

CEMA



CEMA's Position on Industry Challenges



The European
Agricultural Machinery
Industry



The European Agricultural Machinery Industry

- 4,500 manufacturers
- 28 billion Euro production volume
- 135,000 persons employed directly
- Additional 125,000 persons in the distribution and maintenance network
- 450 different machine types



CEMA



What we need

The European agricultural machinery industry is a successful innovative part of the engineering industry. We develop solutions for all challenges and demands from the farming sector – in Europe but also other parts of the world.

To remain successful suppliers to European and world markets, we must ensure we have a competitive cost base alongside our use of the best technology and our innovative drive.

National governments and the European institutions can play their part by fostering positive economic conditions – and providing a level legislative playing field to ensure fair markets for those operating in Europe.

CEMA promotes these aims by forming common industry positions on key topics. This folder addresses some of the fundamental commercial issues we are facing. Should you require more detail on any of our policies and interests, contact the CEMA secretariat.





What we offer

Feeding the growing world population, providing enough renewable resources and protecting the environment are core issues for today's agriculture and the whole society. To reach these targets agricultural machines are a key factor for success.

Modern agricultural machines enable farmers to:

- efficiently use the scarce agricultural area
- maximize harvest results via minimal losses and careful treatment
- use water in a targeted and responsible way for irrigation when needed
- nourish plants with exactly the amount of fertilizer not provided by the soil
- protect their crops against damage via exact dosage and targeted application to maximize the yield while protecting nature
- take the right decisions by providing all necessary information electronically
- manage their farms efficiently

The European agricultural machinery industry provides solutions for all of these challenges - from large farms around the world with several thousand hectares to family-run farms in alpine areas. There are solutions optimized specifically for small-scale organic farming needs as well as industrial-style production of renewable energy plants. The use of agricultural machinery is a prerequisite for all these farm types to be effective.

Engine Emission Directive and the economic crisis

The Challenge

The costs for redesigning mobile machines for Stage IIIB are estimated at 2.7 billion Euro and are a major cost increase factor for the two sectors. The main costs are for R&D that will occur from 2009 to 2011, which are also the years when the global economic crisis will result in a huge loss of income.

This will have a direct financial impact, estimated at 550 million Euro in total or 3 million Euro per average company. It will also directly affect the survival of many producers, especially smaller and medium sized companies, through liquidity and cash-flow crises.

The CEMA position

In this period of economic crisis, CEMA and CECE request that for construction equipment and agricultural machinery (incl. tractors) the flexibility provisions of the directives 2004/26/EC and 2000/25/EC must be increased from 20% to 50%. The increased flexibility will allow manufacturers to better distribute the capacities and costs of re-design over a period of 3 years according to the individual needs of the companies.

It is important to remember that a percentage figure of 50% flexibility does not mean that every second sold machine falls under the scheme. The 50% figure refers to the quantity of an average year and this quantity can be distributed over the whole period of the following stage (3 years). This means that used equally over the period of 3 years, a manufacturer could apply the flexibility provision each year for 16.6% of his total European sales. Alternatively, if used completely at the beginning of the period, it could be applied for 6 months on all products of the respective power-band and, after the initial 6 months, only Stage IIIB engines could be provided for the next 2.5 years.

The downside of an enlarged flexibility would be a slightly higher amount of exhaust emissions compared to the 20% flexibility. However, in Europe a new machine will most probably replace one or more existing old machines

“In these dark times industry’s fuel for innovation is not endless... some comprehension and common sense would get us much further.”



CEMA President Federico Corradini (CNH)

equipped with engines prior to Stage III. The overall effect on emissions, regardless of the rate of flexibility, will therefore be a reduction. 50% flexibility will only temporary lead to a slightly lower decrease. The decrease in sales and the utilization of Construction and Agricultural Equipment during the years of financial crisis will further reduce the overall emissions produced, which is clearly evident today.

The 50% flexibility therefore leads to considerable positive economic effects at the cost of a negligible environmental effect.



