Hungary



Traceability checks in the fruit and vegetables sector in Hungary

Istvan ECSEDI
National Food-chain Safety Office

21. May 2014.



Traceability checks

Legal basis:

- REG. (EC) No 178/2002 laying down the general principles and requirements of food law

Definition of 'food' and 'traceability'

- 'food' (or 'foodstuff') means **any substance or product**, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be **ingested by humans**.
- 'traceability' means the **ability to trace and follow a food**, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution;



Traceability checks

- **Labelling requirements (food and quality reg.)**
 - Name and address of packer/dispatcher
 - We also accept the grower (in reality this is the best solution)
 - Country of origin (explicitly)
 - Lot nr. (e.g. date of packaging)
 - In case of the 10 products specifically regulated:
 - Class
 - Variety
 - Size



Traceability checks

- **Accompanying documents the (CMR /invoice)**
 - Name of the produce
 - Country of origin
 - Lot nr/ date of packaging
 - Dispatcher
 - Place of dispatch



Traceability checks

label Identity check! documents (CMR/bill)

lot is traceable lot is not traceable

↓
destruction



Steps of the destruction procedure

- Protocol on no traceability (issued by the coord. body)
- Clarification of the client
- Official supervision of the lot (sealing)
- Action on destruction
- Decision on fine and destruction
 - What destruction means?
 - Real destruction (waste deposit, composting)
 - No charity
 - Could only be fed to animals that will not serve as food (zoo)

Sealed potatoes in a hungarian warehouse



Traceability checks

- **Problems :**
 - Transit lots?
 - Lot nr. (where it is specified)?
 - Translator?
 - Enforcement of decision in foreign countries?
 - Framework contract of the countries for destruction
 - The same procedure on each level of marketing

Thank you!



SECTION III.

APPLICATION OF INTERNATIONAL STANDARDS UNDER THE SCHEME

Presentations in this section:

- Application of tolerances in international marketing/quality standards
- Interpretation of skin defects (area, skin defects caused by pests) in international marketing/quality standards

APPLICATION OF TOLERANCES IN INTERNATIONAL MARKETING/QUALITY STANDARDS

By Mr. Jean Crombach, Quality Inspection Bureau, Netherlands

Abstract:

Mr. Jean Crombach, the Technical Director of the Dutch Quality Inspection Service, the KCB made a presentation on the application of tolerances in international marketing standards. Tolerances in standards are provided to allow for errors during the grading and packing process. However, this allowance is limited. During grading and sizing it is not permitted to deliberately include out of grade produce, i.e. to exploit the tolerances.

The tolerances are determined after examining all sample packages calculating the percentage (by number or weight) of all units not conforming to the class or size indicated of all samples examined.

There are two types of tolerances. The quality tolerance is the maximum acceptable percentage (in weight or number) of products not meeting the requirements of the class. Non-conform products have defects on physiological, morphological and pathological breakdown, physical damages affecting the appearance, organoleptic and other quality specifications such as maturity. The size tolerance is the maximum percentage (in weight or number) of the fruit or vegetable in a lot not meeting the requirements of the class concerned.

As regards the European Union, the General Marketing Standard defines minimum quality requirements. It defines 10 % quality tolerance. Within this tolerance, maximum 2 % of the produce is allowed which affected by decay. The Specific Marketing Standards also define quality tolerances as well as size tolerances for the covered produces.

The application of tolerances in practice is the responsibility of the national inspection services. Distinguishing decay, which summarise defects which affect the edibility of the produce, is an important element of the implementation. Usually a separated and stricter tolerance level is applied to them. In the practice of the KCB, a less strict tolerance for non-progressive decay is applied. The usual tolerance is 1% but KCB applies 2% for Dutch produce and 3 % for import.

The KCB introduced the terms 'defects' and 'mayor defects'. The mayor defects include decay and defects that result in failure of meeting with the minimum requirements. The Netherlands applies 2or 3 % tolerances in these cases. The other defects are covered by the term 'defect' and 10% tolerance is applied.

Application of defects for the products covered by the General Marketing Standard is sometimes challenging. Therefore, the Netherlands developed internal guidelines which contain instruction how to apply the GMS to product specific defects. Usually these guides are in line with the specific international standard requirements.

During the discussion several delegates mentioned that there is no tolerance for decay in their country either that they are exporting country and long distance shipping does not allow such defects, or these defects mean food safety risk. Delegates agreed that it is hard to apply the same tolerance for decay at all marketing stages. It was also mentioned that strict tolerance would lead to the increase in the rejection of lots.

APPLICATION OF TOLERANCES IN INTERNATIONAL MARKETING/QUALITY STANDARDS

Presentation by Mr. Jean Crombach, Quality Inspection Bureau, Netherlands



WILDETTEN-CONTROLE-BUREAU

Application of tolerances in international marketing/quality standards

Jean Crombach
Technical director KCB

16th Meeting of the Heads of national Inspection Services
Warsaw, Poland
20 – 23 May 2014

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WILDETTEN-CONTROLE-BUREAU

CONTENT PRESENTATION

1. Something about The Netherlands
2. Something about KCB
3. Tolerances in Regulation
4. Difficulties with the application of tolerances
5. How are tolerances applied by KCB?
5. Questions 



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WILDETTEN-CONTROLE-BUREAU

THE NETHERLANDS

- Small country, but a big role in trade of fresh fruits and vegetables
- Free trade – Import and export
- High Quality – Food safety – Marketing standards
- Logistic concept – controlled atmosphere
- Centre of excellence for fresh fruit industry
- Frontrunner in the field of sustainable horticultural technology



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WILDETTEN-CONTROLE-BUREAU

FIGURES FRESH FRUITS & VEGETABLES

Import 2012

(x 1 mln kg)

Total: 4.418

Fruit:
3.238

Vegetables:
1.180



Export 2012

(x 1 mln kg)

Total: 6.595

Dutch product:
3.187

Re-export:
3.408

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WILDETTEN-CONTROLE-BUREAU

KCB CHARACTERISTICS

- Founded in 1924 → long history
- Primary task 1924 → export inspections quality fresh fruits and vegetables
- Appointed by Government
- High level of expertise
- Accreditation
- No payment by Government, inspections 100% payed by inspected traders/packing stations/producers



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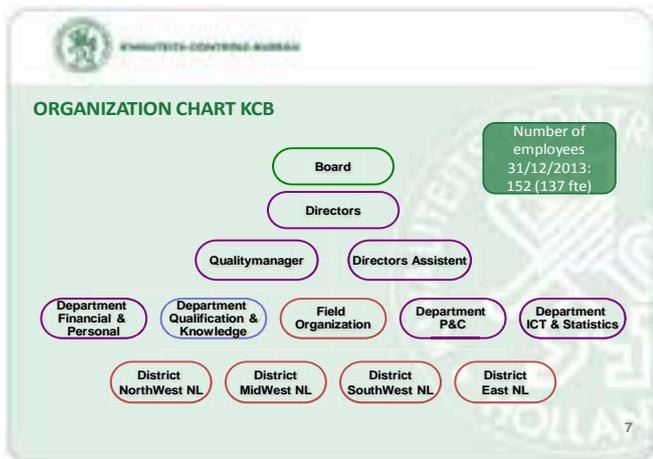
WILDETTEN-CONTROLE-BUREAU

DEVELOPMENTS

- History → product control at auctions and packing stations
- Change in product flow: direct from grower to packing station, to trader, to supermarket
- Change of checkpoints – efficiency
- 2005 → Introduction regulation 'Approved Trader' (RIK)
- Since then → Increase application risk analysis
Dynamic approach →
 - poor quality → more inspections
 - good quality → less inspections



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- TASKS KCB**
- Only public tasks
 - Supervision on regulations on quality of fresh fruits and vegetables
 - » Import and export inspections, internal (EU) market and issue export certificates
 - Fytosanitary import inspections
 - » Mandate by Ministry of Agriculture
 - » Analysis sample/organism by Plant Protection Service (PPS)

- INSPECTIONS: STATISTICS 2013**
- Import: Inspections import: 67.886 (1.196 million kg Produce)
Rejections import: 844
 - Export: Exported consignments: 86.285
Rejections export: 237
 - Internal market: Inspected lots: 22.129
Rejections internal market: 527

- TOLERANCES (Glossary of terms UNECE Standards)**
- Why? Tolerances are provided to allow for errors during the grading and packing process.
 - Allowance limited. During grading and sizing it is not permitted to deliberately include out of grade produce, i.e. to exploit the tolerances deliberately.
 - How? The tolerances are determined after examining all sample packages calculating the percentage (by number or weight) of all units not conforming to the class or size indicated of all samples examined.

- WHICH TOLERANCES?**
- Quality tolerances
Maximum acceptable percentage (in weight or number) of products not meeting the requirements of the class. Not conform products have defects on physiological, morphological and pathological breakdown, physical damages affecting the appearance, organoleptic and other quality specifications such as maturity.
 - Size tolerances
Maximum percentage (in weight or number) of the fruit or vegetable in a lot not meeting the requirements of the class concerned.

- TOLERANCES IN EU REGULATION (EU) 543/2011**
- General Marketing Standard (GMS)
Minimum quality requirements. A tolerance of 10% by number or weight of product not satisfying the minimum quality requirements shall be permitted in each lot. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay (Annex I, Part A (GMS), under 3)
 - Specific Marketing Standards (SMS)
For each SMS tolerances are defined. Tolerances for quality are similar. Tolerances for sizing differ according to SMS.



QUALITY TOLERANCES IN SMS APPLES:

- 'Extra' Class: A total tolerance of 5 per cent, by number or weight, of apples not satisfying the requirements of the class, but meeting those of Class I is allowed. Within this tolerance not more than 0,5 per cent in total may consist of produce satisfying the requirements of Class II quality.
- Class I: A total tolerance of 10 per cent, by number or weight, of apples not satisfying the requirements of the class, but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.
- Class II: A total tolerance of 10 per cent, by number or weight, of apples satisfying neither the requirements of the class nor the minimum requirements is allowed. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay.

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QUALITY TOLERANCES IN SHORT

- 'Extra' Class: maximum tolerance 5% produce of Class I, within tolerance maximum 0,5% Class II produce
- Class I: maximum tolerance 10% produce of Class II, within tolerance maximum 1% produce with serious defects (not meeting Class II / min. requirements / decay)
- Class II: maximum tolerance 10%, within tolerance produce allowed not meeting Class II or minimum requirements, within tolerance maximum 2% of produce with decay

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SIZE TOLERANCES IN SMS APPLES

For all classes: a total tolerance of 10 per cent, by number or weight, of apples not satisfying the requirements as regards sizing is allowed. This tolerance may not be extended to include product with a size:

- 5 mm or more below the minimum diameter,
- 10 g or more below the minimum weight.

