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Regione Emilia-Romagna

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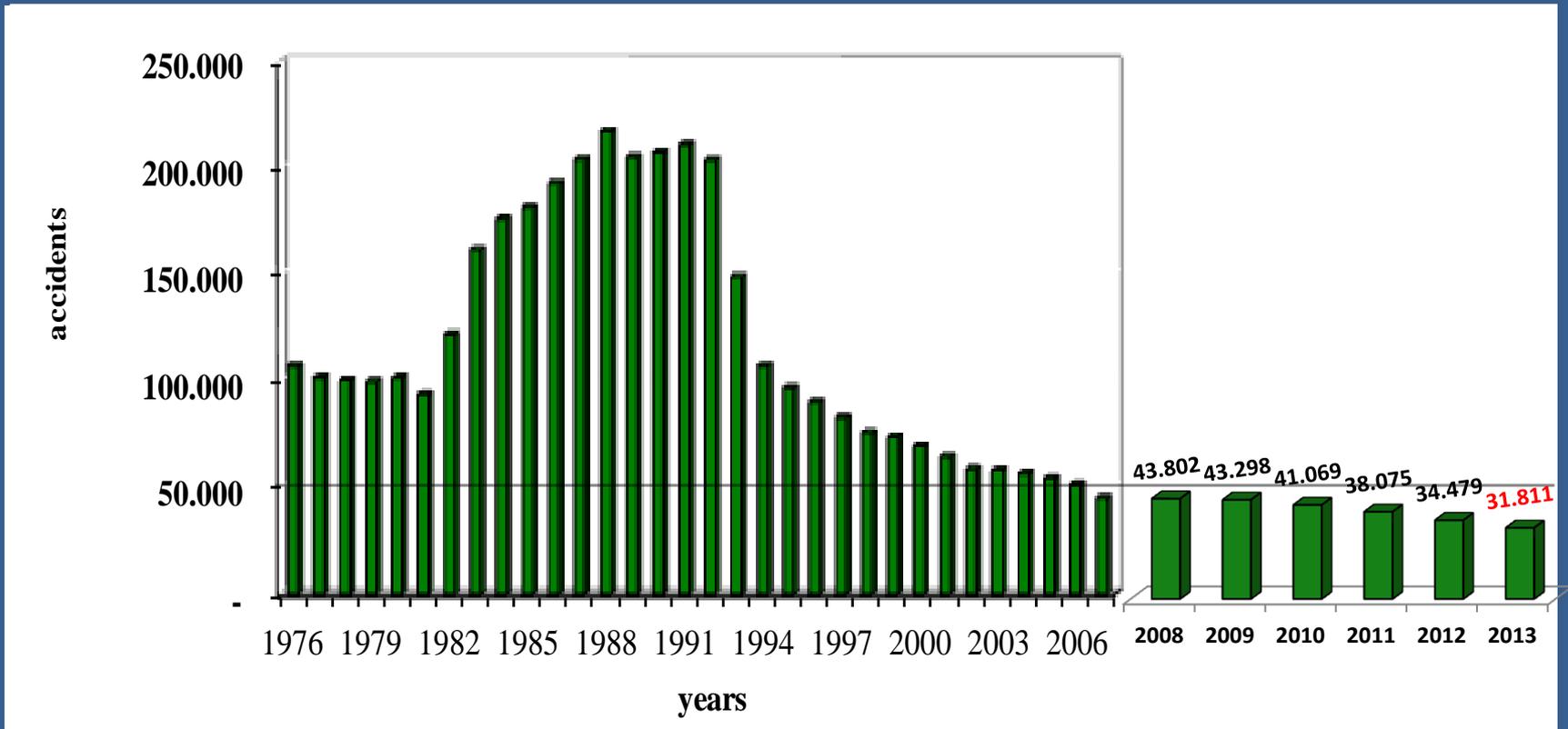


Meeting on safety of tractors and agricultural machinery

INAIL initiatives to improve safety in the use of agricultural machinery in Europe

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Accidents occurred in agricultural sector registered by the traditional detection systems (INAIL) and compensated until 31 October 2014

Since 1st June 1993 self-employed workers for whom the agricultural activity is not predominant are not subjected to mandatory insurance.