Agricultural tractors out of the Machinery Directive

The Challenge

Tractors are excluded from the Machinery Directive 98/37/EC. At the time the new Machinery Directive 2006/42/EC was adopted, the Tractor Directive did not deal with all the risks associated with the use of tractors. In order to ensure that all relevant risks were covered, agricultural and forestry tractors were excluded from the scope of the Machinery Directive only **for the risks** covered by the Tractor Type-Approval Directive (2003/37/EC). For risks not covered by the Tractor Directive, the Machinery Directive applies.

The manufacturer of a tractor should therefore assess the conformity of the tractor with the essential health and safety requirements of the Machinery Directive that deal with the risks concerned, affix the CE-marking to the tractor and establish an EC Declaration of conformity. This EC Declaration of conformity should be included in the technical construction file together with a reference to the EC type-approval according to Directive 2003/37/EC.

The CEMA position

When the Machinery Directive 2006/42/EC was adopted, the following joint declaration was made by the European Parliament, the Council and the Commission: to cover the health and safety risks of agricultural and forestry tractors, 2003/37/EC needs to be modified so as to address all the relevant risks of the Machinery Directive. Such a modification of Directive 2003/37/EC should include an amendment of the Machinery Directive, in order to delete the expression “for the risks”.

CEMA has contributed largely to the identification of a list of remaining risks by the Commission and the necessary new standards and changes in legislation to cover these risks. **It is of utmost importance that tractors are excluded again from the Machinery Directive and that any new health and safety risks will be dealt with under the**

tractor directive. An official agreement of the Commission and Member States is needed before 29 December 2009. An approval in ‘Comitology’ (in the Committee for adaptation to technical progress by Commission and member states representatives) is at hand.

“Why change a good working system, set up for such dedicated applications? It is open to reduce adequately new identified risks with full support of all stakeholders... there is no need to place manufacturers in a situation of legal uncertainty and to add unnecessary administrative burden.”

CEMA Technical Board Chairman Dr. Heribert Reiter (Fendt)

The next step is an amendment of the Machinery Directive. Only then, all legal uncertainty will be removed.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

The new tractor framework regulation

The Challenge

The European directive 2003/37/EC deals with type approval of agricultural and forestry tractors, and their trailers and interchangeable towed equipment (type approval of trailed vehicles/machines being limited to road safety aspects). Before this directive came into place each of the EU member states had its own procedures and standards defining the rules for the registration or first use of agricultural and forestry tractors. The implementation of the requirements of this Directive means that manufacturers are able to sell their products all over Europe without having to change the designs to meet any specific local requirements.

The European Commission wants to apply the principles of simplification and unification to the type approval procedures for all vehicles under type approval. The Commission proposal should be finished before end of 2009.

The Commission is using the type approval procedures for the cars sector as the basis, creating new and not always appropriate requirements for the agricultural sector.

The CEMA position

CEMA has had a very positive approach towards this new proposal to look for opportunities and a way to improve on errors in communications from the past. A good example would be the clarification of the scope.

- CEMA requests that a mandatory EC type approval should exist only for a number of T tractors. For all other tractors and machines optional EC type approval would be more appropriate as many vehicle types are for specific applications in specific regions. It would be quicker and more appropriate to allow manufacturers to choose for these models national solution alternatively to a European.
- CEMA is in favour of an inclusion of self-propelled agricultural vehicles in the scope for optional EC road type approval as a means to harmonize road safety technical requirements in Europe.

“The goal is harmonization and fast technical adaptation to the state of the art...by keeping the parts of the current system that work appropriate and seek opportunities for an even more efficient system, e.g. an explicit exclusion of tractors from the scope of the Machinery Directive.”

Antoon Vermeulen (CNH)

- CEMA believes it to be appropriate that certain small trailers and interchangeable towed machinery e.g. machines that do not need braking requirements, should be able to prove to fulfil all requirements for EC type approval by self-certification.

Further on CEMA is still very concerned on a number of subjects that have nothing to do with type approval, but would have a deep impact on the sector. A good example is the requirement that “manufacturers shall provide unrestricted and standardized access to vehicle repair and maintenance information to independent operators” or the provisions for “recall of vehicles”.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

Tractors Emission Directive –

T2 – C2-T4.1-C4.1 delay

The Challenge

Narrow tractors and high clearance tractors (categories T2/C2 and T4.1/C4.1 according to Directive 2003/37/EC) are dedicated machines that are specifically developed for fruit and vine cultivations requiring the ability of the tractors to operate in extremely restricted spaces maintaining high manoeuvrability.