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DEALING WITH TOLERANCES IN PRACTICE

Important elements in regulation:

- Decay: defect (progressive or not) affecting the edibility of the product.

KCB Practice: sometimes produce with none progressive defects less strict tolerance

- Sound (minimum requirement): products affected by rotting or deterioration such as to make them unfit for consumption are excluded.

- Tolerance for serious defects: 1% → Too strict !!!

KCB Practice: 2% for NL-produce, 3% for non NL-produce (import)

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APPROACH KCB

- KCB differentiates into: 'defects' and 'mayor defects'
- Mayor defects:
 - ➔ decay
 - ➔ defects that result in failure of meeting minimum requirements
- (Other) defects
- Mayor defects → related to 2%/3% tolerance → 2%/3% defect
- (Other) defects → related to 10% tolerance → 10% defect

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KCB PRACTICE

1% maximum tolerance too strict!

Example lot mandarins → 1 affected product would lead to rejection → therefore: KCB allows 3% (non NL produce)



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KCB PRACTICE
 Tomatoes on the vine
 Healed cracks → KCB 10% tolerance



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KCB PRACTICE
 Tomatoes with colour defect caused by virus
 Not allowed: KCB 2%/3% tolerance for Class I and 10% tolerance for Class II



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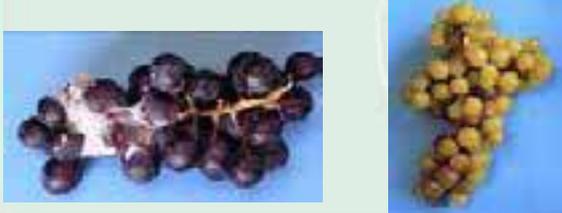
KCB PRACTICE

KCB: still Class I (2%/3% tolerance)	KCB: Class II (10%) (10% tolerance)	KCB: not allowed (2%/3% tolerance)
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KCB PRACTICE
 Table grapes: When rot focused on spot in the vine, KCB rates whole vine as 'mayor defect' (3%, non NL produce)
 If single grapes rot KCB rates individual grape as 'mayor defect'



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KCB PRACTICE
 Carrots: General Marketing Standard → produce has to be intact
 Broken or split carrots not allowed
 But, UNECE standard → 15% of carrots may be broken
 KCB adopted this number
 Cracks, not reaching into the heart, also allowed



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KCB PRACTICE
 General Marketing Standard → the produce may not be overripe
 Visible sprouting not allowed
 Chicoree: KCB adopted UNECE standard
 Sprouting only allowed up to ⅓ of the length



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EXAMPLE OF INSPECTION

250 boxes tomatoes

Box	Number of tomatoes per box	Number of tomatoes with defect allowed in 10% tolerance	Number of tomatoes with defect allowed in 2% tolerance
1	42	4	1
2	42	4	
3	42	3	1
4	43	3	
5	44	4	1
6	42	4	
7	45	5	1
TOTAL	300	27	4

What would be your decision?



RESULT INSPECTION TOMATOES ON THE VINE

- Count total number of tomatoes with defects
= 27 (9%) + 4 (1,33%) = 31 tomatoes
 - 31 tomatoes: $31/300 \times 100\% = 10,33\%$
- ⇒ Rejection (tolerance of 10% is exceeded)



DECLARATION OF NON CONFORMITY



RESULTS INSPECTION



RESULTS INSPECTION



Thank you for your attention

Are there any questions?

j.crombach@kcb.nl

**INTERPRETATION OF SKIN DEFECTS (AREA, SKIN DEFECT CAUSED BY PESTS) IN INTERNATIONAL
MARKETING/QUALITY STANDARDS**

By Mr. Dorian LaFond, USDA/AMS/Fruit and Vegetable Programs, U.S.A.

Abstract:

Mr. Dorian LaFond, representative of the USDA, made a presentation on the interpretation of skin defects in international marketing standards. There are different methods to measure skin defects. The first one is the mental calculation. The inspector makes decision on the size of the defect on the basis of a scoring guide. In this method the inspector divides the surface of the product to several equal and regular parts in order to help the calculation. The second method is based on the use of gauges or rulers, tape measures, callipers etc. These tools help to the inspector to easily calculate the surface of the skin defect.

Skin defects can be treated differently depending on the edibility of the skin. The evaluation of these defects on the surface is based on if the skin is edible or not. It is also important that in case of insect damage, the pest name should not be named; the identification of the defects should be on the basis of the symptoms. It is also important to know that the same pest can cause different symptoms on different coloured fruits. The insect injury can also be a quality issue if the insect is not present or condition problem when the pest is still on or in the produce. In case of produce which skin is not edible, these defects are treated less strictly in general and are mostly a cosmetic issue.

**INTERPRETATION OF SKIN DEFECTS (AREA, SKIN DEFECT CAUSED BY PESTS) IN INTERNATIONAL
MARKETING/QUALITY STANDARDS**

Presentation by Mr. Dorian LaFond, USDA/AMS/Fruit and Vegetable Programs, U.S.A.

INTERPRETATION OF SKIN DEFECTS (TYPES, AREA, SKIN DEFECTS CAUSED BY PESTS ETC.) IN INTERNATIONAL MARKETING/QUALITY STANDARDS.



By: Dorian A. LaFond

INTERPRETATION OF SKIN DEFECTS (TYPES, AREA, SKIN DEFECTS CAUSED BY PESTS ETC.) IN INTERNATIONAL MARKETING/QUALITY STANDARDS

This presentation is divided in three parts:

1. Methods used for Measuring:

- Mentally determining if defect is large enough to score (judgment call)
- Measuring defect with a diameter area gauge or similar tool.

2. Commodities with Edible Skins

3. Commodities with In-edible Skins

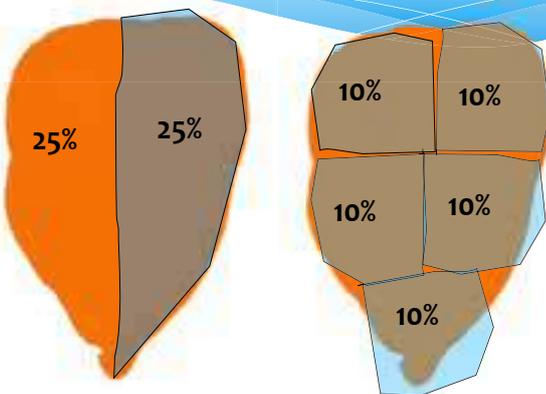
Part 1. Measuring Defects

Method 1: Mental Calculation



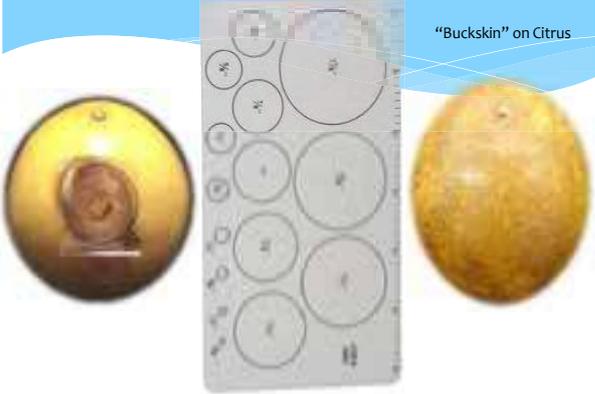
**Scoring Guide:
Peppers (Other Than) Sweet Peppers
ALL CLASSES**

Defect	Extra Classes (Injury)	Class I (Damage)	Class II (Serious Damage)
Blossom End Rot	Any amount	Aggregates > 3/8ths	Aggregates > 18 mm
Bruising	Aggregates > 5%	Aggregates > 10%	Aggregates > 15%
Dirt	Aggregates > 5%	Aggregates > 10%	Aggregates > 15%
Discoloration	Aggregates > 5%	Aggregates > 10%	Aggregates > 15%
Hail or Mechanical	Any amount	Aggregates > 3/8ths	Aggregates > 18 mm
Pitting	Aggregates > 5%	Aggregates > 10%	Aggregates > 15%
Scars	Aggregates > 5%	Aggregates > 10%	Aggregates > 15%
Shriveling	Aggregates > 5%	Aggregates > 10%	Aggregates > 15%
Sunburn	Aggregates > 5%	Aggregates > 10%	Aggregates > 15%





Method 2: Measuring defect with a diameter area gauge or similar tool



“Bruising” on Apples

Scoring Guide for Diameter

- Injury:** > 15mm dia.
- Damage:** >21mm dia.
- Serious Damage:** > 28mm dia.



“Bruising” on Apples



- Scoring Guide for Depth:
- Injury:** > 3mm
 - Damage:** > 6 mm
 - Serious Damage:** > 9mm

“Transit Rubs” on Watermelons

- Damage:** 125 mm²
- Serious Damage:** 250 mm²

MUST BE THIS DARK OR DARKER

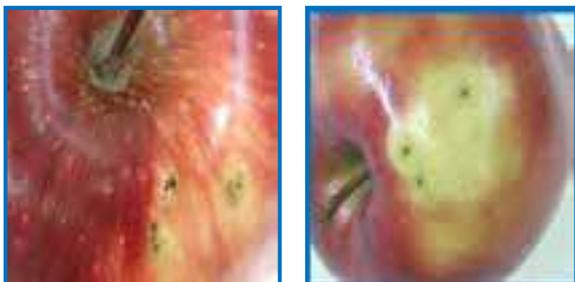


INSECT/PEST INJURY
PART 2

COMMODITIES WITH EDIBLE SKINS
Apples, Tomatoes, Plums, Pears, Cherries,
Apricots, Table grapes, Eggplants etc.

**PART 2: INSECT/PEST INJURY
COMMODITIES WITH EDIBLE SKINS**

APPLES Insect Stings (Quality)



APPLES - Worm hole



APPLES Leaf Roller (Q)

Injury: Free from leaf roller scars.
Damage: > 3 mm aggregate.
Serious Damage: > 6 mm aggregate.



APPLES Thrip Injury/Pansy Spot (Quality)



APPLES Scale and Scale Marks (Quality)



- Red Surface
Injury: > 2 marks.
Damage: > 5 marks.
- Yellow/Green Surface
Injury: > 1 mark.
Damage: > 3 marks.
- All Surfaces
Serious Damage: Scattered
over > 10% of surface.

**Tomatoes:
Cloudy Spot (Q)**



Damage: Aggregating > 9 mm .
Serious Damage: Aggregating > 16 mm.
Very Serious Damage: Aggregating > 25 mm.



Tomatoes: Other Insect Stings (Q)

Damage: Aggregating > 9 mm
 Serious Damage: Aggregating > 16 mm
 Very Serious Damage: Aggregating > 25 mm



Sweet Cherries: Insect Larvae or Holes (Q/C)

- Free-from defect.
- Score as serious damage.
- Condition factor if insects/larvae are alive.



