

# Tractor Codes Member Countries



## Formal Applicant Countries



Bulgaria

## Potential Member Countries



# OECD Agricultural Codes and Schemes

2020



<http://www.oecd.org/agriculture/tractors>



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## **OECD Headquarters, Paris - France**

**“21 for 21”**

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### **A Proposal for Consolidation and Further Transformation of the OECD by Angel Gurría, OECD Secretary-General**

**“Making our Organisation even more useful and relevant to its Members and partner countries**

#### **1. DELIVERING FOR MEMBERS: MORE PROACTIVE, MORE STRATEGIC, MORE HORIZONTAL, MORE USEFUL**

Over the past nine years, we have managed to dynamize the OECD and to provide timely policy advice through our regular work, or through new products such as the “Better Policy Series” and the “Getting it Right” publications, reacting faster to support reform agendas in member and partner countries. However, given the prospect of a low growth scenario in the years to come, and the need to improve the economic and social outlook, we need to further strengthen and institutionalise the “targeted policy advice” we provide, and to consolidate the “whole of OECD” perspective. Horizontality needs to become the rule, permeating the work of the whole Organisation, and adjusting its structure as necessary, to leave the fragmented “policy silo” approach behind. This will help us build more productive, more competitive, more inclusive and more sustainable economies.”

**[www.oecd.org](http://www.oecd.org)**

## OECD In Brief



The Organisation for Economic Co-operation and Development (OECD), an inter-governmental organisation founded in 1961, provides a multilateral forum to discuss, develop and reform economic and social policies. Today it has 36 member countries<sup>1</sup> The OECD's mission is to promote policies for sustainable economic growth and employment, a rising standard of living, and trade liberalisation. It is at the forefront of efforts to help governments understand and respond to new developments and concerns so that economic and social developments are not achieved at the expense of environmental degradation.

The OECD brings together its Member countries to discuss and develop domestic and international policies. It analyses issues, identifies good policy practices and recommends actions in a unique forum in which countries can compare their experiences, seek answers to common problems, and work to co-ordinate policies. It shares expertise and exchanges views with more than 100 countries worldwide and engages in dialogue with business, labour, and civil society organisations on topics of mutual interest. The OECD is the largest and most reliable source of comparable statistical data and information on economic, environmental and social developments in its Member countries.

The OECD's work is overseen by several bodies. At the highest level is the OECD Council, made up of Ambassadors from all Member countries. The Council's main role is to review and approve the OECD budget and Programme of Work. The specific policy and technical work is directed by specialist Committees, supported by Working Parties and *ad hoc* meetings, which bring together technical expertise from Member countries. The daily work of the OECD is coordinated and supported by its Secretariat in Paris, with 2 500 staff and a budget of over €374 million.

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<sup>1</sup> *OECD member countries in 2019: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States. The European Commission also participates in the work of the Organisation.*

## Strategic Orientations of the Secretary-General



Angel Gurría, Secretary-General of the OECD

### Strategic Orientations of the Secretary-General



***“Action Three: Responding to the specific challenges of the digital transformation.*”**

18. The digital transformation is rapidly reshaping the way we live and work, redefining interactions between economic, social and government actors, and creating new opportunities for growth and well-being. As highlighted in the seminal OECD reports, *“Going Digital: Shaping Policies, Improving Lives”* and *“How’s Life in the Digital Age?”*, digital technologies have catalysed remarkable progress in our education, health, transport, social protection, communication and energy systems, offering unprecedented opportunities to achieve ambitious goals: inclusive societies; new jobs and new ways of working; low emission, climate-resilient economies; and cost effective, people-centred health systems, among others. Recent OECD analysis also shows that the adoption of digital technologies by firms is an important driver of much-needed productivity growth and diffusion in our economies”

Full Report available on the public website  
[www.oecd.org](http://www.oecd.org)

## Trade and Agriculture Directorate



**Ken Ash, Director**

The **Directorate for Trade and Agriculture (TAD)** is the part of the OECD Secretariat that undertakes the work on behalf of the Trade, Agriculture and Fisheries Committees. The key objective of OECD work on trade is to support a strong, rules-based multilateral trading system that will maintain the momentum for further trade liberalisation, while contributing to rising standards of living and sustainable development. OECD also analyses food, agriculture and fisheries issues and provides advice to governments on practical and innovative options for policy reform and trade liberalisation, as well as facilitating the negotiation of international rules on official export credits. An important part of the mandate of the OECD is to provide analytical support to agricultural trade liberalisation, as well as estimating the effects of further trade liberalisation. Working closely with Member countries, the Directorate collects information and data, and develops modelling capacity to analyse the policy issues identified by

the Committees. The **Committee for Agriculture**, the **Committee for Trade**, and the **Committee for Fisheries** are responsible for implementing the agriculture, trade and fisheries biennial programme of work, once it has been approved by the OECD Council.

The **Directorate** is structured around seven divisions that work together to deliver the work programme: Agro-food Trade and Markets, Development Division, Fisheries Policies, Agricultural Policies and Environment, Policies and Trade in Agriculture, Trade Policy Linkages and Services and Export Credits. Two other units are attached to the Directorate: **Agricultural Codes and Schemes**, and the **Co-operative Research Programme**. The staff of the Directorate is drawn from Member countries. In 2019 there were 115 full-time staff, and increasingly, the Directorate also welcomes staff on short-term appointments, consultants and trainees.

## Agro-Food Trade and Markets Division



**Lee Ann Jackson,**

**Head of the Agro-Food Trade and Markets Division  
of the Trade and Agriculture Directorate (TAD)**

**The Agro-Food Trade and Markets Division of the Trade and Agriculture Directorate (TAD)** undertakes a range of quantitative and qualitative analysis of the links between policies and markets within the agro-food sector. A key output is the annual OECD-FAO Agricultural Outlook publication, which is prepared jointly with the UN Food and Agricultural Organisation (FAO) and provides ten-year projections for agricultural markets. **The Agricultural Codes and Schemes Unit** is located within the **Agro-Food Trade and Markets Division**.

**The OECD Codes and Schemes increase market transparency by helping to reduce technical barriers to trade, enhance market openness and access through the simplification of procedures, and help to strengthen market confidence by ensuring product quality.**

## OECD Flagship Publication



### OECD-FAO Agricultural Outlook 2019-2028

- Following several years of relatively calm market conditions, world agricultural markets today face mounting risks, including policy uncertainty from trade tensions
- Productivity is projected to outpace demand growth, which implies declining real food prices. This is good news for poor consumers, but will put pressure on farm incomes
- Global food demand follows population growth as per-capita consumption of many food items levels off
- Open, transparent and predictable trade is important for global food security – regions experiencing rapid population growth are not those where food production can be increased sustainably
- This year's edition focuses on the prospects and challenges in Latin America and the Caribbean

<http://www.agri-outlook.org/>



## Agricultural Codes and Schemes

The OECD Agricultural Codes and Schemes facilitate international trade through the simplification and implementation of international standards.

For **Seeds** and **Forests**, the **Schemes** encourage the production and use of seeds or plants of consistently high quality for which trueness to name or source is guaranteed.

For **Tractors**, the **Codes** enable an importing country to accept, with confidence, the results of safety and performance tests carried out in another country, and in the case of **Fruit and Vegetables**, the **Scheme** promotes the use of uniform classification and quality control procedures.

The Codes & Schemes were created in the late 1950s/early 1960s and the number of participating countries has been constantly rising. The Codes and Schemes are open to any OECD or non-OECD country that is a member of the United Nations, or of the World Trade Organisation. In addition to the 35 OECD countries, which are all members of at least one of the Codes & Schemes, participation currently encompasses 29 non-OECD Economies including some of the major players in world trade (Brazil, Russia, India, China, South Africa, Argentina, Ukraine). There is also close co-operation with the UN family especially the FAO, UNECE, UNESCAP and UNIDO as well as manufacturer non-governmental organisations and manufacturer and farmer organisations.

The overarching objectives of the Codes & Schemes are to simplify existing international trade procedures, increase transparency, reduce technical barriers to trade, contribute to international harmonisation of standards, environmental protection, and to increase market confidence through enforcement of quality control and inspection procedures, and facilitate the traceability of the traded products.

The objectives are achieved through ongoing dialogue and debate with the designated authorities of member Countries, observers and other stakeholders, including farmers, industry and trade. This comprehensive and inclusive process ensures that the standards are reliable, efficient and fit for purpose.

International product certification differs from national certification as domestic regulatory systems may vary to a large extent. A voluntary international system is a tool that countries can use for specific products traded. The benefits from product certification and guarantees are shared among all stakeholders.

It is important to note that all decisions to amend/update the rules are taken by full consensus of all member countries. The Rules governing the Codes and Schemes are regularly updated to reflect changes in trade, agriculture, environment and health and safety standards in member countries.

The following are the prerequisites for joining the Codes & Schemes:

- An official request to join is sent to the OECD Secretary-General accompanied by the relevant documentation;
- This is followed by an evaluation process, usually involving a short mission to the applicant country;
- The evaluation report is circulated to the authorities of the participating countries and discussed at the OECD Annual Meeting;
- The final step is an internal OECD process resulting in a Council Decision. The whole procedure takes about one year.



Delegates from 19 countries Member of the Tractor Codes programme, three Observer countries and Organisations posing with the OECD Secretariat during the 2019 Annual Meeting of the OECD Tractor Codes.