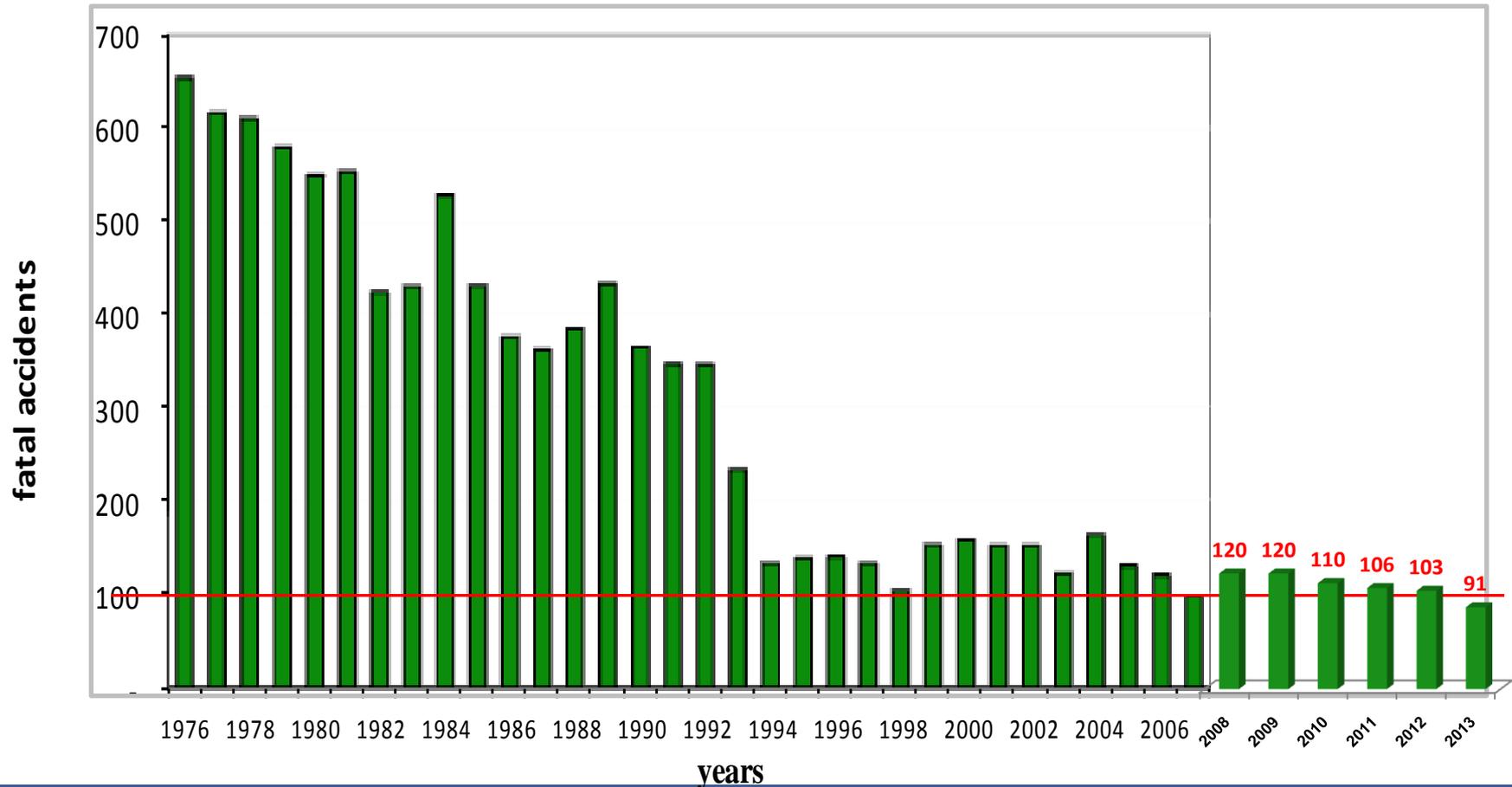
The main trend registered in the accidents occurred in the period between the beginning of 90's till today is significantly decreasing.

The last complete data refers to **2012** where about **34.000** accidents occurred (data coming from INAIL referring to compensated accidents until 31/10/2014).

The inversion of the trend is due to the implementation in the Italian legislation of EU social and product rules

But it has to be considered that the aforementioned trend is affected also by the decision by law to **exclude from mandatory insurance** self-employed workers for whom the agricultural activity is not predominant.

This lead to the increase of the number of agricultural workers (such as self-employed workers for whom the agricultural activity is not predominant and hobbyists) which are not taken into account in the official accident statistics.



Accidents occurred in agricultural sector registered by the traditional detection systems (INAIL) and compensated until 31 October 2014

Since 1st June 1993 self-employed workers for whom the agricultural activity is not predominant are not subjected to mandatory insurance.

Real – Time data required

At the beginning of 2015 are available data of the previous year (2014) which refers to accidents happened two years before (2013)

Lack of some data

Accidents occurred to self-employed workers for whom the agricultural activity is not predominant and hobbyists are not accounted among the official statistics of INAIL

Specific information

Sometimes it is necessary to have detailed information on the event (e.g. dynamic, environment conditions, etc.) which are out of the field foreseen by the official data base



**National Observatory on the accidents in
agricultural sector**

For this reason the INAIL research unit involved in the agricultural sector in between 2007 - 2009 developed a specific observatory in order to collect all the information about accidents involving agricultural machineries **which occurred also to self-employed people and hobbyists.**

The information about accidents in agricultural sector are collected from local newspapers (even on-line), emergency rooms, justice courts, etc.

When it is needed the information about the accident are deeply investigated and enriched by the involvement of **local inspectors for safety at work** by means a **specific national project** regarding the promotion of health and safety in the agricultural, forestry and zootechnical sectors (progetto CCM “Promozione della salute e Sicurezza nelle attività agricole, zootecniche e forestali”) approved by Ministry of Work.