Apricots: Worm Injury (Q/C)

All worm holes are scored as serious damage.

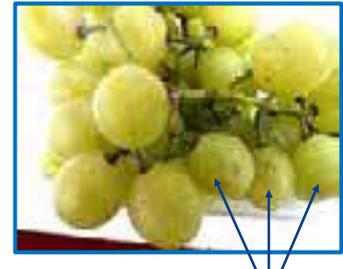
Same for plums and peaches.



Table Grapes: Insect Injury (Q)

Score when:

- Penetrates skin.
- Noticeable infestation.
- Residue materially detracts.



Eggplants: Insect Injury (Q/C)

Worms: Condition factor when alive.
 Quality factor when dead.

When "evidence" of feeding:
 Injury: Aggregates > 16 mm (1/2")
 Damage: Aggregates > 25 mm (1")
 Serious Damage: Aggregates > 50 mm (2") circle.



Aphids & other insects (based on a 10 - 12.5 cm or 4 - 5 inch dia. fruit)
 When Present:
 Serious Damage: 5 or more live or dead insects.

INSECT/PEST INJURY PART 3

COMMODITIES WITH INEDIBLE SKINS
 Avocados, Bananas, Cantaloupes, Citrus Fruits,
 Papaya, Pineapples, Plantains, Watermelons etc.

Avocados: Insect Injury (Q)

Scars caused by thrips, other insects, wind, limb rubs, scab, etc. are scored as follows:

When affected to a greater extent than a scar that is light brown, superficial, fairly smooth, and...

Class I: Aggregating 10% of the surface: Damage

Class II: Aggregating 25% of the surface: Serious damage

Class III: Aggregating 50% of the surface: Very serious damage



Pineapples: Insect Injury (Q/C)



Cantaloupes: Insect Injury (Q/C)



Oranges: Scale (Q)



TX: Damage
Aggregating > (16mm)
(on a 200 Size orange)

CA: Damage
Aggregating > (16 mm)
(outside stem button area)
OR
> 7 Lg/Med

FL: Damage
Aggregating > (16 mm)



Questions???????



SECTION IV.

POLISH APPLE SECTOR

Presentations in this section:

- Presentation of the Polish apple sector
- Effect of pre – and post – harvest on fruit quality
- Changes of quality parameters of fruit during storage and shelf life

THE POLISH APPLE SECTOR

By Ms. Marta Dziubiak, Ministry of Agriculture and Rural Development, Poland

Abstract

Ms. Marta Dziubiak from the Polish Ministry of Agriculture and Rural Development made a presentation on the Polish apple sector. Apple production has a long tradition in Poland and going back to the XVI century. Since the World War II the volume of the production growth dynamically and was more than 3 million tons in 2013. Poland also developed a stable scientific background to support the production. Poland is the third largest producer of apples after China and US and the first exporter in the world.

Poland grows several popular varieties of apples. However, traditional and well accepted varieties are the backbones of the production. Poland still grows apples for juice productions which is still takes almost 50 % of the total production. Most of the fresh apples are still sold on a traditional way in local markets and retail stores. However, the importance of supermarkets in the distribution chain is growing. The largest export markets for Polish apples are Russia, Belarus, Germany and Ukraine.

Poland participates in the EU School Fruit and Vegetative Scheme since 2009. This programme promotes the good eating habits amongst children. Thanks to this project above 970 000 Polish children receives apples in the school. Poland also participate other promotion and information actions such as “apples every day” in Russia and Ukraine, “Five portion of vegetables, fruit or juice” in Poland and Romania as well as in the new EU project “European two-coloured apples” organised in China and the United Arab Emirates.

THE POLISH APPLE SECTOR

Presentation by Ms. Marta Dziubiak, Ministry of Agriculture and Rural Development, Poland

Polish Apple Sector

Marta Dziubiak
Ministry of Agriculture
and Rural Development



**OECD Meeting of Heads of National Inspection Services,
Warsaw, Poland, 20 – 23 May 2014**



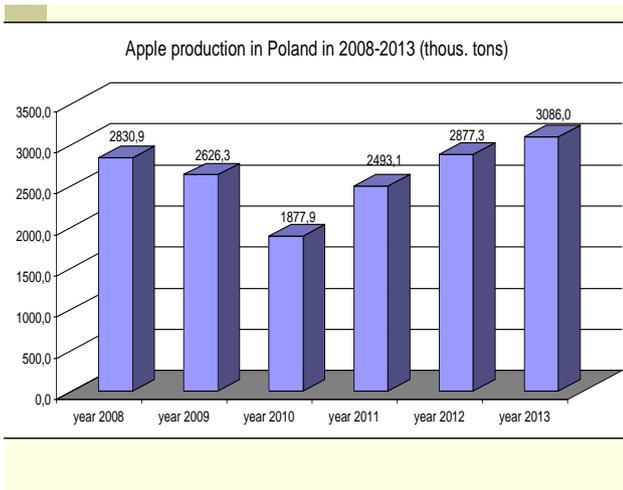
Cultivation of apple trees has a long tradition in Poland (from XVI century)

Apple production

before 2nd World War (1939)	300 thous. tons
in 1980s XX	1,4 mio tons
in 1990s XX	1,6 mio tons
2009 - 2013	2,6 mio tons

→ in 1951 in Skierniewice a scientific **Institute for Fruit Growing and Floriculture** was established, its founder and first director for 37 years was **prof. Szczepan Pieniążek**

→ development of national nursery production (Polish Nurserymen Association)

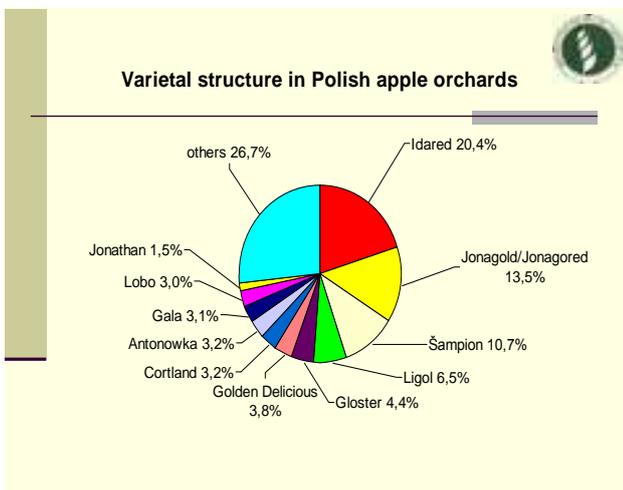




Area of cultivation and crops of apples in 2013

area of cultivation	190 thous. ha
production in Poland	3,1 mio tons
total EU production	10,7 mio tons
Polish apples - ca 30% of EU production	

Poland is **the 3rd** biggest world's producer country after China and US



Use of apples in Poland

48% of apples is intended for processing, mainly for apple juice concentrate (AJC)

average AJC production in 2008-2013 240 thous. tons

(in EU-15 only 27% of apples are intended for processing)

Distribution channels of fresh apples in Poland

local markets, retail selling	45%
supermarkets	37%
wholesale markets	15%
selling in farms	3%

Export of apples

Poland is the biggest world exporter of apples

Fresh apples account for 25% of Polish fruit export (including processed products)

Season	Volume (thous. tons)
2009/10	786,7
2010/11	443,2
2011/12	806,0
2012/13	1 217,1
2013/14*	1 150,0

* Prognosis of Institut of Agricultural Food and Economics

The biggest Importers of Polish apples in 2013

Country	Volume (thous. tons)	Value (mio EUR)
Russia	677,2	256,1
Bielarus	145,1	45,5
Germany	66,8	18,3
Ukraine	53,4	17,5

source: Polish Ministry of Finance

Poland participates in EU program School Fruit and Vegetables Scheme (SFS)



Aim of the programme is to encourage good eating habits in children.

EU supports free distribution of fruit and vegetables in schools.

Poland participates in SFS since 2009/2010 (5 years). Apples are the most popular fruit under SFS.

Above 970 thous. of Polish children aged 6-10 years participate in SFS.

Promotion and information actions under EU CAP

„Apples every day”

– 3 years campaign
2012 - 2014
in Russia and Ukraine



„5 portions of vegetables, fruit or juice”
– 3 years campaign 2011 - 2013
in Poland and Romania

Possibly new programme „European two-coloured apples”
– China, United Arab Emirates

Thank you for your attention

EFFECT OF PRE – AND POST – HARVEST FACTORS ON FRUIT QUALITY

By Mr. Krzysztof Rutkowski, Research Institute of Horticulture, Skierniewice, Poland

Abstract

Mr. Krzysztof Rutkowski from the Research Institute of Horticulture, Skierniewice, made a presentation on different pre- and post- harvest factors on fruit quality. Fruits, even after harvest, are living organism, which has to respire and needs oxygen and nutrients for prolonging its functions. In the components of food quality two groups may be distinguished: attributes which affect sensory characteristics of food (typically ‘visual’ and related to taste) and ‘internal’ or ‘hidden’ attributes which affects nutritional and/or the health value of the food. The attributes are measured with different instruments and sensors, or judged by experts/panellists during sensory evaluation. Quality is interpreted differently by the producers, handlers, consumers, or even individual groups of consumers. The claim and requirements of quality attributes by different groups, especially by the producer and consumer needs to be harmonised in order to satisfy the different interests. There are several fruit tasting experiments in order to collect data on consumer preferences and to provide this information to breeders and growers.

There are several international standards for fresh fruits and vegetables such as the UNECE or Codex standards. These standards are recommendations. However, in some regions, e.g. in the European Union, the application of standards are compulsory. The OECD also plays key role with the establishment of inspection methods and the development of interpretative brochures.

The quality of fruits and vegetables depends on many factors such as the genotypes, ripeness, climate conditions, agrotechnical factors, post-harvest treatments, storage conditions, etc. The presentation was focused on ‘visual’ attributes such as size, colour and external defects. The fruit size can be measures by weight, by diameters or by volume. Usually, in case of apples fruit size is determined by weight or diameter. However, there is not a simple correlation between these two parameters due to different specific gravity of fruits various cultivars. The correlation tables should be created for specific cultivars for simplified grading of fruits. The colour of apples is described by blush (type, colour and surface) and background skin colour. The fruit injuries (external defects) can be caused by climatic factors such as frost and hail damages, sunburn or fruit cracking as well as mechanical factors, such as scratching, corking etc.

EFFECT OF PRE – AND POST – HARVEST FACTORS ON FRUIT QUALITY

Presentation by Mr. Krzysztof Rutkowski, Research Institute of Horticulture, Skierniewice, Poland



Effect of pre- and post-harvest factors on fruit quality

Krzysztof P. Rutkowski & Witold Płocharski

Research Institute of Horticulture
Department of Fruit Storage and Processing
 Skierniewice, Poland



16th OECD Meeting of the Heads of National Inspection Services
20 - 23 May 2014, Warsaw

Pro memoria

Below is a fruit cell with a nucleus, which is like a beating heart.