## **OECD and enlargement**

Global reach has been an integral part of the OECD mission from its beginning. Article 1 of the Convention states that the Organisation should "contribute to sound economic expansion in member as well as non-member countries in the process of economic development."

The OECD is committed to act as a global and flexible network based on high standards, with the goal of developing effective and innovative policy choices for governments around the world. Partner countries' involvement in OECD work is mutually beneficial and essential for keeping the OECD inclusive and relevant, and may in some cases lead to OECD membership.

In 2007 the OECD Council at Ministerial level opened membership discussions with five candidate countries, as a result of which Chile, Estonia, Israel and Slovenia became Members in 2010, while discussions with the Russian Federation are currently postponed. In May 2013, the Council decided to launch a new wave of accession discussions with Colombia and Latvia; in April 2015, it invited Costa Rica and Lithuania to open formal OECD accession talks. Latvia became an OECD Member on 1 July 2016.

### **What is an Accession Roadmap and how does the accession process work?**

An "Accession Roadmap" is developed to detail the terms, conditions and process of each accession discussion. This roadmap lists the reviews to be undertaken by Committees in various policy areas in order to assess the country's position with respect to the relevant OECD instruments and to evaluate its policies and practices as compared to OECD best policies and practices in the relevant area. Each country follows its own process and is assessed independently.

At the end of the technical review, each Committee provides a "formal opinion" to the OECD Council. The timeline for the accession process depends on the pace at which the candidate country provides information to Committees and responds to recommendations for changes to its legislation, policy and practice.

On the basis of the formal opinions and other relevant information, the Council takes a final decision on the basis of unanimity. An Accession Agreement is then signed and the candidate country takes the necessary domestic steps and deposits an instrument of accession to the OECD Convention with the depositary, *i.e.* the French government. On the date of deposit, the country formally becomes a Member of the OECD.

### **What is the role of the Council in the accession process?**

As the governing body of the OECD, bringing together representatives of each of the 35 Member countries and of the European Union, the Council ultimately controls all aspects of the accession process and takes the final decision on whether to extend an invitation to a country to become a Member.

### **What is the role of the Committees?**

The Committees, bringing together technical experts from all OECD countries, assess the candidate country's willingness and ability to implement OECD legal instruments and evaluate its policies and practices as compared to OECD best policies and practices. Committees may recommend changes to bring the candidate country's legislation, policy and/or practices into line with OECD legal instruments or to bring its policies closer to OECD best practices.

## Global relations

Over time, OECD's focus has broadened to include extensive contacts with non-Members and it now maintains co-operative relations with a large number of them.

The **Global Relations Secretariat** (GRS) develops and oversees the strategic orientations of OECD's global relations with non-Members. More than 15 Global Fora have been established to address trans-boundary issues where the relevance of OECD work is dependent on policy dialogue with non-Members.

Regional initiatives cover Europe, the Caucasus and Central Asia; Asia; Latin America; the Middle East and North Africa (MENA). The Sahel and West Africa Club creates, promotes and facilitates links between OECD Members and West Africa.

Helping improve public governance and management in European Union Candidate Countries, Potential Candidates, and European Neighbourhood Policy partners is the mission of a joint OECD-EU initiative, the Support for Improvement in Governance and Management (SIGMA) programme.

<https://www.oecd.org/globalrelations/>

## The OECD's Relations with its Key Partners

The 2012 Ministerial Council Meeting marked the fifth anniversary of the launching of Enhanced Engagement, aimed at advancing the OECD's relationship with five Key Partners, **Brazil, China, India, Indonesia and South Africa**.



[Brazil](#)



[China](#)



[India](#)



[Indonesia](#)



[South Africa](#)

**Key partners** contribute to the OECD's work in a sustained and comprehensive manner. A central element of the programme is the promotion of direct and active participation of these countries in the work of substantive bodies of the Organisation. Each country participates in OECD work through a programme containing a mix of several elements, notably:

- participation in OECD committees,
- regular economic surveys,
- adherence to OECD instruments
- integration into OECD statistical reporting and information systems,
- sector-specific peer reviews.

The actual mix and the sequencing of the elements is determined by mutual interest.

### Date of accession of some of the key partners to the OECD Codes and Schemes

Countries	OECD Seed Schemes	OECD Tractor Codes	OECD Fruit and Vegetables Scheme
<b>Brazil</b>	<b>1999</b>	<b>2019</b>	<b>2018</b>
<b>China</b>		<b>1988</b>	
<b>India</b>	<b>2008</b>	<b>1988</b>	
<b>South Africa</b>	<b>1961</b>		<b>1994</b>

## OECD Active with...

(brochures available on the public website [www.oecd.org](http://www.oecd.org))



*"...Brazil's application for OECD membership is a signal that it is ready to further consolidate its reform agenda..."*



*"... The OECD takes pride in its co-operation with China. Today, with China's increasing importance as a dynamic engine for the world economy, this partnership is more relevant than ever..."*



*"...India's valuable policy experience has enriched the work of the OECD, increasing the relevance of its analyses and legal standards in today's increasingly globalised world..."*



*"...  
"...The Latin American and Caribbean must tap into internal sources of growth in order to sustain economic and social development..."*



*"...This brochure provides an overview of the OECD's work with Africa and underlines the interest of the Organisation to continue developing a promising and intense relationship with the continent..."*

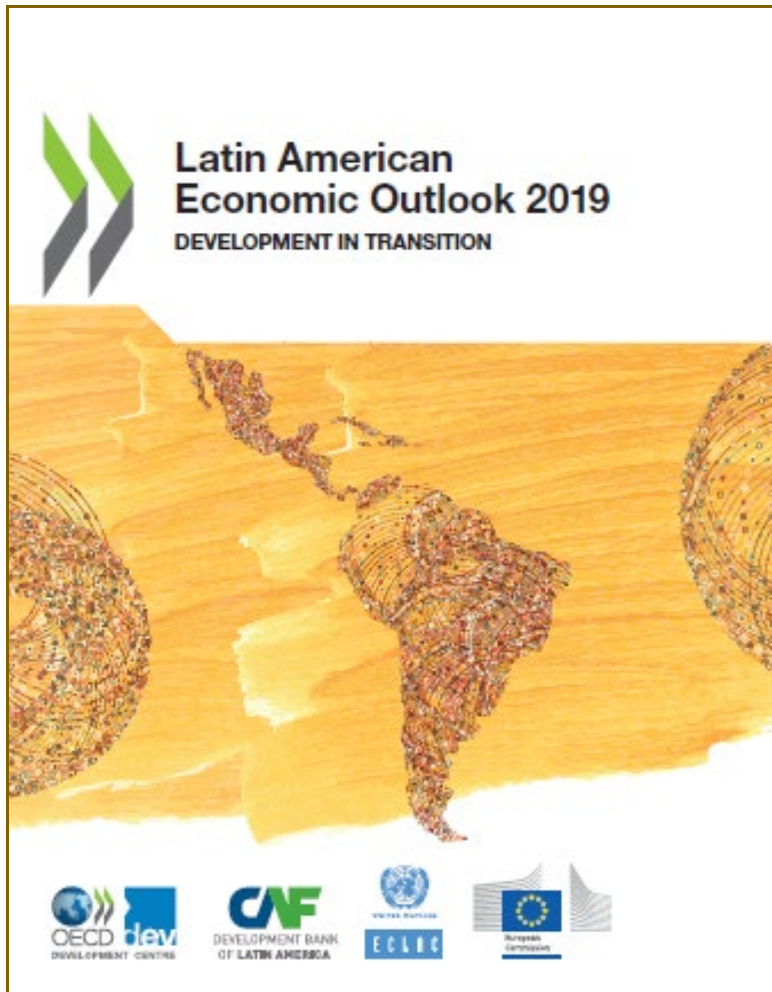


*"...A member of the G20, Indonesia is the largest economy in the rapidly growing region of Southeast Asia..."*

## Latin American Economic Outlook 2019

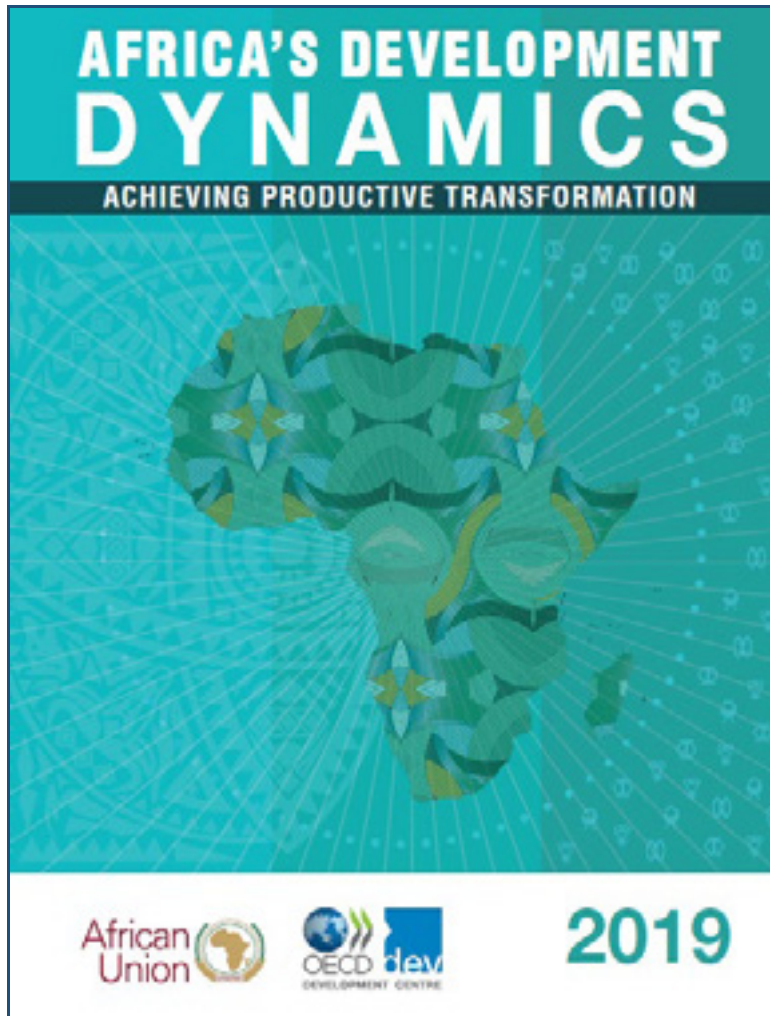
### Latin American Economic Outlook 2019 Development in Transition

OECD Development Centre



Latin America and the Caribbean has seen a remarkable socio-economic progress since the beginning of the century. Countries strengthened their macroeconomic situations, living standards improved, and poverty and inequality declined. Yet, large structural vulnerabilities remain and new ones have emerged. Many of these are linked to countries' transition to higher income and development levels.