These high value crops, limited to selected regions, are optimised for quality and yield, the European Union subsidised their restructuring and defined the present layout and, implicitly, the tractors requirements. These tractors are totally dedicated machines, unsuitable to operate in other areas and almost exclusively used in the EU.

Directive 2000/25/EC defines the emission requirements for agricultural and forestry tractors equivalent to Directive 2004/26/EC for non-road mobile machinery. Starting from stage IIIB the limits on gaseous and particulate emissions will require the installation of exhaust after-treatment systems and much larger cooling systems. The installation of such devices would impose an increase in dimensions and a loss of manoeuvrability incompatible with the cultivations.

The CEMA position

The engine packaging is already a very challenging task for the 'Compact Tractor' manufacturer going from phase II to phase IIIA, due to the increase in required performance of the cooling system including charge air cooling. After-treatment systems (particulate filters and NOX selective catalysts) have dimensions totally incompatible with the engine compartments, their remote installation would make them ineffective. An increase of the current dimensions to accommodate these devices would be totally incompatible with the functionality of these tractors.

The European Joint Research Centre and ARCADIS, operating on behalf of DG Enterprise and industry, confirmed with their studies the findings of CEMA:

- The overall dimensions of these tractors are dictated by the cultivations. Adopting any after-treatment system would make the size of these tractors increase in a way not compatible with their functionality, thus leaving a

“Specialized tractors and implements are the key factor to allow farmers to improve their cultivation and get best quality with an acceptable income. European legislative system shall correct the shortcomings of its decisions that would put products out of the market well beyond its original intentions.”



Maurizio Bandini (ARGO)

significant part of the European agriculture without a fundamental tool;

- The environmental impact of these tractors is negligible.
- The economical impact on the manufacturing industry and agriculture far outweigh the environmental benefits.
- The lack of suitable tractors would extend the life of the existing ones, specifically pre-regulation tractors, thus leading to a substantial stop in the improvement of exhaust emissions in this particular sector.

CEMA requests an exemption for T2, C2 and T4.1 tractors as no technical solution is available.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

Harmonization and unification for sprayers

The Challenge

Sprayers or more general pesticide application equipment are included in the Machinery Directive, and have always been, under the generic definition of 'machinery'. However it is also a machine that distributes pesticides. Not only machine safety but also environmental safety requirements are therefore applicable.

The Machinery Directive is only one part of a comprehensive legal framework on pesticides and their use. The European legislator recently reinforced this framework by revising the framework directive on the sustainable use of pesticides and the regulation on pesticides. Regarding 'pesticide application' there are requirements, not only for manufacturers but also for pesticide producers, member states and farmers regarding 'good practice', technical inspection of machinery, education, information, etc.

How to guarantee the highest environmental safety has been a point of discussion when inserting environmental requirements for sprayers in the Machinery Directive, and it is now again in the discussion regarding the inspection of sprayers in use.

The CEMA position

CEMA has always been in favour of realistic harmonization. The introduction of environmental requirements for sprayers in the Machinery Directive 2006/42/EC was a good example of such harmonization. The result is one piece of legislation containing all safety requirements, including the environmental safety for placing sprayers on the market. Persuasion was however necessary to make sure that self-certification was seen as the right conformity assessment procedure and that standards were seen as the right tools to work out the detailed technical requirements and tests according to the state of the art. Harmonised standards, such as EN 12761, pr EN ISO 4254-6 and EN 13790, aid manufacturers in providing a uniform high quality product within Europe and also enhancing an International sale.

Not just harmonization is of concern to CEMA. There is also the unification of the different legislations and standards between the machinery standards and the in-use inspection standards, for example EN 13790. It should be avoided that

these standards have contradictory requirements. In reviews the content of all involved standards should be compared. Such unification should also cover the environmental requirements now imposed by different national authorities on e.g. the cleaning of machines, determination of drift, how to handle rest residues, etc. With uniform requirements over all Europe, it will be easier and more profitable for manufacturers to develop the necessary intelligent solutions.

"The harmonized standards and the self certification procedure provide the manufacturers with the innovative freedom. The mutual recognition of test procedures all over Europe will ensure the high performance of our innovative products over their lifetime."