To preserve F&V quality we must realize that we deal with a living organism, which has to respire, and therefore needs some oxygen and nutrients for prolonging its functions.



B. Dyki, Research Institute of Horticulture

Płocharski and Rutkowski, Lublin 2010

Topics to be discussed

1. Quality of fruit and vegetables - definitions
2. Quality F&V – consumer tests
3. Quality F&V – regulations
4. Quality F&V – pre- and post-harvest factors

Topics to be discussed

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Quality - definitions

According to A. Kader (UC Davies): Quality, the degree of excellence or superiority, is a combination of attributes, properties, or characteristics that give each commodity value, in terms of its intended use.

The relative importance given to a specific quality attribute varies in accordance with the commodity concerned and with the individual (producer, consumer, and handler) or market concerned with quality assessment.

Source: A.A. Kader, R.S. Rolle, 2004: The role of post-harvest management in assuring the quality and safety of horticultural produce. Food and Agriculture Organisation of the United Nations, Rome. FAO Agricultural Services Bulletin 152.

There are at least 5 more definitions of quality (e.g. Kramer i Twigg (1966); Abbott (1999))

Main & individual components of food quality

Appearance	Size; Shape; Colour; Gloss; Freedom from defects and decay.
Texture	Firmness; Crispness; Juiciness; Mealiness; Toughness; Fibrousness.
Flavour	Sweet taste; Sour taste; Bitterness and astringency; Aroma; Off flavour/off aroma.
Nutritional/health value	Minerals; Vitamins; Carbohydrates; Proteins; Antioxidants ; Fibre.
Safety	Contaminants (residues of pesticides, heavy metals); Mycotoxins; Microbiological contamination; Natural toxic substances; Allergens .

Quality - Summary

In the components of food quality two groups may be distinguished:

1. Attributes which affect sensory characteristics of food;
2. „Internal” or „hidden” attributes which affect nutritional and/or health value of food.

These groups concern nature of the product.

The presence of antioxidant compounds can be considered as an internal quality parameter for fruit and vegetables.

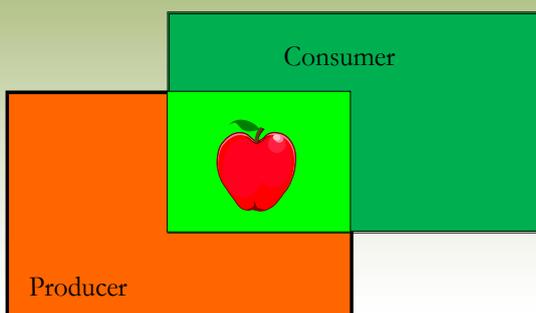
Quality may be judged different way by producers, handlers, nutritionists and consumers, or even individual groups of consumers.

Perception of quality attributes – most important factors

- To producers: high yields, resistance to diseases, good appearance, ease of harvest, good storeability, and the ability to withstand long-distance shipping to markets.
- To wholesale and retail marketers: appearance, firmness, and shelf-life.
- Nutritionists judge food by their nutritional and health properties.
- Consumers: judge the quality of fresh fruits and vegetables on the basis of appearance (including ‘freshness’) at the time of initial purchase. Subsequent purchases depend upon consumer’s satisfaction in terms of flavour (eating) quality of the edible part of produce.

Modified opinion of A.A. Kader, R.S. Rolle. 2004: The role of post-harvest management in assuring the quality and safety of horticultural produce. Food and Agriculture Organisation of the United Nations, Rome. FAO Agricultural Services Bulletin 152.

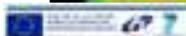
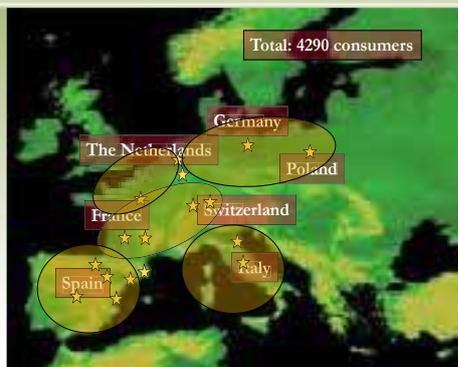
Quality



Topics to be discussed

1. Quality of fruit and vegetables - definitions
2. Quality F&V – consumer tests
3. Quality F&V – regulations
4. Quality F&V – pre- and post-harvest factors

Consumer tests of apples - localisation



Isafruit Project – WP Leader - Joan Bonany, ES

Basic parameters of the tested cultivars

Table 1. Ranges of the basic parameters of the tested apple cultivars

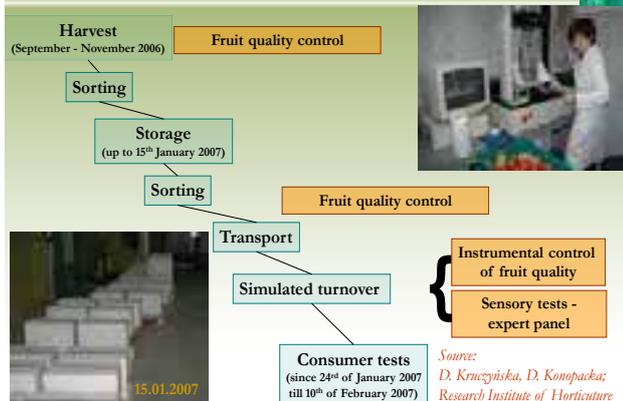
Content	Soluble solids %	Titrateable acid. %	Dry weight %	SS/TA ratio
Average	14.4	0.46	16.6	34
Minimum	11.7 Jonagold	0.23 Fuji	13.7 Jonagold	21 Kanzi
Maximum	16.5 Ariane	0.78 Ariane	19.3 Ariane	62 Fuji

Table 2. Ranges of the phenolic compounds of the tested apple cultivars, affecting astringency of apples (mg/kg)

Content	Epicatechine	Oligo-procyanidins	Chlorogenic acid	Quercetin glucosides	Sum
Average	104.8	98.8	144.7	113.5	503.0
Minimum	51.1 Kanzi	50.2 Kanzi	49.1 Kanzi	78.4 Jonagold	260.0 Kanzi
Maximum	158.4 Gold Ch.	177.0 Ariane	296.7 Ariane	166.3 Gold Ch.	817.4 Ariane

Source: Data by the Research Institute of Horticulture, Skierniewice

Experiment design



Source: D. Kruczyńska, D. Konopacka; Research Institute of Horticulture

Standard cultivars



Source: D. Kruczyńska, D. Konopacka; Research Institute of Horticulture, Skierniewice

Consumer preferences for apples

Standard cvs

- Golden Delicious
- Jonagold
- Fuji

New cvs

- Pink Lady® Cripps Pink
- Ariane
- Wellant® CPRO 47
- Junami® Milwa
- Kanzi® Nicoter
- Rubens® Civni
- Gold Chief® Goldpink
- Ligol

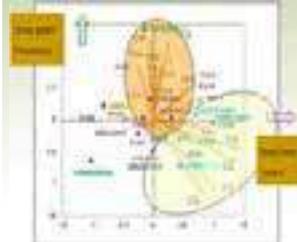
Groups of apples	F	D	I	NL	PL	E	CH
C1 Sweet-sour – like them all (21)	15	5	17	20	36	32	19
C2 Sweet-sour – differentiate (38)	40	32	44	44	29	35	39
C3 Sour and firm – critical opinion (10)	14	23	10	9	5	5	7
C4 Sour and firm – differentiate (22)	17	35	18	22	19	21	30
C5 Sweetly-sour – critical (3)	7	2	4	1	2	1	2
C6 Sweet – do not accept sour (6)	7	3	7	4	9	6	3

Source: D. Kruczyńska, D. Konopacka; Research Institute of Horticulture, Skierniewice

Preferences for apple cultivars in Poland

Consumer tests

A map of European consumer preferences toward new and standard cultivars.



Principal Components Analyses

Cultivar	Flavour (1-9)	Soluble solids/ Acidity
Goldchief	7.4	39.1
Rubens	7.2	33.3
Fuji	7.1	61.3
Golden Delicious	7.0	41.1
Pink Lady	6.8	30.4
Junami	6.8	29.8
Ligol	6.5	27.9
Kanzi	6.5	21.1
Wellant	6.4	32.8
Jonagold	6.1	29.0
Ariane	5.8	20.4

Source: D. Kruczyńska, D. Konopacka; Research Institute of Horticulture, Skierniewice

The best and the worst apple cultivars at the time of testing acc. to Polish consumers

The best ones		The worst ones	
Goldchief	Rubens @ Civni	Jonagold	Ariane

Source: D. Kruczyńska, D. Konopacka; Research Institute of Horticulture, Skierniewice

Optimal & highly acceptable ranges of firmness considering sensory texture of apples

Cultivar/storage atmosphere	Optimal firmness [N]	Highly acceptable range of firmness * [N]
'Elstar' N	50.6	42.2 – 58.3
	50.9	42.8 – 59.6
	48.5	38.8 – 57.4
'Jonagold' N	51.8	46.9 – 56.8
	57.5	48.0 – 68.8
	59.8	<50 – 63.8
'Gloster' N	56.5	50.1 – 63.7
	62.0	52.6 – 74.3
	60.0	50.0 – 72.3

* Confidence interval $\alpha = 0,05$

D. Konopacka, W.J. Plocharski / Postharvest Biology and Technology 32 (2004) 205–211

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Quality standards

- UNECE Standards FFV – concerning the marketing and commercial quality control
 - Apples FFV – 50,
 - Citrus fruit FFV – 14,
 - Kiwifruit FFV – 46,
 - Peaches and nectarines FFV – 26,
 - Pears FFV – 51,
 - Strawberries FFV – 35,
 - Table grapes FFV-19.