## African Economic Outlook



### **Africa's Development Dynamics** **Achieving Productive Transformation**

OECD Development Centre

What are the major economic and social trends in Africa? What is Africa's role in globalisation? This annual report presents an Africa open to the world and towards the future. Africa's Development Dynamics uses the lessons learned in the five African regions – Central, East, North, Southern and West Africa – to develop recommendations and share good practices. The report identifies innovative policies and offers practical policy recommendations, adapted to the specificities of African economies. Drawing on the most recent available statistics, this analysis of development dynamics aims to help African leaders reach the targets of the African Union's Agenda 2063 at all levels: continental, regional, national, and local. Every year this report will focus on one strategic theme.



## 2019 marked the 60<sup>th</sup> Anniversary of the Tractor Codes



The 60<sup>th</sup> anniversary of the OECD Tractor Codes was celebrated on 26-27 February 2019 with displays of a tractor just outside OECD headquarters and scale-model tractors in the Conference Centre. The tractor safety and performance codes, established in 1959, reassures buyers and farmers on the quality and safety of tractors. Mutual recognition by member countries also contributes to improving trade flows, saving everybody's time and money.



## OECD Scale-model Tractor Exhibition in the Conference Centre for the 60<sup>th</sup> Anniversary of the Tractor Codes



OECD Cocktail on 26 February 2019



Anniversary Cake shared with participants during the OECD Cocktail.

**Technical Visit to SIMA (Salon International du Machinisme Agricole)  
on 27 February 2019**

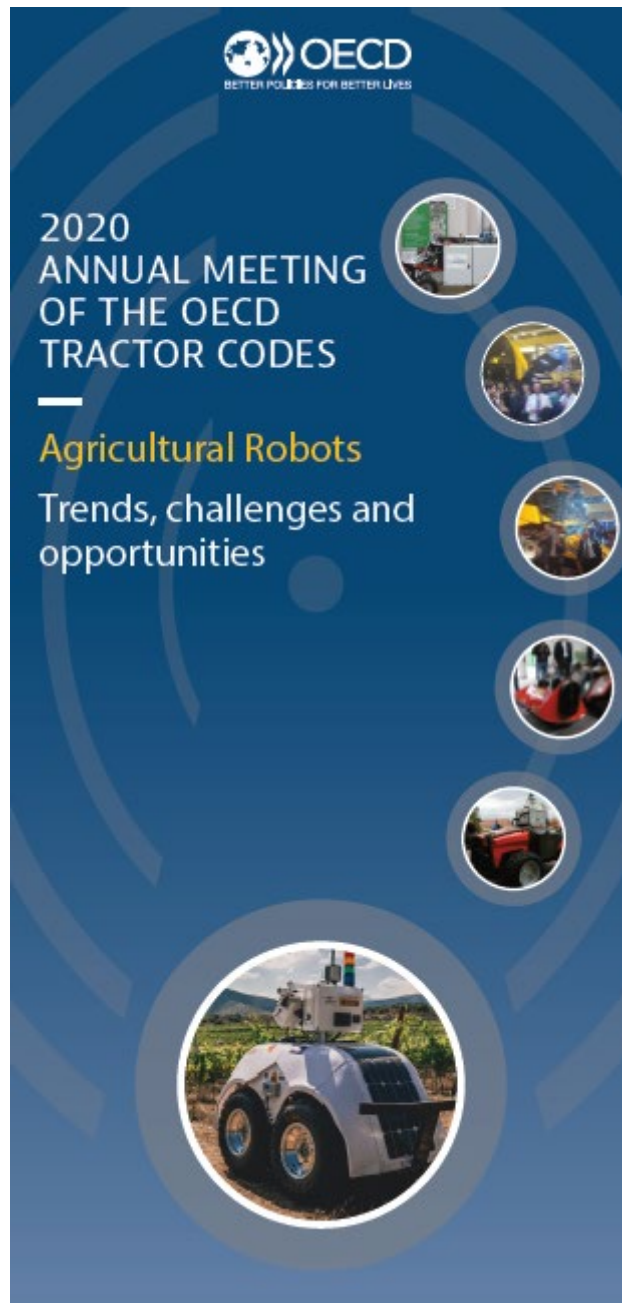


To mark the 60<sup>th</sup> Anniversary of the Tractor Codes, a technical visit was organised in the afternoon of 27 February 2019 to the SIMA Exhibition in Parc des Expositions, Villepinte, near Paris.

SIMA is the exhibition for all types of farming – irrespective of the size or type of farm – and over the years has established itself as a major international event. As proof of its dynamism and its worldwide reach, the 77<sup>th</sup> edition of the exhibition (2017) stood out for its significant increase in exhibitors and visitors from outside France.

## Tractor Innovations

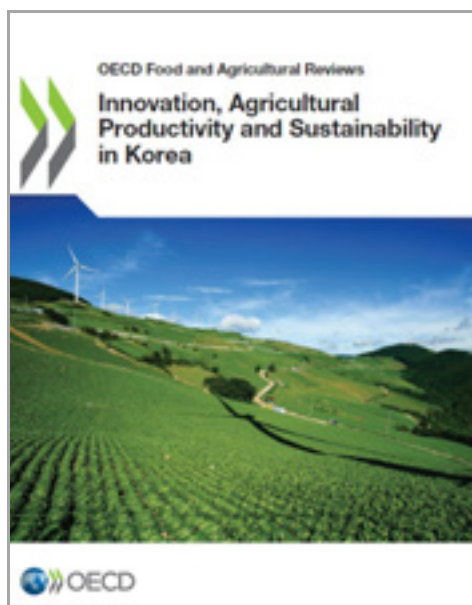
The OECD is currently exploring the possibility to include virtual tests of Roll-over protective structures into the OECD Tractor Codes. In order to learn more about variations in physical tests that can be then used on the work on virtual tests, nine OECD Accredited Testing Stations (Italy-Turin, Italy-Milan Spain, France, Turkey, Germany, Korea, Austria, and Italy-Bologna) agreed to conduct a “Round Robin test ” exercise.



In experimental methodology, a round robin test is an interlaboratory test (measurement, analysis, or experiment) performed independently several times. This can involve multiple independent scientists performing the test with the use of the same method in different equipment, or a variety of methods and equipment.

## Innovation, Agricultural Productivity and Sustainability

### in Korea



Korea is under increasing pressure to develop a more comprehensive agricultural system that respond to changing domestic demand, while remaining competitive internationally. This report examines the extent to which Korean policies are supportive of innovation and structural change in the food and agriculture sector, while exploring the extent to which policies affect access to, and use of, natural resources for productivity growth and sustainability.