Peter Oldenkamp (Dubex)

CEMA recommends that in the further developments of EN13790 national variations are reduced so that only one uniform standard remains for inspection.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

The Challenge

According to the amendment of the "Fuels Directive" (2009/30/EC) the maximum permissible sulphur content of gas oils shall be 10 mg/kg as from 1 January 2011. However, in order to accommodate minor contamination in the supply chain, Member States may, from 1 January 2011, permit gas oil intended for use by non-road mobile machinery and agricultural and forestry tractors to contain up to 20 mg/kg of sulphur at the point of final distribution to end users.

The problem is that the 1st January 2011 is the same date as the introduction of stage IIIB for >130 kW engines in non-road machines and agricultural tractors. Fuel sulphur levels above 20mg/kg are not compatible with the emissions control technologies being developed for use on stage IIIB and IV engines. Moreover, the continued use of 1000 mg/kg sulphur fuel could permanently damage the emissions after-treatment systems and engines and will degrade the emissions performance

Furthermore will it be allowed until the end of 2011 to continue using 1000 mg/kg sulphur for agricultural and forestry tractors.

The coincidence of the date of introduction does not provide any time for high sulphur fuel to be purged from end-users storage tanks prior to sulphur sensitive technologies entering use.

The CEMA position

CEMA welcomes the clarification of the European Commission that the 1000 mg/kg high sulphur fuel may be used for old (!) tractors only within 2011.

Industry applauds those member states who have already mandated fuel for non-road machines and agricultural tractors to contain no more than 10 mg/kg sulphur and challenges all other member states to follow this example and to ensure in their territories the mandatory supply of this fuel no later than 1st January 2010, rather than 2011, noting that 98/70/EC Article 4(5) already provides discretion to take this action.

"Through massive R&D and investment, our industry is now ready for entering Europe's blue skies. However our new and complex environmental systems need low-sulphur fuels for functioning properly. We hope that Member States and oil-suppliers do their outmost to make for making these fuels available so that EU citizens will enjoy a cleaner environment."



CEMA Vice-President Dr. Gilles Dryancour (John Deere)



Harmonization of requirements for 'high speed' tractors

The Challenge

The European directive **2003/37/EC** deals with type approval of agricultural and forestry tractors, trailers and interchangeable towed machinery. Before this directive came into force, each of the EU member states had its own procedures and standards that allow for the registration or first use of agricultural and forestry tractors. The implementation of this Directive enables manufacturers to sell their products all over Europe without having to change the designs to meet any specific local requirements.

Still not everything is solved. For tractors with a design speed over 40 km/h no European harmonization exists and manufacturers have to contend with differing rules in the 27 Member States.

The CEMA position

The CEMA position is clear: there is a need for harmonization taking into account the current legislative framework complete for T1, T2 and T3 tractors, the state of the art, existing national rules, and additional risks due to higher travel speed and increased road use.

Member states should avoid the further development of diverging national rules for high speed tractors which is neither appropriate nor desirable.

The European Commission should prepare a legislative proposal to complete the current framework for high speed category T5 tractors.

“High speed T5 tractors are the flagship vehicle of this industry. It is imperative that the European market has a level playing field for the sale of these vehicles.”



Mark Ireland (JCB)

CEMA itself is mobilised to investigate the implication on the legislative side but also the standardisation side. A common industry proposal will be the result.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

Harmonization of tractor braking performance

The Challenge

The European directive **76/432/EEC** is the separate directive for braking under the tractor framework directive. At first it was only for tractors up to 40 km/h (categories T1, T2 and T3). When the directive came under revision, tractors faster than 40 km/h (Category T5) and trailers & interchangeable towed machinery (category R&S) came into the scope. Until a compromise has been found between European Commission/ member states/ industry categories, T5 and R&S vehicles fall under national type approval for braking.

In view of the revision a study was published in 2007. A very worrying conclusion of this study, a study that was far from complete, was that there should be a mandatory requirement of a specific technological solution ABS for tractors driving > 40 km/h to meet safety requirements.

The CEMA position

CEMA has always been in favour of more harmonisation and therefore the inclusion of R&S vehicles and T5 tractors in the scope of the braking directive. But with the general understanding that this can be completed much quicker. CEMA has a strong position on the necessary requirements to have a realistic proposal that guarantees safe use of machinery on the road, for example...