<http://www.unece.org/trade/agr/standard/fresh/ffv-standardse.html>

Quality standards

- Regulations – Commission Implementing Regulation (EU) No 543/2011;
- Codex Alimentarius
 - Table grapes - CODEX STAN 255-2007.
- OECD (Organisation for Economic Co-operation and Development) – brochures

Quality standards

- **Regulations – Commission Implementing Regulation (EU) No 543/2011;**
- Codex Alimentarius
 - Table grapes - CODEX STAN 255-2007.
- OECD (Organisation for Economic Co-operation and Development) – brochures

Regulations (EU) No 543/2011

- Apples
- Citrus fruit
- Kiwifruit
- Lettuces, curled leaved and broad-leaved endives
- Peaches and nectarines
- Pears
- Strawberries
- Sweet peppers
- Table grapes
- Tomatoes

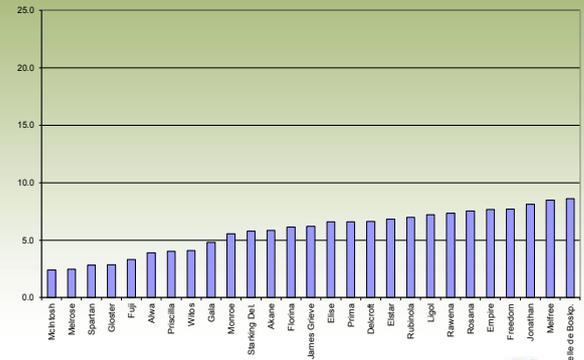
Topics to be discussed

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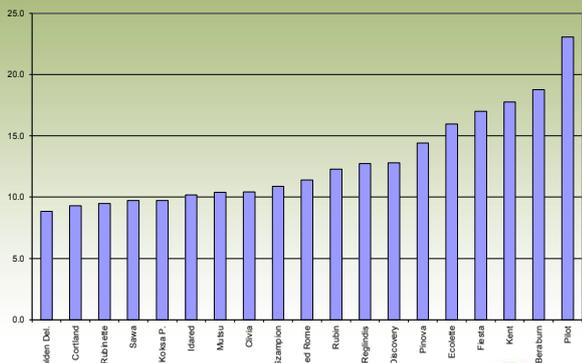
Dependence of quality on various factors

- Genotype (*the most important factor*);
- Ripeness degree;
- Climate;
- Treatment after harvest;
- Agrotechnical factors;
- Method of picking;
- Fruit location within the tree;
- Interaction of some of the above mentioned factors.

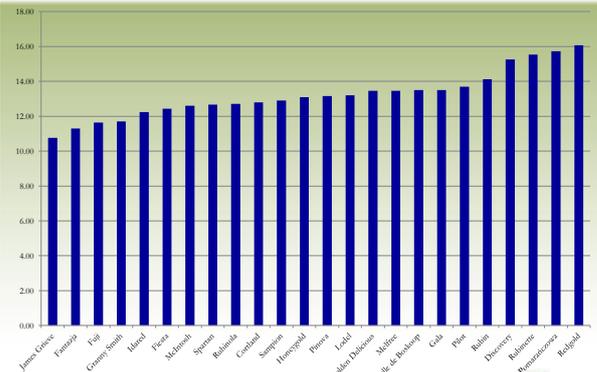
Content of ascorbic acid in selected apple cultivars



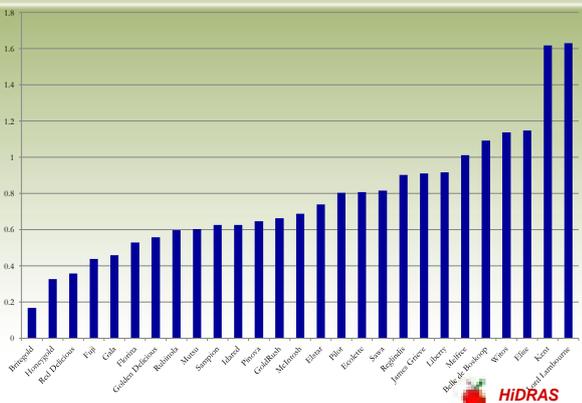
Content of ascorbic acid in selected apple cultivars



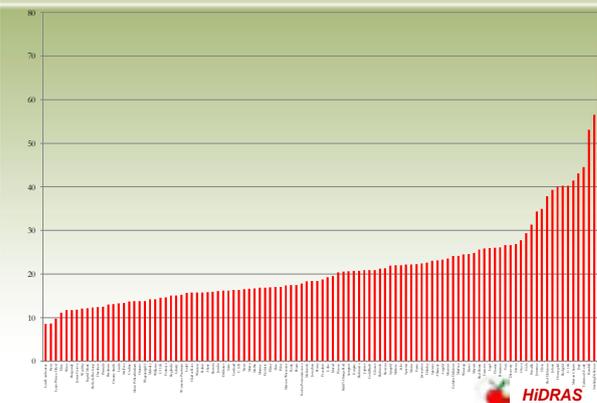
Content of soluble solids in selected apple cultivars



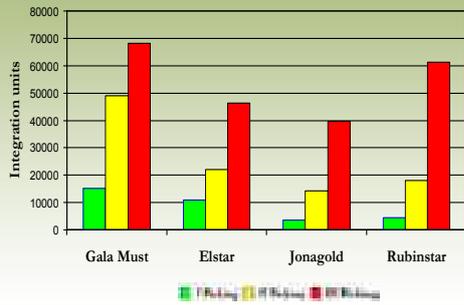
Titrateable acidity in selected apple cultivars



Soluble solids to titrateable acidity proportion in the investigated apple cultivars

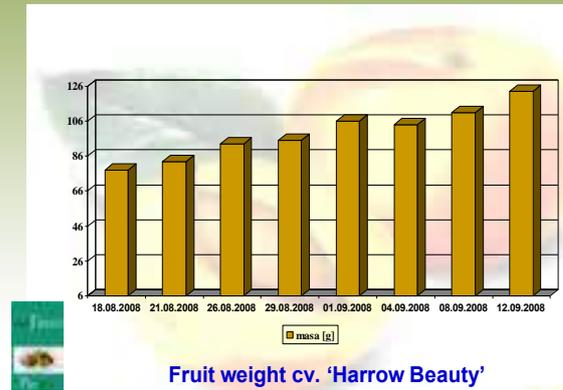


Apples aroma (production of aromatic compounds)



Source: A. Miszczyk, Research Institute of Horticulture, Skierniewice

Peaches and nectarines



Fruit weight cv. 'Harrow Beauty'

Peaches and nectarines



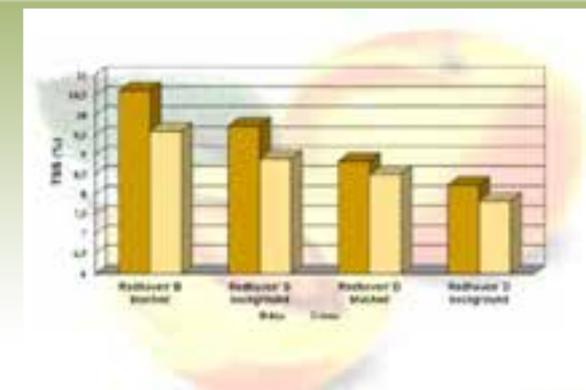
Fruit firmness – 'Harrow Beauty'

Peaches and nectarines

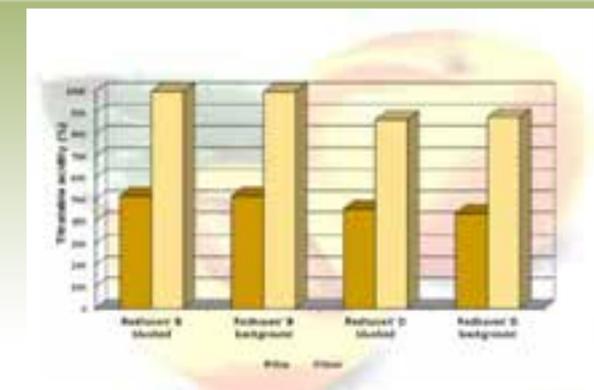


TA – 'Harrow Beauty'

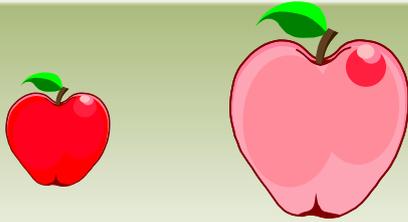
Peaches and nectarines



Peaches and nectarines



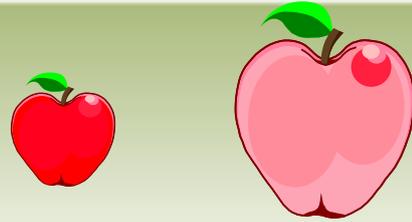
Fruit size



Fruit size:

length; width; height; diameter;
weight
volume

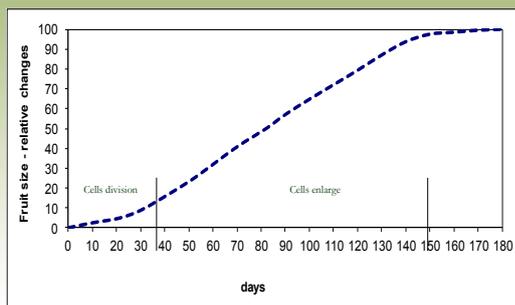
Fruit size



- Regulations – Commission Implementing Regulation (EU) No 543/2011
- Size is determined either by the **maximum diameter** of the equatorial section or by **weight**

cultivars vary in specific gravity = fruit weight / volume !

Fruit size



Fruit size

- Genotype
- Cell number and size
- Fruit location within the tree and bud type
- Yield
 - Number of fruits per tree
 - Orchard density
- Irrigation
- Rootstock

Fruit size



Fruit colour

- Blush
 - type
 - colour
 - surface
- Background skin colour

Fruit colour



Fruit colour



Fruit injuries

- Frost damages



- Hail damages



- Sun injuries



- Fruit cracking



Thank you
for your attention

E-mail:
Krzysztof.Rutkowski@inhort.pl

CHANGES OF QUALITY PARAMETERS OF FRUIT DURING STORAGE AND SHELF LIFE

By Mr. Krzysztof Rutkowski, Research Institute of Horticulture, Skierniewice, Poland

Abstract

Mr. Krzysztof Rutkowski from the Research Institute of Horticulture, Skierniewice, made a presentation on the changes of quality parameters of fruit during storage and shelf life.

The fruits and vegetables based on their respiratory and ethylene production patterns after harvest can be classified into two groups: climacteric and nonclimacteric. Climacteric fruits and vegetables exhibit a large increase in carbon dioxide and ethylene production rates coincident with ripening, while the nonclimacteric exhibit no change in production rates both CO₂ and ethylene. These differences are very important in retention of their postharvest quality and storability. For climacteric fruits it is essential to pick them at optimum harvest date, before the ethylene production is arise.

The storage conditions (such as temperature, relative humidity and the composition of the storage atmosphere) are also important factors in the maintenance the quality of the fruits. The temperature has great influence on the respiration activities. Storing the fruits in a cold environment can dramatically extend their keeping time. The right relative humidity plays key role in the maintenance of the freshness of the fruit and weight loss caused by transpiration. The storage atmosphere (oxygen and carbon dioxide concentration) and ethylene concentration significantly affected the ripening process. Proper storage conditions reduce the risk of different storage disorders, e.g. low temperature damages, soft scald, superficial scald, senescent breakdown, carbon dioxide and low oxygen injury, etc.