<https://www.oecd-ilibrary.org>

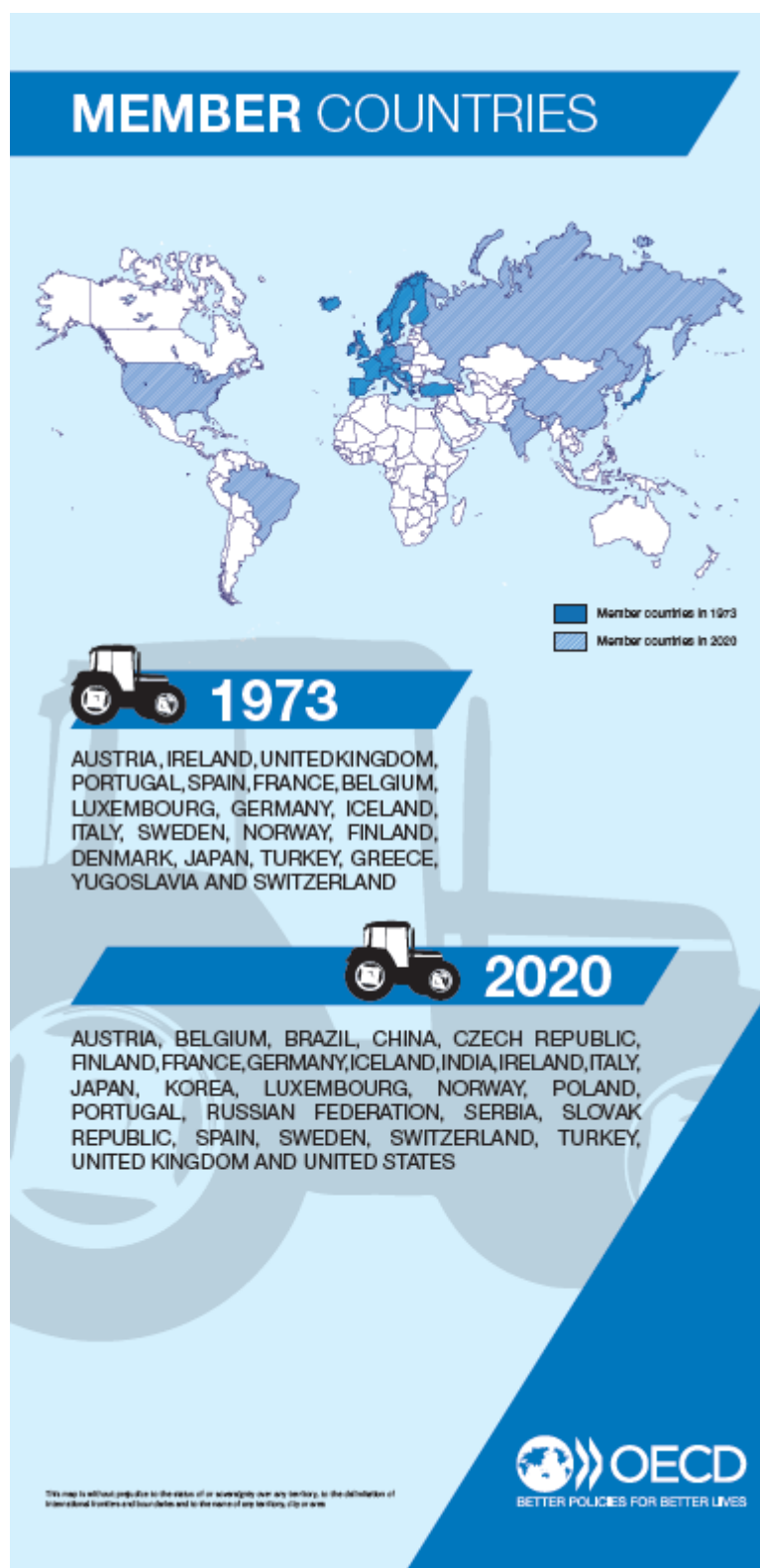
### In China



The expansion of agricultural production in China has been remarkable, but at the expense of the sustainable use of its natural resources. To counter this, as well as to face problems due to rising labour costs and a rapidly ageing rural population, agricultural production must concentrate on a smaller number of more productive farms. It is in this light that this report reviews recent policy developments to assess whether they have been conducive to productivity growth and environmental sustainability.

<https://www.oecd-ilibrary.org>

## 27 Countries Participate in the OECD Tractor Codes in 2020



## Brazil, Member of the Tractor Codes in 2019



Brazil joined the OECD Tractor Codes in 2019, coinciding with the 60<sup>th</sup> Anniversary of the establishment of the Codes, increasing the number of participating countries to twenty seven (27). Brazil is the first Latin American country to join the Programme and will help enhance the global standing of the OECD Tractor Codes.

The “Ministério de Agricultura Pecuária e Abastecimento” will be the National Designated Authority responsible for the OECD Tractor Codes.

Mr. Cavallo, Head of an OECD Accredited Testing Station in Italy, represented the OECD Secretariat and participated as speaker in the ENESTA meeting on 7-8 October 2019 in Campinas, Brazil. He provided an overview of the OECD Tractor Codes and participated in a debate about standards and safety in agriculture. Mr. Cavallo highlighted the advantages of the OECD Tractor Codes and shared with the audience his experiences as Head of an OECD Accredited Testing Station in Italy.



From left to right: Mr. Cavallo, Head of an OECD Accredited Testing Station in Italy and Mr. Zacher, one of the organizers of the conference.



Countries	Seeds	Forest	Tractors	Fruit and Veggies
Albania				
Argentina				
Australia				
Austria				
Belgium				
Bolivia				
Brazil				
Bulgaria				
Burkina Faso				
Canada				
Chile				
China				
Croatia				
Cyprus				
Czech Republic				
Denmark				
Egypt				
Estonia				
Finland				
France				
Germany				
Greece				
Hungary				
Iceland				
India				
Iran, Islamic Rep. of				
Ireland				
Israel				
Italy				
Japan				
Kenya				
Korea				
Kyrgyzstan				
Latvia				
Lithuania				
Luxembourg				
Madagascar				
Mexico				
Moldova				
Morocco				
Netherlands				
New Zealand				
Norway				
Poland				
Portugal				
Romania				
Russian Federation				
Rwanda				
Senegal				
Serbia				
Slovak Republic				
Slovenia				
South Africa				
Spain				
Sweden				
Switzerland				
Tanzania				
Tunisia				
Turkey				
Uganda				
Ukraine				
United Kingdom				
United States				
Uruguay				
Zambia				
Zimbabwe				

## OECD Tractor Codes

*What are the OECD Tractor Codes?*

The OECD Standard Codes for the official testing of agricultural and forestry tractors are a set of rules and procedures for tractor testing with the aim to facilitate trade by updating international rules to certify tractors and their protective structures. Implementation of the Codes ensures that protective structures and performance criteria are carried out on a comparative basis, thus increase transparency, simplify international trade procedures, and open markets.

*Participating Countries and International Organisations*

Currently, 27 countries<sup>2</sup> implement the Codes; of which, 22 are OECD Members and 5 non-OECD Economies (Brazil, China, India Serbia and Russia). Observers include

- the European Commission (EC);
- the United Nations Industrial Development Organization (UNIDO);
- the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP);
- the European Free Trade Association (EFTA);
- the European Committee for Standardization (CEN);
- the European Committee of Manufacturers of Agricultural Machinery (CEMA);
- the Economic Commission for Europe of the United Nations (UN/ECE);
- the International Commission of Agricultural Engineering (CIGR);
- the European Confederation of Agriculture (CEA);
- the Food and Agriculture Organization of the United Nations (FAO);
- the International Organization for Standardization (ISO);
- the Committee of Professional Agricultural Organizations and General Confederation of Agricultural Co-operatives in the European Union (COPA-COGECA);
- the World Farmers' Organisation (WFO).

*How do the Tractor Codes operate?*

National testing stations in each participating country carry out the tests on tractors to be commercialized according to common procedures. Test results are submitted to OECD for approval and the verification of individual tests are subcontracted to a Co-ordinating Centre. Approved tests are published and used by tractor manufacturers, sellers and buyers. Summaries of performance tests are available on-line ([www.oecd.org/tad/tractor](http://www.oecd.org/tad/tractor)).

*What is OECD's role?*

OECD facilitates co-ordination at the international level, with frequent meetings. These meetings enable dialogue amongst stakeholders, exchange of information, discussion of case studies, preparation of new rules and amendments to the Codes. Since the Codes were established in 1959, over 3 000 tractors have been tested for performance characteristics, and over 10 800 tractors have been tested for noise measurement at the driving position, and driver protection, in the case of tractor roll-over. In addition to regular meetings of the Codes, Test Engineer Conferences are held every two years, each time in a different country. The primary purpose of these conferences is the observation, review and discussion of testing practices by test engineers.

<sup>2</sup>

Austria, Belgium, China, Czech Republic, Finland, France, Germany, Iceland, India, Ireland, Italy, Japan, Korea, Luxembourg, Norway, Poland, Portugal, Russian Federation, Slovak Republic, Serbia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

*Benefits of joining the programme*

There are a series of inherent advantages associated with joining the OECD Tractor Codes. The first is trade facilitation. Obtaining an OECD approval number facilitates trade among member countries. Tests carried out in one member country are recognized in ALL member countries and allows manufacturers to use OECD test certifications to satisfy import regulations, or to show that their model is safer and more efficient. Second, OECD is an intergovernmental organization and our tests have always a third party certification. This means that the tests done in a particular member country are always validated by OECD's Co-ordinating Centre, enhancing the credibility of the tests. Finally, the users (farmers) and other stakeholders can benefit as well by comparing the safety and technical reliability of different tractor models and choose the one that better suits their needs.

*Who can join?*

Membership is open to countries member of the United Nations Organization or its Specialised Agencies.



*Tractor Exhibition, OECD Headquarters, February 2019*

*Outlook*

The OECD Tractor Testing Codes are in constant evolution with the growth in demand for greater harmonisation across countries as new tractor models continue to proliferate. They have become an important international reference in the certification of tractors and their protective structures, underpinning existing international agreements, and contributing actively to the harmonisation of regional and global standards. There is regular updating of the Codes so as to identify significant improvements in technical performance, safety and environmental protection.

## Role of the Members of the Bureau



*The Bureau Members (Austria, Japan and France) and the Secretariat  
OECD Headquarters, February 2019*

A bureau is made up of the Officers of the Plenary Meeting; Its task is to assist the Secretariat in the preparation of the next Annual Meeting, including matters relating to the admission of new countries and to propose solutions, when necessary, to urgent problems that may arise out of the implementation of the Tractor Codes. The Bureau is convened by the Secretariat at the request of anyone of its Members or any country participating in the Scheme. It can provide counsel in writing and invite one or more participating countries to be presented.