The information collected allow to perform statistical analyses on the dynamics, machinery involved, environment, etc.

Dynamic	Fatal accidents per year involving tractor					
	2009	2010	2011	2012	2013	2014
Roll - over	123	116	94	87	88	89
Run over	10	9	21	11	11	13
Fall	10	8	11	6	7	7
Engine start from the ground	1	-	2	7	3	3
Not defined	2	2	12	2	8	9
Total	146	135	141	113	117	121

Environment	Fatal accidents per year involving tractor					
	2009	2010	2011	2012	2013	2014
Field	81	83	117	89	91	68
Public road	26	37	16	17	14	17
Other	3	2	8	1	-	24
Not defined	36	13	-	10	8	12
Total	146	135	141	117	113	121

In many cases the accidents registered in the observatory data base are due to **lack of safety requirements** of specific typologies of machineries.

Sometimes these lacks were deeply related to **insufficient or not clear requirements of specific harmonized standards** (e.g. the use of warnings instead of technical requirements).

As a first result of the data acquired by means of the observatory, INAIL took actions in order to:

- **ask for amendment or revision** of specific harmonized standards;
- develop specific **guide lines or good practice** for final users or employers;
- give **economical support** for aligning to specific safety requirements old tractors still in use.

On the bases of this experience INAIL is today involved in the **development of an European Standard** for the definition of a data base concerning accidents in the agricultural sector.

Since **2010** Italy started a **market surveillance campaign** during the main agricultural machineries international **fairs**.

This campaign was and still is one of the activities foreseen by a **national project** regarding the promotion of health and safety in the agricultural, forestry and zootechnical sectors (progetto CCM “Promozione della salute e Sicurezza nelle attività agricole, zootecniche e forestali”) approved by Ministry of Work.

INAIL and Regions with their local inspectors are the main Institutions involved in this activity.

Compliance verification and possible improvements of machineries safety requirements



Reduction of unfair competition



Improvement of the safety requirements of specific harmonized standards



Safier machineries placed on the market or put into service

The market surveillance activity at fair from 2010 till 2014 allowed to investigate about **170 agricultural and forestry machineries**.

Fair	Machineries
• International Fair EIMA 2010	25
• International Fair Agri Levante Bari 2011	21
• International Fair Cremona 2011	10
• International Agri Business Show Verona 2012	24
• Agricultural Fair Tarquinia (VT) 2012	17
• International Fair EIMA 2012	21
• Agricultural Fair Campoverde (LT) 2013	4
• Agricultural Fair Codogno (LO) 2013	4
• International Fair Cremona 2013	5
• Agricultural Fair Tarquinia (VT) 2013	14
• Agricultural Fair Santa Lucia di Piave (TV) 2014	12
• International Agri Business Show Verona 2014	15

The market surveillance activity developed at fair is focuses on **specific categories of machines** considered **potentially dangerous** based on **accident data** coming from National Observatory or which may have **compliance issues** due to the **evolution of the specific harmonized standard**.

According to Article 6 of Directive 2006/42/EC **only machines which are not provided with a visible sign** clearly indicating that they do not conform and that they will not be made available until they have been brought into conformity are investigated.

The main typologies of machineries investigated are:

- Pedestrian controlled tractors / Motor hoes



- Round balers



- Self-propelled agricultural machineries



- Flail mowers



The main typologies of machineries investigated are:

- Silage loading, mixing and distributing machines



- Solid fertilizer distributors



- Backhoes



- Wedge splitters



The main EHSR investigated are:

- Silage loading, mixing and distributing machines
 - 1.3.8.2 “Moving parts involved in the process”
- Round balers
 - 1.2.3 “Starting”
 - 1.4.1 IV indent “General requirements of guards”
- Flail mowers
 - 1.3.3. “Risks due to falling or ejected objects”
- Pedestrian controlled tractors / Motor hoes
 - 1.1.2 “Principles of safety integration”
 - 1.2.2 “Control devices”

The main EHSR investigated are:**- Agricultural self-propelled machineries****3.2.2 “Seating”****3.4.3 “Roll-over and tip-over”****- Wedge splitters****1.4.1 IV indent “General requirements of guards”****- Solid fertilizer distributors****1.3.7 “Risks related to moving parts”****1.3.8.2 “Moving parts involved in the process”****1.4.2.1 “Fixed guards”****- Backhoes****1.3.9 “Risks of uncontrolled movements”**

Market surveillance activity at fairs allows to:

- perform a **preventive verification** of the safety requirements before machineries are put into service;
- verify an **higher number** of machines than the one obtained by means of the normal market surveillance activity;
- **act before an accident occurs.**

This should lead to:

- a **reduction of accidents** which may occur due to specific non-compliances;
- a **reduction of unfair competition** among manufacturers;
- **possible improvements** of specific **safety requirements** at standardization level.