The fruit quality can be measured with different tools. The firmness can be checked with handheld or fixed penetrometers. The total soluble solids content, which has strong correlation with the sugar content, can be measured with refractometers. The titratable acidity is measured in the laboratory using titrators or burette with 0.1 N solution of NaOH. This is also very important to measure the sugar/acid ratio, which is a good marker of ripeness and taste of fruits. Measuring the aroma compounds are more complex methods and need chromatographic or other sensory analysis.

The newest storing technologies can control the ethylene's hormonal effects on the fruit ripening. 1-MCP is a molecule which can binds to ethylene receptors in cell membranes. This can slow down the natural ripening process. There are also innovative storage technologies available such as: ILOS Plus, ILOS, Swinglos, DCA, DCS, ACR to maintain the quality of stored fruits.

Their use in practice must be preceded by full knowledge of principles of their use and justified by the aim, the economic factors and profitability.

CHANGES OF QUALITY PARAMETERS OF FRUIT DURING STORAGE AND SHELF LIFE

Presentation by Mr. Krzysztof Rutkowski, Research Institute of Horticulture, Skierniewice, Poland



Changes of quality parameters of fruit during storage and shelf life

Krzysztof P. Rutkowski & Witold Płocharski

Research Institute of Horticulture
Department of Fruit Storage and Processing
Skierniewice, Poland



16th OECD Meeting of the Heads of National Inspection Services
20 - 23 May 2014, Warsaw

Topics to be discussed

1. Postharvest behaviour of F&V
2. Storage conditions
3. Quality measurement
4. Changes of fruit firmness
5. Changes of titratable acidity
6. Conclusions

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Classification of some fruits according to respiratory behaviour during ripening

CLIMACTERIC

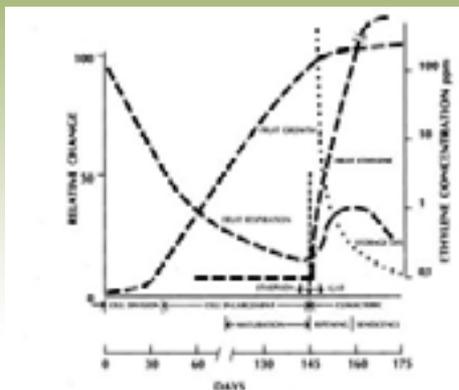
apple
apricot
avocado
banana
blueberry
kiwifruit

NONCLIMACTERIC

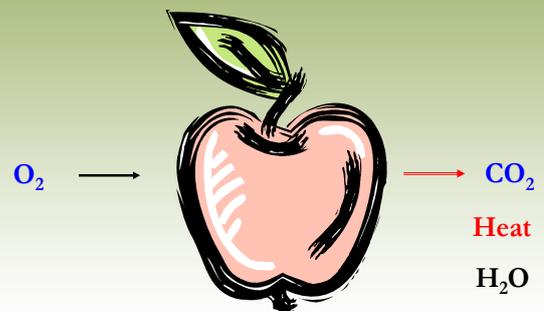
mango
nectarine
peach
pear
plum
tomato

blackberry
lime
cherry
orange
cucumber
pepper
pineapple
raspberry
strawberry

Climacteric fruits...



After harvest.....



Topics to be discussed

1. Postharvest behaviour of F&V
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Storage conditions

- Temperature
- Relative humidity
- Composition of the storage atmosphere
 - Air – normal atmosphere
 - Modified atmosphere
 - Controlled atmosphere
 - standard (5% CO₂ + 3% O₂ + N₂)
 - ULO (1,5% CO₂ + 1,5% O₂ + N₂)
 - DCA (<1% CO₂ + 0,4-0,7% O₂ + N₂)
 - ILOS plus
 - SWINGLOS
 - DCS
 - ACR

Temperature...

Respiration rates of fruits expressed as rate of carbon dioxide production (mg CO₂ * kg⁻¹ * h⁻¹)

Temperature	0°C	4-5°C	10°C	15-16°C	20-21°C	25-27°C
Peaches	5	7.5	16	37.5	80.5	101.5
Sweet cherries	4.5	12	-	35	30	-
Plums	2.5	6.5	9	12	22	49.5
Apples - summer	4.5	8	17	24.5	30.5	-
Apples - fall	3	6	8.5	14.5	20	-

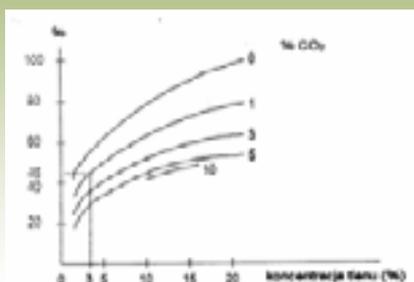
mg CO₂ * kg⁻¹ * h⁻¹ → x 61.2 → kcal * 1000 kg⁻¹ * 24 h⁻¹

Harkerburg et al. 1986

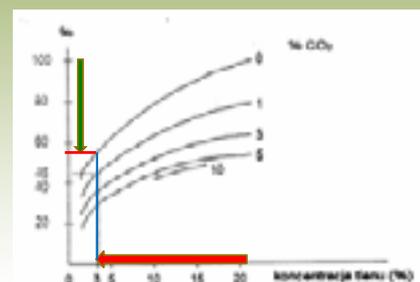
Relative humidity...



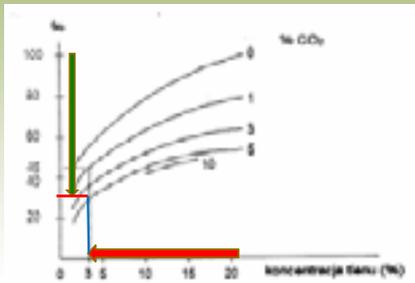
Storage atmosphere...



Storage atmosphere...



Storage atmosphere...



Control of superficial scald

- **DPA** – treatment after harvest
- **HLO** 0.7 % O₂ - 0.7 % CO₂
- **Hypobaric** storage
- **N₂**
- **Modern storage technology**



Control of superficial scald

- **DPA** — treatment after harvest
- **HLO** 0.7 % O₂ - 0.7 % CO₂
- **Hypobaric** storage
- **N₂**
- **Modern storage technology**



Modern technologies of storage

- **ILOS** – low oxygen stress at the beginning of storage
- **ILOS Plus**
- **DCS**
- **Swinglos**
- **ACR**
- **DCA** – Dynamic CA (HarvestWatch – R. Prange & Satlantic Inc.)
- **1-methylcyclopropene (1-MCP)**

Topics to be discussed

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Firmness measurement



Firmness measurement



Automated firmness meter EPT 1R

Firmness measurement



Texture pressess at the Research Institute of Horticulture

Total soluble solids content



Titrateable acidity



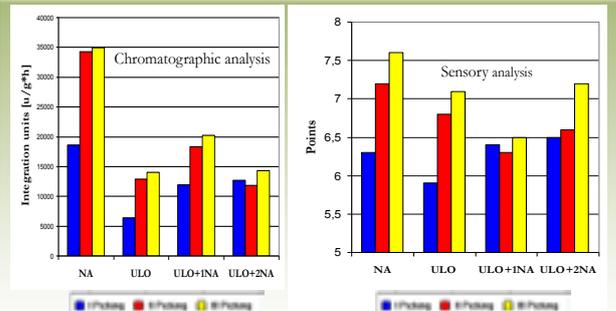
Changes of apples composition during storage

During apples storage there is some decrease of sugars content, which are utilised in respiration process. However, due to starch and other polysaccharides hydrolysis, changes in soluble solids are not large.

The major changes in chemical composition concern content of acids and texture (due to pectic substances changes).

There are no major changes in polyphenolics content and antioxidative properties of stored fruit.

Apples aroma (Production of aromatic compounds)



Source: A. Miszczak, InHort

Topics to be discussed

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Fruit firmness

Changes during ripening and storage

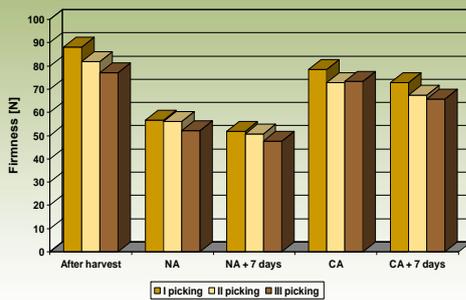
Apple firmness during picking depends on: cultivar, ripeness degree, minerals content, fruit size.

Too excessive softening of apples during storage has been considered a negative feature associated with quality deterioration.

In the case of pears, peaches and nectarines softening during storage has been positively interpreted by the consumers.

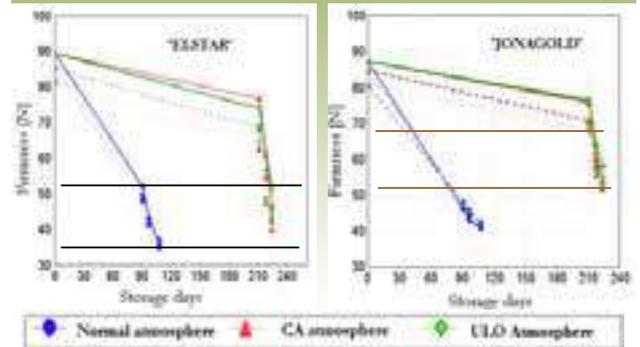
Crunchiness of some products may also be viewed positively (e.g. in the case of apples or watermelon).

Apples firmness changes during ripening and storage



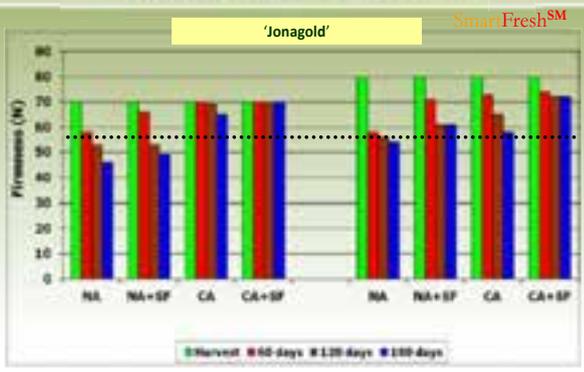
'Elstar' cv.