In 2019, The Chair of the Tractor Codes Bureau is a delegate from Japan and the Vice-chairs are delegates from Austria and France.

## About the OECD Tractor Testing Codes

### Tractor Performance Test Code

This was where it all began. The first Standard Code for the Official Testing of Agricultural Tractors was approved by OECD (*then the OEEC*) in April 1959, the desire being to develop and publicise an internationally-recognised standard method by which to assess tractor performance. Research and testing centres in many different countries had been testing tractors and measuring their performance levels for many, many decades, but the testing methods used were not all the same: it was not always possible to compare test results produced in different countries. The OECD Standard Test Code attempted to solve this problem and, after over 50 years of testing and over 2750 tractor models tested, the success of the venture is clear for all to see.



The first tractor tested according to the OECD Standard Code

- McCormick International B-450 - March / April 1959

So what exactly is the OECD Tractor Performance Test Code? In simple terms, it's a series of standardised procedures which test laboratories (*Testing Stations*) can follow to measure the performance characteristics of agricultural (*and forestry*) tractors. As you may imagine, the Test Code has developed a great deal since 1959, increasing in detail and complexity to keep pace with the introduction of new features on the tractors submitted for testing. Diesel Particulate Filters, Selective Catalytic Reduction systems and Continuously Variable Transmissions had not been thought of then!

Also a family of OECD test codes has developed progressively since 1967 to address other issues of tractor operation, such as operator safety (*roll-over and falling-object protection*) and comfort (*noise level at the driving position*).

Still, returning to the Tractor Performance Code (*Code 2*). Today it still attempts to satisfy the same requirement as it did back in 1959, namely the standardised assessment of tractor performance. To

achieve this aim, the Test Code provides a range of test procedures, each focussing on a specific aspect of the vehicle, namely:-

- i) **Engine Power Output and Fuel Consumption** (*measured at the Power Take Off (P.T.O.) shaft*)
- ii) **Drawbar Power Output and Fuel Consumption** (*measured using a dynamometer loading car on a concrete or asphalt test track*);
- iii) **Hydraulic Power Output** (*as available at the auxiliary service (spool valve) couplings*)
- iv) **Hydraulic (3-point linkage) Lift Capacity** (*measured at the lower link ends and on a coupled frame*)



In addition to these ‘Compulsory’ tests, which all tested tractors must complete, there are a range of additional ‘Optional’ test procedures which can also be followed if the tractor manufacturer wishes, including:-

- Braking Performance
- Turning Area and Turning Circle
- Low Temperature Starting
- Centre of Gravity location
- External Noise Level
- Axle Power
- Engine (*bench*) Test
- Waterproofing Test
- Performance in a Hot Atmosphere

Plus repeats of any of the ‘Compulsory’ tests, but with different system settings, e.g. tractor ballasted during drawbar power test, 3pt hitch lift performance with different linkage geometry. Performance Code (Code 2) test results are tractor specific; they relate only to one model /vehicle configuration. Code 2 test results are available from the OECD Tractor Website ([www.oecd.org/tad/tractor](http://www.oecd.org/tad/tractor)).

### *Description of each Code 2 ‘Compulsory’ Test*

#### **1. Engine Power Output and Fuel Consumption**

This test is used to measure the tractor’s engine torque–speed, power and fuel consumption characteristics under controlled laboratory conditions: this starts to show exactly how powerful and fuel-efficient the test tractor actually is.

Engine power output is measured at the power take-off (P.T.O.) shaft by means of an instrumented dynamometer. Fuel is not supplied from the tractor’s tank, but from an external, temperature-controlled supply, which enables the test tractor’s fuel consumption to be measured instantly at any loading level used during the test. If the test tractor consumes material in addition to (*diesel*) fuel, e.g. exhaust reagent fluid for SCR systems, this consumption rate is also measured alongside fuel consumption. Atmospheric conditions during the test, such as air temperature and barometric pressure, are also noted and the test bay temperature is kept within specified limits, to prevent excessive influence upon engine performance.

The engine power output measured at the P.T.O. shaft will always be lower than the values quoted by tractor manufacturers for engine ‘flywheel’ power output. This is because small amounts of power are lost as it is transferred through the driveline from the engine to the P.T.O. or to the axle ends. Also engine and vehicle ancillary systems such as cooling fans, hydraulic pumps (*e.g. for power steering and suspension*) and cab air conditioning systems all consume a certain amount of engine power. Consequently, the although the power available at the tractor’s P.T.O. may only be 90 – 95% of the stated ‘rated’ engine power, depending upon the complexity and design of the tractor, the P.T.O. power output level is probably closer to what the user can actually expect to be available when the tractor is put to work in the field.

During the test, engine (P.T.O.) power output (*torque and speed*) and fuel consumption levels are measured as increasing load is applied via the dynamometer. This is initially done with the throttle control / governor set for maximum engine speed: increasing the dynamometer load effectively drags the engine speed down as the test progresses. This produces a series of measurements which create a ‘Full-Load’ power curve. In addition to this, power output / fuel consumption is also measured at the tractor’s ‘Rated’ engine speed, at the standard P.T.O. speed (*540 and/or 1000 rpm*) and also at a series of specified ‘Part-Load’ engine speed - load settings. If the test tractor has the ability to ‘boost’ its power output under certain conditions, the P.T.O. power tests are repeated both in ‘Normal’ and ‘Boosted’ engine operating modes.

The results of the tests are presented both as tables and graphs of engine power and torque output across the engine speed range investigated. Fuel and reagent consumption levels are also reported, both in terms of Hourly Consumption (*litres/hour & kg/hour*) and Specific Consumption (*g/kWh*): a further quantity ‘Specific Energy’ (*kWh/litre*) is also reported. These last two quantities are important and effectively indicate how efficiently the tractor can convert (*diesel*) fuel into usable energy or work. Specific Consumption (*g/kWh*) shows how many grammes of fuel are required by the tractor to produce one kilowatt-hour of work. Conversely Specific Energy (*kWh/litre*) tells us how efficiently the test tractor can convert the energy present in one litre to diesel fuel into actual,

practical P.T.O. work (*at a given engine torque-speed setting*): as such it provides a realistic measure of the overall (P.T.O. power) efficiency of the test tractor.

#### **2. Drawbar Power Output and Fuel Consumption**

This test complements the static P.T.O. power test and measures the tractor's ability to convert engine power into drawbar power. Tractors spend a lot of their time pulling implements, so it is important to identify how efficiently the vehicle's driveline can transfer power from the engine to the wheels / ground. This is done by following a similar test procedure to that used during the P.T.O. Power Test, but instead of loading the tractor via a P.T.O. dynamometer, this time a Loading Car is towed by the tractor around a concrete or asphalt. Whilst this test surface may not be very 'agricultural', it does provide very consistent results, removing the variability which different surface conditions could introduce into data produced by different testing stations or at different times of year. This approach enables direct comparison between any OECD drawbar power test data.

Each testing station has its own load car, but all work in a similar way. Based on a truck or bus chassis, the vehicles incorporate a dynamometer which can apply a precisely-controlled braking force to the load car wheels. This in turn applies a draught (pull) force to the tractor drawbar, the size of which is measured by a load cell at the front of the load car. As with the P.T.O. power test, fuel is not supplied from the tractor's tank, but from a temperature-controlled supply on the load car. The load car is fitted with a great deal of electronic measuring equipment, to record not only the drawbar load applied to the tractor, but also the forward speed, the tractor's fuel consumption, engine coolant and oil temperature, atmospheric conditions and all other relevant information during the test. The level of drawbar power generated by the test tractor is calculated from the drawbar pull and vehicle forward speed.

During the test various loading levels are applied to the tractor in a range of transmission gears / forward speeds. Tractors with steplessly variable transmissions (*e.g. CVTs*) are tested in a similar way, but it is likely that, as intelligent tractor engine-transmission control systems become more commonplace in the future, the test procedures will have to evolve yet further. In all cases the tractor is tested in unballasted condition, but further tests may also be performed with ballast added (*e.g. front end / wheel weights, tyre liquid ballast*). Once again, as with the P.T.O. power test, specific fuel consumption and specific energy values are derived, together with reagent (*SCR fluid*) consumption, to show how efficient the test tractor actually is. However, because further power losses are always present between engine (*flywheel*) and drawbar power, due to driveline losses and wheelslip, the specific fuel consumption values will be higher (*and the Specific Energy levels lower*) than during the static P.T.O. power test.

### **3. Hydraulic Power Output**

This test procedure measures the tractor's ability to produce hydraulic power, as would be required to power hydraulic motors or actuate hydraulic rams on attached implements. Most modern tractors deliver hydraulic flow externally via auxiliary or spool valves, many having four or more pairs of such valves.

External test equipment is used to measure the maximum hydraulic pressure (*at max. engine speed*) which the tractor can supply at one of its spool valve couplers. After this, the hydraulic flow rate delivered by the coupler at 90% of this max. pressure is recorded, enabling calculation of max. hydraulic power availability. The oil temperature in the tractor's hydraulic reservoir is monitored throughout the test. These tests may be repeated using more than one pair of couplers, simultaneously, where a single coupler may limit maximum flow rate. Also, whilst initially tested with the oil flow being subject to no return pressure, further tests may be performed with the 'return' oil flow re-entering the tractor via coupler pair, as would often be the case in normal use. This creates greater back pressure and consequently reduces the oil flow and hydraulic power available.