- no ABS for tractors driving less than 60 km/h;
- no automatic coupling of the split brake pedals above a certain speed;
- in general different requirements based on speed. (different compatibility charts between tractors and towed vehicles based on the tractor speed);
- lower requirements for vehicles designed for maximum travelling speed less than 30 km/h;. the reason is that for certain tractors and towed implements no technical solutions are available yet;
- adaptation for crawlers

“Safety on the road is everybody’s responsibility... There is more to it than just the tractors.”



Giovanni Esposito (SDF group)



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

Road Safety for mobile machines

The Challenge

Requirements governing the use of self-propelled agricultural machinery on the road are still a non-harmonised area in the EU with many of the 27 Member States having their own rules for the design and conformity assessment of machines. This results in a differing level of road safety for these machines in circulation in the various Member States. Manufacturers have to apply different solutions which often have the same safety objectives. It implies significant engineering and administrative burden and therefore high cost and time inefficiencies. European Commission sponsored studies have shown that this is an area in need of a legislative framework. While for other types of vehicles the internal market exists, the European legislators have been struggling to fill this legal gap for years.

The same can be observed for trailers and interchangeable towed equipment. These machines have a European legislative framework for road safety as they fall under the scope of the European directive 2003/37/EC (EC type approval of agricultural and forestry tractors, and their trailers and interchangeable towed equipment). However no detailed requirements have been worked out for these machines. Consequently the design regarding road safety has to follow the 27 different national legislations.

The CEMA position

CEMA will take up the task of preparing positions and propositions for more harmonization in Europe on road safety. A major step could be the inclusion of self-propelled agricultural machinery in the chapter of road safety of the new tractor framework regulation. This works already for trailers and interchangeable towed equipments. But apart from the legislative path to be followed, proposals of working items need to be forwarded for CEN standards with technical solutions based on the state of the art.

A first step in the standardisation process is aiming at equal requirements on warning boards and –foils which are used for the marking of agricultural vehicles to the front, to the rear and to the side. A subject where differences between member-states lie within the details.

“The long journey of harmonisation of road safety begins with the first step of standardisation of a detail.”



Leon Van Amstel (Kuhn)

In a later stage all aspects of road safety for trailers and interchangeable towed equipment and self propelled vehicles will follow.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

Engine Emission Directive – Upcoming challenges

The Challenge

Climate change will continue to provide many challenges. A key factor is the reduction of greenhouse gases and in particular the CO₂ emissions, which will also include the contribution from agricultural machinery.

According to the Engine Emissions Directive (2004/26/EC) the Commission has an obligation to assess the need for a system for 'in-use compliance' and examine possible options for its implementation. The Commission's Joint Research Centre (JRC) is working out how to do this. A possible solution is to use some form of Portable Emissions Measurement System (PEMS).

Another issue is that there are an increasing number of local environmental zones being designated in cities or city centre areas within the EU, primarily due to the EC Particulate Directive (1999/30/EC). In these areas, tighter particulate limit values are requested, especially for motor cars and trucks. However, mobile machinery is being included more and more which often requires a retrofit, with exhaust emission after-treatment systems, for existing machines.

The CEMA position

CEMA is convinced that the agricultural equipment industry must continue its investment in longer-term product design technologies to ensure that we make the cleanest and most fuel-efficient machines possible. We have an opportunity in Europe to create a centre of excellence in terms of how we contribute to the global effort to reduce greenhouse gases and in doing so, create a competitive advantage by engineering advances that give lower operating costs for our customers.

CEMA and CECE are contributing to the PEMS programme by delivering machines to study the feasibility of PEMS, especially taking into account the different ways PEMS equipment must be installed and its own robustness in 'real life'. This study will determine the practicality of the process and most importantly, its impact on safety for both the machine and the operator. Once this study is finished CEMA and CECE will follow closely the next steps.

Regarding retrofit, CEMA is in favour of measures to protect the environment, but this must happen within a European harmonized approach and that it does not conflict with the freedom to innovate.

“To meet the climate challenge will need a multi faceted approach.”