Changes of apple firmness during storage and shelveife: Elstar and Jonagold



D. Kozpacka (2000) Ph.D. Thesis

1-MCP postharvest treatment

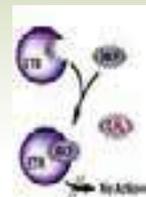
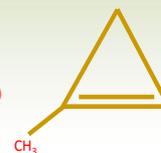


leBert Research Institute of Horticulture, Skierniewice, Poland

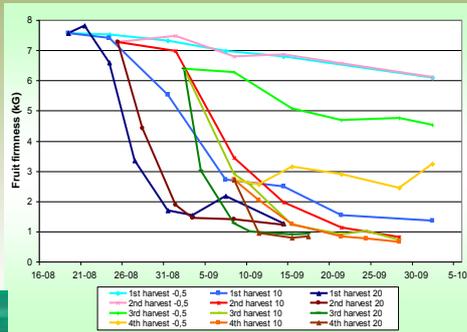
New technology in fruit, vegetables and ornamental plants storage

- Efficiency due to 1-MCP influence on metabolic processes linked to production of ethylene;
- 1-MCP binds to ethylene receptors in cell membranes;
- Typically 1 application after harvest.

1-MCP
(1-methylcyclopropene)



Peaches and nectarines



The influence of harvest date and storage temperature on fruit firmness

Summary on fruit firmness

To limit unfavourable changes of apples firmness during storage it is necessary:

1. To pick fruit at optimal time.
2. To assure optimal storage conditions (temperature, relative humidity, proper composition of gas atmosphere).
3. For some commodities removal of ethylene has been recommended.

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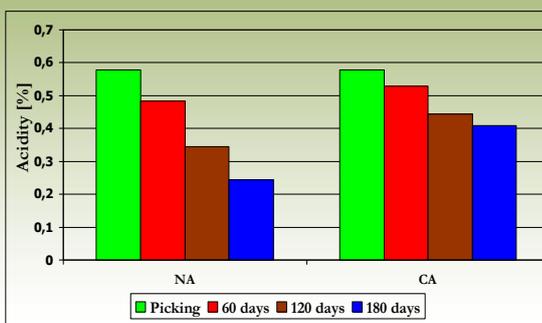
Titratable acidity of fruit during storage

Titratable acidity of fruit depends primarily on cultivar characteristics and fruit ripeness. There is some effect of the growing season, fruit size, rootstock, fertilisation and other factors.

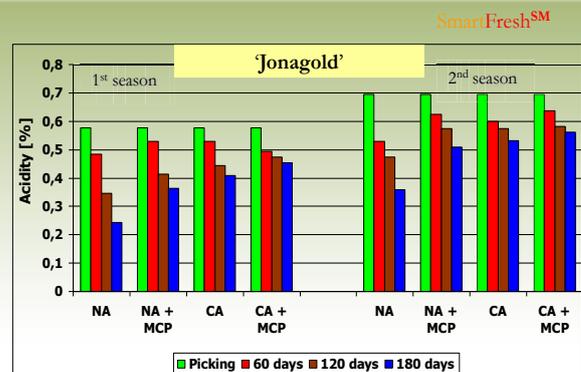
Acidity quite rapidly decreases during fruit ripening and storage.

Losses of acidity may be limited by storage at proper conditions, particularly at CA atmosphere.

Changes of 'Jonagold' apples acidity during storage



Postharvest treatment of apples



Topics to be discussed

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4. Changes of fruit firmness
5. Changes of titratable acidity
6. **Conclusions**

Conclusions...

- Development and availability of modern technologies limits unfavourable changes in fruit and vegetable quality and storage losses
- Their use in practice must be preceded by full knowledge of principles of their use and justified by:
 - **AIM**
 - **ECONOMICAL FACTORS**
 - **PROFITABILITY**



People

Decision Support System

Pawel Konopacki – Research Institute of Horticulture, Skierniewice



People is a prototype Decision Support System created with the objective to:

simulate quality changes of apples and peaches along different supply chains to meet the demands of consumers and consequently stimulate the increase of fresh fruit consumption.

Pawel Konopacki – Research Institute of Horticulture, Skierniewice



People contains models for several apple and peach quality indices.

Depending on selected fruit species (apple or peach), cultivar and growth location user may choose one (or several) of available models for:

- firmness
- acidity
- soluble solids content
- skin colour (L^* , a^* , b^* and hue attribute)

Pawel Konopacki – Research Institute of Horticulture, Skierniewice



Paweł Konopacki – Research Institute of Horticulture, Skierniewice

Thank you
for your attention

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SECTION V.

OECD GUIDELINES ON QUALITY INSPECTION

Presentation in this section:

- Draft OECD Guidelines on Quality Inspection

DRAFT OECD GUIDELINES ON QUALITY INSPECTION [TAD/CA/FVS/HS(2014)]

By Ms. Ulrike Bickelmann, Bundesanstalt für Landwirtschaft und Ernährung (BLE), Germany

Abstract:

Ms. Ulrike Bickelmann from BLE, Germany introduced the draft text of the guidelines as well as photos to illustrate the implementation of quality inspection. The work on the revision of inspection methods started in 2007 with the revision of the sampling plan. The revised inspection methods were adopted in 2013 during the Plenary Meeting of the Scheme. It was also decided to develop guidelines on the implementation of the inspection. The draft text and photos were presented to the Heads of the National Inspection Services for feedback and their comments were incorporated into the final draft guidelines to be presented to the Plenary Meeting for approval in December 2014.

Delegates had a detailed discussion on the draft text and the photos. They thanked Germany for the excellent work. Delegates feel that these guidelines will be a great help to inspection services and will enhance international harmonisation. Several comments were made, including, a need for making it clear that this is a User Guide, the prime aim of which is to assist in a better understanding of inspection rules. The guidelines should not go beyond the Rules of the Scheme. Delegates also felt that the Guidelines should be user friendly and easy to use. With regard to technical comments, it was mentioned that the random sampling procedure should be presented and promoted in the guidelines.

DRAFT OECD GUIDELINES ON QUALITY INSPECTION

*Presentation by Ms. Ulrike Bickelmann, Bundesanstalt für Landwirtschaft und Ernährung (BLE),
Germany*

Photos to illustrate the
OECD DRAFT EXPLANATORY BROCHURE ON
INSPECTION OF FRUIT AND VEGETABLES
TAD/CA/FVS/HS/WD(2014)1

Example B1: Sampling of the bulk sample
– lot presented unloaded
– produce presented in packages ≤ 25 kg



Photo B1.1

Lot presented for inspection before loading or after unloading.

Example B1



Photo B1.2

Lot consisting of 20 pallets.

Example B1



Photo B1.3

Inspector selecting the packages to be presented as primary samples by the trader or his/her representative.

Example B1



Photo B1.4

5 packages (primary samples) are selected (marked with a red paper) from different points of the 20 pallets. In case of non-conformities another 10 primary samples must be taken.

Example B1

Photo B1.5

Sampling operation using a bridge ladder.



Photo B1.6
Sampling operation using a rolling table to bring the primary samples to the inspection table.

Photo B1.7
Bulk sample consisting of 5 primary samples arriving at the inspection table.

Photos to illustrate the
**OECD DRAFT EXPLANATORY BROCHURE ON
 INSPECTION OF FRUIT AND VEGETABLES**
TAD/CA/FVS/HS/WD(2014)1

Example B3: Sampling of the bulk sample
 – lot presented loaded on the truck
 – produce presented in packages



Photo B3.1
 Truck arriving at the place of inspection.

Example B3

Example B3



Photo B3.2
 Truck arriving at the entrance of the place of inspection.



Photo B3.3
 Truck driver opening the truck.

Example B3

Example B3



Photo B3.4
 Open truck



Photo B3.5
 Measuring the temperature of the arriving lot.



Photo B3.6
Truck driver unloading the lot.



Photo B3.7
At least 3 pallets must be unloaded.



Photo B3.8
5 packages (primary samples) making the bulk sample of a lot consisting of not more than 100 packages are selected (marked with a yellow paper) from different points of the 3 pallets.



Photo B3.9
Sampling operation using a bridge ladder and a rolling table to bring the sample to the inspection table.



Photo B3.10
Sampling operation using a bridge ladder and a rolling table to bring the sample to the inspection table.



Photo B3.11
Sampling operation using a bridge ladder and a rolling table to bring the sample to the inspection table.



Photo B3.12

Bulk sample consisting of 5 primary samples arriving at the inspection table.

Photos to illustrate the
OECD DRAFT EXPLANATORY BROCHURE ON
INSPECTION OF FRUIT AND VEGETABLES
TAD/CA/FVS/HS/WD(2014)1

*Example S4: Sampling of the secondary sample
– produce presented in sales packages
in the package ≤ 25 kg*



Photo S4.1

Bulk sample is consisting of 5 primary samples – table grapes presented in sales packages in the package.

Example S4

Example S4



Photo S4.2
After opening primary sample no. 1, the SO₂-pad must be removed.



Photo S4.3
Primary sample no. 1 contains 10 sales packages each with a net weight of 500 g.

Example S4

Example S4



Photo S4.4
A secondary sample consisting of 5 sales packages is taken from primary sample no. 1. It is recommended to take all secondary samples from one side of the package.



Photo S4.5
The composite sample of the 5 primary samples, i.e. 5 x 5 = 25 sales packages.

Photos to illustrate the
**OECD DRAFT EXPLANATORY BROCHURE ON
 INSPECTION OF FRUIT AND VEGETABLES**
TAD/CA/FVS/RD(2012)8

Part 5

Example 5: Assessment of tomatoes on trusses in a package



The obligatory indications are present.

Photo 5/5
 Each primary sample is checked for correct labelling. Labelling is correct.

Example 5

2



Photo 5/6
 As tomatoes are sensitive to chilling injury, the fruits of the bulk sample are checked for their temperature when arriving in a transport vehicle at the place of inspection or when coming directly from the storage room. The temperature at inspection time is ok.

3



Photo 5/7 a+b
 Primary sample #1 is checked for overall appearance in the a) top and b) bottom layer.

Example 5

4



Photo 5/8
 From each primary sample a secondary sample of 3 kg = 6 trusses is taken at random.

Example 5

5



Photo 5/9
 Primary sample #1 is checked for defects: crack (green circle).

Example 5

6



Photo 5/10 a+b
Secondary sample #1 is checked for defects: crack (green circle), fruit deviating from general colour 11-9 of OECD colour gauge (yellow circle).

Example 5

7

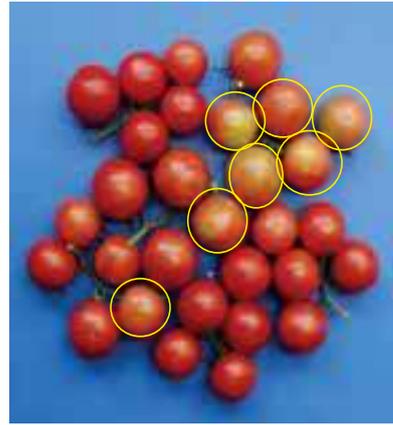


Photo 5/12 a+b
Secondary sample #2 is checked for defects: fruit deviating from general colour 11-9 of OECD colour gauge (yellow circle).