By performing these tests in a number of different ways it is possible to obtain a truly realistic assessment of the hydraulic flow / power available from the tractor to operate attached implements.

### **4. Hydraulic (3-point linkage) Lift Capacity**

Sufficient hydraulic lift capacity is an important requirement for most modern tractors, except perhaps very large models designed for use mainly with trailed implements. The geometry of the three-point (3pt) linkage has an important influence upon a tractor's lift capacity. Whilst a manufacturer may only state the maximum lift capacity in the product information, the OECD Test Report shows all the relevant



dimensions of the 3pt linkage and then goes on to measure the tractor's hydraulic lift capacity throughout the entire range of linkage movement. It's no good if a tractor can start to lift an implement off the ground but then runs out of lift capacity further up into the lift range.

Exactly how tractor the stated 3pt linkage lift capacity corresponds to actual ability to lift a mounted implement is rather a complex situation. It depends not only on the mass of the implement, but also the location of the Centre of Gravity (*Centre of Mass*) – how far this is behind the implement headstock / linkage attachment points – and the tractor's linkage geometry, some of which you may be able to see and some of which may be hidden away inside the rear axle casing.

OECD testing stations measure 3pt linkage lift capacity by two complementary methods. Firstly, at the lower link ends and, secondly, at a point on a simple frame attached to the lower and upper (*top*) links, 610 mm behind the lower link attachment points. In each case the max. lifting force is recorded at various points throughout the lift range, at 90% of the hydraulic lift system's relief valve pressure. The tests are often repeated (*at the manufacturer's request*) with slightly modified 3pt linkage geometry, such as may be obtained on the test tractor by shortening the lift rods, attaching the lift rods the lower links in a different location, or changing the top link mounting point / hole.

### **Tractor Noise Test Code (Code 5)**

This Test Code is slightly unique in that, from a technical point of view, it sits part-way between the Performance and the Protective Structure test codes. During the 1970s many countries required that operator roll-over protective structures (*safety cabs, frames, or roll-bars*) be fitted to tractors to reduce the number of drivers killed in overturning accidents.

These early ROPS worked well, but most designs were attached directly to the tractor chassis or engine-transmission housings. When fitted with cladding to give the operator some level of weather protection, it was found that very high noise levels were generated inside the cab ..... much higher than if no protective structure had been fitted. It was almost as if the driver was sitting inside a personal loudspeaker! It soon became clear that there was a real danger of tractor operators suffering damage to their hearing and many countries rapidly introduced legal requirements for in-cab noise levels to be reduced, particularly when the tractor was working under full-load.

OECD Code 5 is a test procedure to enable measurement of noise levels at the operator's driving position ..... in effect, close to the driver's ear. Noise levels are recorded both with the tractor "Under Load" and also "Without Load", with the cab "openings" (*windows, doors, roof hatches*) open and closed.

- "Under Load" tests are performed with the tractor pulling a drawbar load (*dynamometer car*). The maximum sound level generated in each forward gear is recorded, together with that in a gear and corresponding engine speed which gives as near as 7.5 km/h forward speed as possible;
- "Without Load" tests are performed with no drawbar load but, to provide comparison with the "Under Load" tests, in a gear and corresponding engine speed which gives as near as 7.5 km/h forward speed as possible. A further "Without Load" noise level is also recorded at the tractor's maximum forward speed.

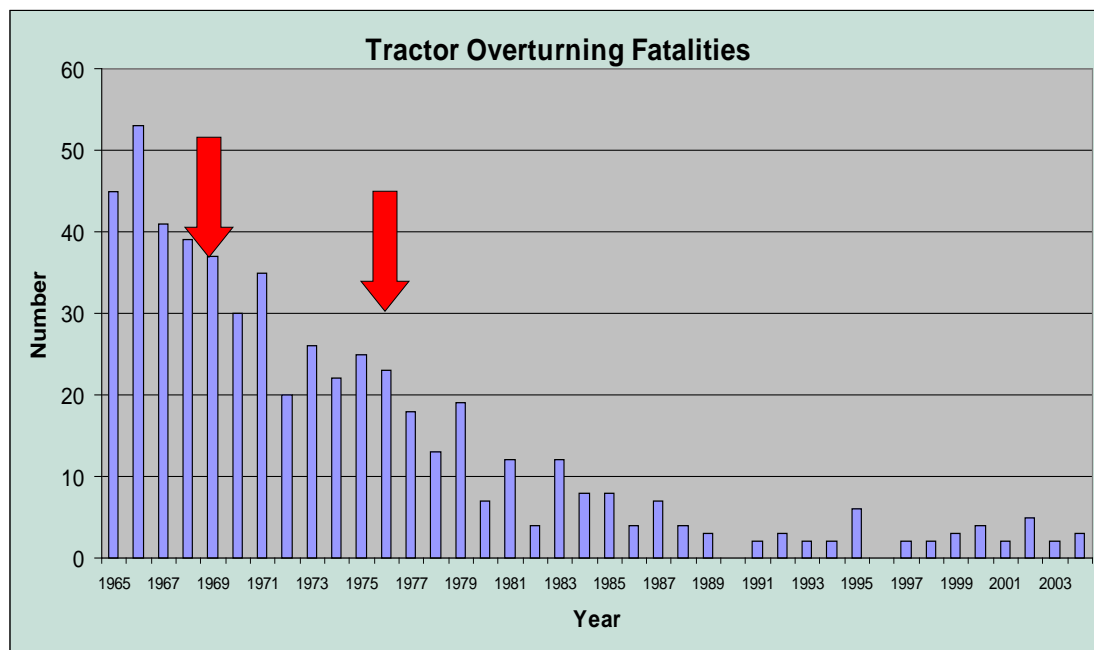
Noise Code (*Code 5*) test results are similar to those of the Performance Code (*Code 2*) in that they are tractor specific; they relate only to one model /vehicle configuration. Also, unless made public at the wish of the test applicant / manufacturer, the test results remain confidential and are not released by OECD.

## Operator Safety (ROPS / FOPS) Test Codes

### Roll-Over Protective Structure (ROPS) Test Codes

#### *Why Do Tractors Need ROPS?*

Tractors spend much of their time working off-road in the countryside, but these often variable conditions (*e.g. slopes, slippery surfaces, rivers and drainage ditches*) introduce a risk of instability, potentially leading to vehicle roll-over. Historically, before the widespread introduction of ROPS, tractor roll-over caused the deaths of many tractor drivers each year: the risk of severe injury or fatality was very high. Fortunately ROPS have long been recognised as an effective means of greatly reducing the likelihood of operator injury during overturning accidents involving agricultural tractors, construction or related forestry machinery. The presence of a ROPS cannot guarantee the operator will survive every type of roll-over accident; unfortunately some are simply too severe, but the practical benefits of ROPS are clearly shown by the data below, which comes from the UK.



(courtesy UK Health & Safety Executive)

In 1970 it was made a legal requirement for all 'new' tractors sold in the UK to be fitted with ROPS and from 1977 onwards ROPS had to be fitted to all existing tractors in-use on farms. As can be seen, the number of operator deaths due to tractor roll-over dropped dramatically from approx. 35 – 45 per year to approx. 4 – 8 per year. Today in the UK, most roll-over deaths result from the operator having been partially ejected from the protective zone provided by the ROPS, often because of the failure to wear a seat belt.

#### *History of ROPS / ROPS Test Standards Development*

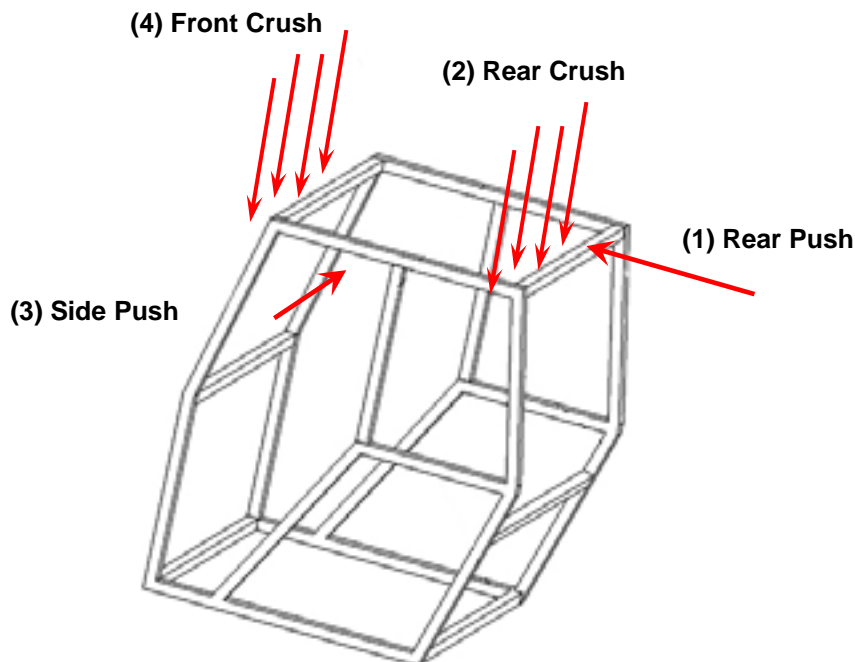
Sweden was one of the first countries to require tractors to be fitted with Roll-over Protective Structures (ROPS) back in the late-1950s, but similar national ROPS legislation followed in many other countries over the next 10 years. However, it's all very well to require ROPS to be fitted, but how can you ensure that the designs are fit-for-purpose and indeed are suitable for the particular design and size of tractor to which they are fitted? Many different agricultural engineering research institutes and universities studied the design and testing requirements for ROPS. This was achieved by a combination of research, testing

and examination of tractor roll-over accidents. In many cases tractor roll-overs were re-created under relatively controlled conditions, so the likely loadings applied to the ROPS and their subsequent behaviour of the structures could be studied. Today computer simulation modelling is often used.