Michael Hawkins (CNH)



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

Towards a European accident database for agricultural vehicles

The Challenge

Agricultural machinery seem to be involved in a consistent number of accidents registered throughout Europe, and in some cases resulting in heavy or fatal injuries. Mass-media information often create wrong perceptions about the reason of failure and the involvement of manufacturers as being solely responsible for any malfunction. There might be different reasons to cause those accidents: the machine could be outdated or not well maintained, the operator could have misused the machine or is not well trained to handle the machine or there could be other unforeseen factors.

Today manufacturers do not have complete and reliable statistical data on the circumstances of accidents. It's commonly understood that no appropriated solutions could be adopted without reliable feedback.

Manufacturers propose to have a proactive collaboration with public institutions on safety issues and they suggest creating a consolidated European database with complete and objective information.

The CEMA position

The agricultural machinery industry has never declined to take up its role as provider of high levels of safety for its customers. And when new safety features were required due to technical safety shortages, a full collaboration was provided.

However the balance between requested safety requirements and added-customer value should be respected. The prevention of accidents should be seen as the goal, reached through necessary and sufficient means proportional to the risk level and not exclusively by the highest level of machine safety.

A first important step is having a common protocol to identify all relevant technical aspects like vehicle identification and configuration, functional operability, human and environmental factors identification.... Manufacturers fully agree that activity will lead to a better understanding of the accident causes and as a direct consequence, they could

"We can proportionally increase the safety level in the use of agricultural machinery through an accurate study of the accidents causes."



Massimo Goldoni

contribute to give real effective and fast solutions. The social benefits are strong and evident.

CEMA has a European project plan to start defining a standard protocol for database accidents . A second step will be to gradually build up a consolidated European database based on national accident databases. According to that scenario, a first reference pilot project is starting up in Italy.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

Customer support on Whole Body Vibration

The Challenge

Whole body vibration (WBV) is seen as one of the key factors in the occurrence of back pain. Whether as enhancer of the susceptibility of the body to damage or as directly involved as harming element, it is a factor not to be neglected. It is the responsibility of the employer (physical agent directive 2002/44/EC) to make sure that his employees are working in a safe environment and that risk factors as exposure to whole body vibrations are taken into account. But also the manufacturer has to ensure that his machine produces vibration levels below the values as mentioned in the legislation (Machinery Directive or Tractor Framework Directive)

However many factors influence the occurrence of back pain and whole body vibration exposure is only one of these. It is believed that a combination of factors is even more detrimental to health.

The CEMA position

CEMA is in favour of the highest possible protection of the customer. In the case of WBV exposure the first action would be to analyse all influencing factors in more detail with the same identification tools all over Europe. Therefore CEMA has a WBV protocol ready to help all those involved, either employers, assurance companies, government inspection services, etc in analysing the vibration exposure of employees. This protocol will allow the identification of the machine and combination of machines/implements, machine conditions, operator condition, road/field conditions... More accurate data will allow making any necessary changes or recommendations to customers/users.

However as prevention is of utmost importance and operator behaviour has been found to be a determining factor in the occurrence of back pain, CEMA has drafted a WBV guideline to help users

of agricultural vehicles to change driving and handling behaviour accordingly.

The gathered uniform information from different stakeholders may lead in future to improved and easier to use measurement methods.

“We always intend to provide the highest possible health protection and safety for our customers. Therefore not only pure knowledge about machinery is requested. By gaining knowledge we can continue to help protect operators and continue to improve technical developments in the future.”



Dr. Christian Von Holst (John Deere)

The protocol and WBV guideline will be available on a CEMA webpage (www.CEMA-WBV.eu) and manufacturers can refer to this webpage in their manual as extra support for their customers.



CEMA - European Agricultural Machinery

Diamant Building, Bd A. Reyerslaan 80, BE-1030 Brussels – T +32 2 706 82 26 – F+32 706 82 10
info@cema-agri.org – www.cema-agri.org

CEMA



CEMA

European Agricultural Machinery

Diamant Building
Bd A. Reyers 80
BE-1030 Brussels
Belgium

Phone: +32 2 706 82 26
Fax: +32 2 706 82 10

E-mail: secretariat@cema-agri.org
Website: www.cema-agri.org

www.cema-agri.org