Example 5

8

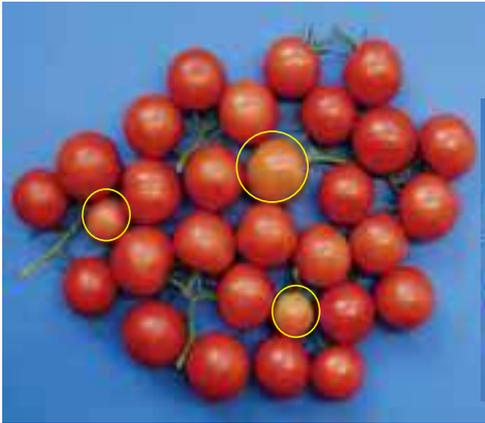


Photo 5/14
Secondary sample #3 is checked for defects: fruit deviating from general colour 10-8 of OECD colour gauge (yellow circle).

Example 5

9

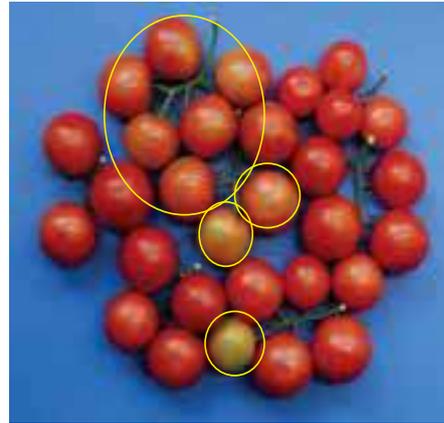


Photo 5/16
Secondary sample #4 is checked for defects: fruit deviating from general colour 10-8 of OECD colour gauge (yellow circle).

Example 5

10

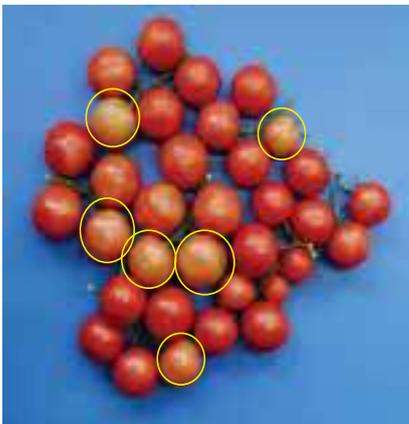


Photo 5/18
Secondary sample #5 is checked for external defects: fruit deviating from general colour 10-8 of OECD colour gauge (yellow circle).

Example 5

11



Photo 5/20
Secondary sample #6 is checked for external defects: fruit deviating from general colour 10-8 of OECD colour gauge (yellow circle).

Example 5

12



Primary samples	Number of fruit	Defects found	
		Splits, cracks	Not within 3 consecutive colours
1	30	2	2
2	30	-	7
3	30	-	3
4	30	-	9
5	30	-	6
6	30	-	1
7	30	-	2
Total	210	2	30

Photo 5/22
Secondary sample #7 is checked for external defects: fruit deviating from general colour 10-8 of OECD colour gauge (yellow circle).

Example 5

13

Photo 5/23
Inspection sheet:
The fruit show a lack of uniformity in colouring and this is exceeding the tolerance for Class I. Thus, the lot is not in conformity.

Example 5

14

FINAL DISCUSSION AND CONCLUSIONS OF THE MEETING

The OECD Secretariat summarised the outcome of the Meeting. The following was agreed:

Traceability:

Traceability is very important in both export and import.

Developing a traceability system is expensive.

Traceability helps to build confidence, consumer protection and facilitates trade.

Ideally it would be better to develop a traceability system that complies with food safety regulations and quality standards.

Traceability in the internal market is relatively easy. However at export stage, when products are repackaged, resorted or re-graded, it is difficult to keep traceability. In this case, it is the responsibility of the trader/packer to maintain the correct traceability documentation from the exporting country and therefore maintain traceability. At import stage the importer should request the correct documentation from the exporter in order to ensure traceability.

Currently the countries operate several different traceability systems. Several countries apply very strict measurements, e.g. if there is no traceability documentation, the product is destroyed. This is possible in those countries where the inspection system is fully integrated. In other countries, where the inspection is less integrated, it is difficult to introduce strict measurements. The biggest issue is the lack of communication and coordination between the relevant authorities.

The conclusion is the better labelling where all necessary information such as the details of the producer/packer/traders is properly mentioned as well as the lot number.

Proposal of the Heads of National Inspection Services to the 2014 Plenary Meeting

The role of the OECD in traceability systems should be:

- a) the coordination of developing the labels;**
- b) To develop a “Procedural Approval” outlining the key steps (checklist) for the validation of the label and documentation which the importer and exporter can use to ensure traceability.**

Interpretation of standards - Tolerances:

Implementation of tolerances should be separated by exporting countries and importing countries.

In general, for an exporting country the tolerances on decay should be “zero”.

Tolerances should be viewed in terms of progressive defects and non-progressive defects.

For importing countries, currently the tolerances for decay vary from 0 to 3 %. This should be harmonised.

Proposal: The Heads of National Inspection Services proposes to the Plenary Meeting to establish a small Ad-Hoc Working Group with the participation of exporting and importing countries to:

- a) More clearly define the problem in the application of tolerances;**
- b) Draw up a proposal for the Plenary Meeting.**

ANNEX I.

<u>DRAFT AGENDA</u>			
OECD MEETING OF HEADS OF NATIONAL INSPECTION SERVICES			
20-23 May 2014			
Venue of the meeting: Mercure Grand Hotel, Warsaw, Poland			
WORKING GROUP MEETINGS,			
Tuesday 20 May 2014, 9:30 - 17:00, Room Olimp 3			
<i>Background Documents</i>			
1.	9:30	Working Group Meeting on Cherries <i>Rapporteur: Slovak Republic</i>	<i>TAD/CA/FVS/WD(2014)1</i>
	13:00	Lunch break	<i>TAD/CA/FVS/WD(2014)2</i>
2.	14:30	Working Group Meeting on Chinese Cabbages <i>Rapporteur: Hungary</i>	
3.	17:30 – 18:00	Meeting of the Bureau and Poland (Organisational Meeting)	
ROOM SESSIONS,			
Wednesday 21 May 2014, 9:00 - 17:00, Room Olimp 1			
	8:00	Registration and welcome coffee	
4.	9:00	Opening Remarks from the Ministry of Agriculture and Rural Development, Chief Inspector of Agriculture and Food Quality Inspection and the OECD Secretariat	
5.	9:30	Adoption of the Agenda	<i>TAD/CA/FVS/HS/A(2014)1</i>
6.	9:40	An Overview of the Polish Fresh Fruit and Vegetables Sector <i>Presentation by the Representative of Ministry of Agriculture and Rural Development</i>	<i>ORAL PRESENTATION</i>
7.	10:10	Update from International Organisations involved in standardisation and inspection of fruit and vegetables a) OECD Fruit and Vegetables Scheme b) Codex Alimentarius Commission c) UNECE	<i>ORAL PRESENTATIONS</i>
	11:00	Coffee Break	
SECTION I. INTRODUCTION OF THE POLISH QUALITY INSPECTION SYSTEM			
8.	11:30	Fresh Fruit and Vegetables Inspection System in Poland <i>Presentation by the Representative of the Agricultural and Food Quality Inspection</i>	<i>ORAL PRESENTATION</i>
9.	12:00	Activities of Agricultural and Food Quality Inspection on the Polish fresh fruit and vegetables sector <i>Presentation by the Representative of the Agricultural and Food Quality Inspection</i>	<i>ORAL PRESENTATION</i>
	12:30	Lunch break	
SECTION II. CHALLENGES FOR INSPECTION SERVICES: TRACEABILITY OF ORIGIN			
10.	14:00	What do we mean by traceability Presentation by the OECD Secretariat	

11.	14:10	How the system of traceability works in a major exporting country <i>a) Presentation by South Africa</i> <i>b) Discussion</i>	<i>ORAL PRESENTATION</i>
12.	14:30	How the system of traceability is implemented in a private company <i>a) Presentation by the Polish Organization of Commerce and Distribution</i> <i>b) Discussion</i>	<i>ORAL PRESENTATION</i>
13.	14:50	The application of EU food inspection rules on traceability in the fruit and vegetables sector <i>a) Presentation on the EU Food Law – Representative of the Agricultural and Food Quality Inspection</i> <i>b) A practical implementation in a Member country - Hungary</i> <i>c) Discussion</i>	<i>ORAL PRESENTATION</i>
	15:30	Coffee Break	
SECTION III. APPLICATION OF INTERNATIONAL STANDARDS UNDER THE SCHEME			
14.	16:00	Application of tolerances in international marketing/quality standards <i>a) Presentation by the Netherlands</i> <i>b) Discussion</i>	<i>ORAL PRESENTATION</i>
15.	16:30	Interpretation of skin defects (area, skin defects caused by pests) in international marketing/quality standards <i>a) Presentation by USA</i> <i>b) Discussion</i>	<i>ORAL PRESENTATION</i>
	17:00	End of Session	
	18:00	Guided Tour	
	19:30	Welcoming dinner in AleGloria Restaurant, Plac Trzech Krzyży 3 (3 Three Crosses Square)	
TECHNICAL AND CULTURAL VISIT Thursday 22 May 2014, 8:00 – 18:00			
	8:00 – 18:00	Technical and cultural visit: Roja Sp. z o.o., Fruit Producers Group, Regnów Local apple orchard visit Lunch Sightseeing	
ROOM SESSIONS, Friday 23 May 2014, 9:00 – 13:00, Room Olimp 1			
	8:30	Welcome coffee	
SECTION IV. POLISH APPLE SECTOR			
16.	9:00	Presentation on the Polish apple sector <i>Presentation by the Representative of Ministry of Agriculture and Rural Development</i>	<i>ORAL PRESENTATION</i>

17.	9:30	Effect of pre- and post-harvest factors on fruit quality <i>Presentation by the Representative of Research Institute of Horticulture</i>	<i>ORAL PRESENTATION</i>
18.	10:00	Changes of quality parameters of fruit during storage and shelf life <i>Presentation by the Representative of Research Institute of Horticulture</i>	<i>ORAL PRESENTATION</i>
	10:30	Coffee Break	
SECTION V. OECD GUIDELINES ON QUALITY INSPECTION			
19.	11:00	Draft OECD Guidelines on Quality Inspection <i>a) Presentation by Germany</i> <i>b) Discussion</i>	<i>TAD/CA/FVS/HS/WD(2014)1</i>
20.	12:30	Final discussion and conclusions of the Meeting	
21.	12:50	Other business	
22.	13:00	Close of Session	
	13:15	Lunch	

ANNEX II.

LIST OF PARTICIPANTS

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20 - 23 MAY 2014**

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