Over time the resulting national ROPS testing standards were harmonised to create those which we know today, allowing OECD to be at the forefront of ROPS test standards development.

Initially ROPS performance validation tests were performed by use of a sequential combination of 'Dynamic' swinging (*pendulum-type*) mass impacts from the rear, side and possibly the front of the structure, supplemented by gradually-applied crushing loads to the upper 'roof' of the ROPS. This procedure is typified by OECD Code 3, which was originally introduced in 1966. The purpose of all ROPS tests is to ensure the ROPS will safely absorb a certain minimum level of strain energy during loading, without the structure failing or deflecting into the safety 'clearance' zone likely to be occupied by the operator. The level of test loading is related directly to the test tractor's mass because, during a roll-over, the heavier the vehicle, the greater the forces and impact energy which will be applied to the ROPS.

As tractor power and mass increased during the late-1960s and early-1970s, it became clear that the 'Dynamic' ROPS test procedure had certain limitations for testing ROPS fitted to heavier tractors. Quite simply it was increasingly difficult to apply the mass-related dynamic loading in a controlled and safe way as tractor mass increased. This problem was solved by the development and introduction of the 'Static' ROPS test procedure (*OECD Code 4*) in 1983. Following a great deal of research in a number of countries, a test procedure was developed which replaced the swinging pendulum mass with a series of slowly-applied loadings. The direction and sequence of loadings was retained, as were the vertically-applied crushing loads. The loading sequence for OECD Code 4 is shown in Figure 1. As before, the loading / strain energy levels which the ROPS must withstand are directly related to mass of the test vehicle.



**Figure 1. Typical OECD Code 4 'Static' ROPS test loading sequence**

Today's ROPS Test Codes have not changed so very much from the 1980's. The family of OECD ROPS Codes has expanded to include test procedures for Narrow-Track (*wheeled, vineyard and orchard*) tractors

(Codes 6 and 7), plus Crawler (tracklaying) tractors (Code 8) and Telehandlers (*self-propelled variable reach all-terrain forklift trucks for agriculture*) (Code 9). Fewer dynamic ROPS tests are performed today, the majority being conducted by the ‘static’-type procedures, of which Code 4 is the most frequently used.

However, unlike the other OECD Test Codes, a ROPS test relates to the particular structure tested, which may subsequently be fitted to a range of different tractor models. So the structure is usually tested with loadings to suit the heaviest model in the vehicle range, in the safe knowledge that the requirements of the lighter models will be satisfied. Also, the results of OECD ROPS tests are not made available to the Public, but remain confidential to the vehicle / ROPS manufacturer and the testing station which performed the test. When tested a test report is produced; this is subsequently checked by the OECD Coordinating (*Quality Control*) Centre and, if all is in order, an OECD Approval Number is issued for the ROPS to prove that it has met the test requirements. A list of ROPS tested, their OECD Approval numbers and the tractor makes and models for which they are suitable is available to the Public via the OECD Tractor Codes Website ([www.oecd.org/tad/tractor](http://www.oecd.org/tad/tractor)).

## **Falling-Object Protective Structure (FOPS) Test Codes**

### ***Why Do Tractors Need FOPS?***

Falling-Object Protective Structures (FOPS) are more commonly found on vehicles used in construction and forestry applications. They are frequently provided either by strengthening the cab roof or by fitting some form of external protective guard above it. In any case the purpose of a FOPS is to prevent vertically-falling objects from entering the operator’s safety zone and causing injury.

Certain regions, notably the Scandinavian countries, where it is common for agricultural tractors to spend part of the year performing light-duty forestry tasks, have required tractors be fitted with FOPS for many years. In recent years greater interest has been shown in this requirement within the European Union. In agricultural applications the specified (*light-duty*) FOPS requirements can often be met by a suitably reinforced plastic or composite material cab roof, supported by the ROPS.

### ***The OECD FOPS Test Code***

Many different FOPS test procedures exist, but all are relatively similar. A drop test object (*usually a steel sphere or cylinder*) is dropped from a certain height onto the FOPS. If it penetrates the FOPS or causes the FOPS to deflect to such an extent that it enters the driver’s safety zone, then the test is failed: otherwise the FOPS passes. The test object drop height and mass is chosen to subject the FOPS to a certain level of impact energy. The more demanding the intended operating environment of the vehicle, the higher the impact energy level. Depending upon the precise construction of the FOPS (*e.g. different materials or thicknesses*), more than one drop test may have to be performed upon different areas of the FOPS upper surface.

The OECD (*Code 10*) FOPS Test is intended only for tractors used for traditional agricultural tasks and therefore features a relatively low impact energy level compared with FOPS test procedures intended for construction or forestry equipment. A FOPS test procedure is also included within OECD Code 9 for the testing of both ROPS and FOPS fitted to Telehandlers (*variable-reach rough terrain forklift trucks*). The impact energy levels of the Code 9 FOPS test (*two alternative levels are provided*) are significantly greater than that found in Code 10 for agricultural tractors.

Similar to the OECD ROPS Test Codes, a FOPS test relates only to the particular structure tested, not a particular tractor or telehandler model. The FOPS may subsequently be fitted to a range of different tractor / telehandler models: as long as the mountings to the vehicle and the (*precise*) operator seating location are unchanged, the results are broadly applicable.

Again, as with ROPS tests, the results of OECD FOPS tests are not made available to the Public, but remain confidential to the vehicle / FOPS manufacturer and the testing station which performed the test. When tested a test report is produced, this is subsequently checked by the OECD Coordinating (*Quality Control*) Centre and, if all is in order, an OECD Approval Number is issued for the FOPS to prove that it has met the test requirements.

## Annual Meeting of the Tractor Codes

25-26 February 2020  
OECD Headquarters, Paris – France

### Tractor Codes Member Countries

<small>Austria</small>	<small>Belgium</small>	<small>Brazil</small>	<small>China</small>
<small>Czech Republic</small>	<small>Finland</small>	<small>France</small>	<small>Germany</small>
<small>Ireland</small>	<small>India</small>	<small>Ireland</small>	<small>Italy</small>
<small>Japan</small>	<small>Korea</small>	<small>Luxembourg</small>	<small>Norway</small>
<small>Poland</small>	<small>Portugal</small>	<small>Romania</small>	<small>Serbia</small>
<small>Slovakia</small>	<small>Spain</small>	<small>Sweden</small>	<small>Switzerland</small>
<small>Turkey</small>	<small>United Kingdom</small>	<small>United States</small>	

### Formal Applicant Countries

<small>Bulgaria</small>

### Potential Member Countries

<small>Argentina</small>	<small>Algeria</small>	<small>Indonesia</small>	<small>Malaysia</small>	<small>Mexico</small>
<small>Paraguay</small>	<small>Philippines</small>	<small>Saudi Arabia</small>	<small>Thailand</small>	<small>Ukraine</small>

<http://www.oecd.org/agriculture/tractors/>

# THE OECD TRACTOR CODES

**Code 2:**  
the performance of tractors

**Code 3:**  
the strength of protective structures for standard tractors (Dynamic Test)

**Code 4:**  
the strength of protective structures for standard tractors (Static Test)

**Code 5:**  
noise measurement at the driver's position(s)

**Code 6:**  
the strength of the front-mounted roll-over protective structures on narrow-track wheeled agricultural and forestry tractors



**Code 7:**  
the strength of the rear-mounted roll-over protective structures on narrow-track wheeled agricultural and forestry tractors

**Code 8:**  
the strength of protective structures on tracklaying tractors

**Code 9:**  
the strength of protective structures for telehandlers

**Code 10:**  
the strength of falling object protective structures for agricultural and forestry tractors



[www.oecd.org/tad/tractor](http://www.oecd.org/tad/tractor)



### Advantages of the OECD Tractor Codes

- **Global Certificate**  
*OECD approval numbers are recognized in 26 countries including 4 non-OECD members (China, India, the Russian Federation and Serbia).*
- **Global Network of Testing Stations**  
*OECD has currently 30 testing stations located in Europe, Asia and America, which ensure compliance with OECD tests and procedures.*
- **Fast Turnaround**  
*Average approval time is less than 5 days.*
- **EU Equivalence**  
*Equivalence of OECD Tractor Codes to EU Directives*
- **Enhanced Credibility and Fair Trade**  
*Tests done in a member country are always validated by the OECD's Co-ordinating Centre. This enhances credibility of tests for operators and guarantees compliance of manufacturers with rules and regulations promoting fair trade.*
- **Operator Safety**  
*Operator safety is one of the main pillars of the OECD Tractor Codes. The certification of adequate Roll-over protective structures (ROPS) and falling object protective structures (FOPS) has contributed to the reduction of tractor fatal accidents.*
- **Constant Evolution**  
*OECD Tractor Codes are updated regularly to take into account improvements in technical performance, safety and environmental protection.*
- **New Markets**  
*OECD Tractor Codes membership is constantly expanding bringing new market opportunities.*
- **Export Growth**  
*On average OECD Tractor Codes member countries report a 30 percent increase in tractor exports.*

[www.oecd.org/tad/tractor](http://www.oecd.org/tad/tractor)

## Biennial Test Engineers' Conferences

The OECD Tractor Codes are in constant evolution, they are updated regularly to take into account improvements in technical performance, safety and environmental protection. As part of this process, OECD Tractor Codes organises **Biennial Test Engineers' Conferences (TEC)**. These unique events gather engineers and stakeholders from around the globe to review and discuss testing practices. The TEC contributes to facilitate the verification of test reports carried out by the Co-ordinating Centre, which liaises between the National Testing Stations and the OECD for technical matters and allows test engineers to discuss, learn and exchange new ideas, methodologies and best practices.

**20 Test Engineers' Conferences were organised between 1981 and 2019.**

**20<sup>th</sup> Biennial Test Engineers' Conference**

1-3 October 2019  
To be hosted by FJ-BLT Wieselburg, Austria

Code 10 Code 2 Code 3  
Code 9 Code 8 Code 7 Code 6 Code 5 Code 4

OECD Standard Codes  
For the Official Testing  
of Agricultural  
and Forestry Tractors

2019 Austria  
2017 Japan  
2015 United States  
2013 Italy  
2011 Germany  
2009 Korea  
2007 Turkey  
2005 China  
2003 Spain  
2001 Finland  
1999 Czech Rep.  
1997 Japan  
1995 Italy  
1993 Switzerland  
1991 United States  
1989 Austria  
1987 Sweden  
1985 France  
1983 Germany  
1981 United Kingdom

OECD

<http://www.oecd.org/agriculture/tractors>



## 20<sup>th</sup> Biennial Test Engineers' Conference held in Austria in 2019

The 20<sup>th</sup> Biennial Test Engineers' Conference was hosted by Austria in Wieselburg and coincided with the 60<sup>th</sup> Anniversary of the OECD Tractor Codes. The conference was a success and counted with the participation of around 60 delegates from 18 countries (including non-OECD countries such as China, India, Russia, and Serbia), as well as representatives from industry.



Left to right: Mr. Brambila and Ms. Russel from OECD Secretariat, Mr. Luger, National Designated Authority from Austria and Mr. Prankl, Managing Director of Josephinum Research, HBLFA FJ Wieselburg.

The topics of the conference included discussions on electric tractors, virtual tests, autonomous machines and trends in precision agriculture in the United States. There were real demonstrations of electric agricultural machinery, vibrations tests, Code 2, Code 4, Code 9 and Code 10.



*Demonstration of Code 4*



*Demonstration of Codes 9 and 10*



*Demonstration of Codes 9 and 10*

## OECD Technical Working Group Meetings on Updating the Codes

A technical working group is an ad hoc group of experts on a particular topic who work together on specific goals. These meetings are often meant to encourage stakeholders to discuss the state of research on a topic and/or to identify gaps in research.

The OECD Technical Working Group Meeting was hosted by US in Ithaca, New York 30-31 October 2018. 32 delegates from 12 Member countries attended the meeting. Professor March, Cornell University, Chair of the Biological and Environmental Engineering Department (BEE), opened the meeting and welcomed delegates.

The main discussions included virtual tests, vibrations, Code 2, tolerances and problems with the foldable ROPS tests.



US also organised a visit and showed technical equipments to delegates.



Family photo

## OECD Tractor Codes and ISO

The OECD Codes refer to ISO standards as much as possible. Compared to the ISO, the OECD applies a centralised approval method for tests, which lends them international official standing. The ISO standardises certain aspects of manufacturing, measurement and testing of tractors in a partial and piecemeal manner, without there existing an international approval mechanism which allows to authenticate tractor description or performance and, therefore, not permitting comparison.

At the invitation of the US Delegation the OECD Secretariat took part in the ISO / TC23 / SC2 (Common Tests) plenary meeting in Alexandria, US on 6 May 2019.

The US hosted the Sub-working groups and plenary meetings of the International Standard Organisation (ISO) Standing Committees (SC) 2, 13 and 17 operating under the technical committee (TC) 23 on "Tractors and machinery for agriculture and forestry". The organisers were Outdoor Power Equipment Institute (OPEI) / The participants were experts from private manufacturers, industrial associations, ministries and national standard agencies.



*Plenary meeting of the ISO Standing Committee 2 on Common Tests, in the Outdoor Power Equipment Institute's facilities, Alexandria, the US, May 2019*

## OECD Tractor Codes in Asia

A particular feature of the OECD Tractor Codes is that, since 1981, a Test Engineers' Conference is organised every two years at the invitation of a participating country. The first Asian country that joined the Tractor Codes was Japan in 1966. Japan hosted the OECD Test Engineers' Conference in Omiya, in 1997. China joined the OECD Tractor Codes in 1988 and was the second Asian country to host the Engineers' Conference in Beijing and Luoyang in 2005. Korea became an official Member of the Tractor Codes in 1995 and was the third Asian country to host the Engineers' Conference in Suwon in 2009. Test Engineers' Conferences permit a correct and coherent interpretation of testing procedures and their development. Their primary purpose is the observation, review and discussion of testing practices by Test Engineers. They facilitate the verification of test reports carried out by the Co-ordinating Centre, which liaises between the National Testing Stations and the OECD for technical matters.

The three Asian countries that have hosted an OECD Test Engineers Conference demonstrated the relevance of the programme in the region. Over the last years, China has been one of the three countries with the highest amount of test reports sent to the OECD for approval.

India joined the OECD Tractor Codes in 1988. Farm machines and equipment play a pivotal role in crop production, and its handling, transportation, processing and preservation. Recognizing this, the Govt. of India had undertaken imports of farm equipment in the First Five Year Plan period. Simultaneously, for promoting the use of machines, the Government established the "Agricultural Machinery Utilization Training Centre" in 1955 at Budni (Madhya Pradesh). Prior to this, use of farm machines in the country, was quite scant. The objective of establishing the Budni Centre was to train the prospective farmers on proper use, maintenance and up-keep of farm machines. Subsequently, considering the imperativeness of the indigenous manufacture of farm machines/equipment, in 1959, a testing wing was added to the Centre; primarily with a view to ascertain the suitability of agricultural machines/equipment to the agro-climatic conditions of the country. The Centre was renamed 'Tractor Training and Testing Station'. In the year 1983, the Tractor Training and Testing Station was upgraded and renamed 'Central Farm Machinery Training and Testing Institute'. Viewing the importance of the testing of farm machines and training on various aspects of farm machinery, and to cope-up with the increased demand of trained manpower in the field of agricultural mechanization, three more Institutes were set up at Hissar (Haryana), Anantapur (Andhra Pradesh) and Biswanath Chariali (Assam) in the year 1963, 1983 and 1990 respectively.

Over a period of 5 decades, with the growth of indigenous production of tractors and farm equipment, the Institute has developed the necessary expertise and infrastructure and has attained International Standards in the field of farm machinery training and testing and is well recognized amongst leading testing organizations in the world. The Institute has accreditation of Organisation for Economic Co-operation & Development (OECD), Paris which has helped in export promotion of Indian Tractors.

## OECD Tractor Codes and ANTAM

The ANTAM is a regional network of national agricultural machinery testing stations, research and extension institutes, associations and farmers organisations across the Asia-Pacific region. The ANTAM Secretariat is hosted by ESCAP (United Nations Economic and Social Commission for Asia and the Pacific) /CSAM in Beijing, China. The ANTAM is implementing a 3-phase process:

- i) development of region wide agricultural standards
- ii) establishment of a network of testing stations
- iii) establishment of a mutual recognition agreement of test results.

The ANTAM has developed three codes, on power tillers, powered knapsacks misters-cum-dusters (sprayers) and paddy transplanters. ANTAM Code 1 on power tillers refers to OECD standards and the three ANTAM codes refer to ISO standards.

On 10-12 October 2019 the OECD Secretariat took part in the 6<sup>th</sup> Annual Meeting of the Asian and Pacific Network for Testing of Agricultural Machinery (ANTAM) in Moscow, Russian Federation. Thirty-four participants from 16 countries attended the meeting (Bangladesh, Cambodia, China, India, Indonesia, Japan, Republic of Korea, Malaysia, Nepal, Pakistan, Philippines, Russian Federation, Sri Lanka, Thailand, Turkey and Vietnam).



*Family Photo, Moscow, October 2019, with courtesy of CSAM*

**China, France, India, Japan, Korea, Russia and Turkey are members of the OECD Tractor Codes and are also members and or key partners of the ANTAM.**

# OECD TRACTOR CODES NETWORK



## OECD Tractor Codes Brochure

**The OECD Tractor Codes contain a set of rules and testing procedures on performance and safety**

The 2020 version of the brochure can be found on the Tractor Codes website at following address:

<http://www.oecd.org/agriculture/tractors>





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## Useful information

The following OECD web pages can be consulted for additional information (latest publications, news and events, list of participating countries).

### **Agriculture (general):**

**[www.oecd.org/tad](http://www.oecd.org/tad)**

OECD Directorate for Trade and Agriculture  
2, rue André – Pascal  
75775 Paris, Cedex 16  
France

### **Codes and Schemes (general):**

**[www.oecd.org/tad/code](http://www.oecd.org/tad/code)**

### **Tractors:**

**[www.oecd.org/agriculture/tractors](http://www.oecd.org/agriculture/tractors)**

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