



# CLIMMAR

October 2018

## **POSITION PAPER ON SMART FARMING**

### **Definition**

*“Smart Farming” stands for the integrated internal and external networking of farming operations where machines and devices are linked to growing processes of plants and animals, . This means that information in digital form exists for all farm sectors and processes; communication with external partners such as suppliers and end customers is likewise carried out electronically; and data transmission, processing and analysis are largely automated. The use of Internet-based portals can facilitate the handling of large volumes of data, as well as networking within the farm and with external partners.*

### **Contemplation and impact Smart Farming**

Precision farming technologies as standard equipment of tractors, harvesters and other equipment use features such as smart control devices (on-board computers), sensors for the operation of the machine and the agronomic process, advanced automation capabilities (guidance, seed placement, spraying) and communication technology (telematics) embedded in the vehicle.

A new boost in Precision Farming can be observed around the early 2010s based on the evolution of several technologies: improved sensors and actuators, low cost microprocessors and high bandwidth cellular communication.

In Smart Farming we are at the start of developments now. Smart Farming has extended Precision Farming by greater use of real-time sensor technology, including data fusion for decision-making support. This is where new components will be used in order to make use of existing potential for optimizing complex agricultural production systems.

The services with new algorithms being developed to transform data into value adding information, to optimise the products and the agronomic process, reduce risk and limit vulnerability from external influences like machinery breakdown, weather and diseases. In the attachment additional background information is gathered that gives a good insight in the opportunities of Smart Farming

Several research institutions expect that Smart Farming Techniques will gain new investments in the ag-food chains of billions of euro’s. The life-cycle of these techniques will be long and promising for as well suppliers, as well farmers-users, as well consumers.

### **View of Climmar**

Smart Farming promises longterm, growing business opportunities for farmers. Therefore European dealers urgently need to pick up these opportunities by facilitating farmers to adopt and join Smart Farming (Techniques).

### **Position Climmar**

Climmar promotes and facilitates implementation and growth of Smart Farming, by taking the next positions:

1. **Awareness by dealers on the impact of Smart Farming needs to be supported**
2. **Focus** needs significantly be shifted **towards the optimal integration of the farm machine into the production system** (process optimisation.) Ag-Machinery should be (highly) compatible especially concerning ICT-linking
3. It is important to obtain – provided the end customer agrees – **access to farm machinery-related data**; There should be an independent business role for the dealer to exchange data (RMI, Telematics) with manufacturers and to advise farmers and contractors
4. **Dealers** (and manufacturers too) of agricultural machinery will **have to network with data portals**, so as to provide the possibility of data exchange. If necessary, portals can also be offered by manufacturers/dealers themselves.
  - a. Specific benefits can be provided by the utilisation of data portals,
  - b. For dealers of agricultural machinery, networking with a data portal can also provide additional advantages,
  - c. Urgently needed is a Code of Conduct to exchange data between links in the ag-food chains
5. **EU decision-makers** and national governments **need to ensure** that
  - a. the **fundamental digital infrastructure** for rapidly growing data flows in terms of network coverage and transmission rates in rural areas; 100% digital connectivity in rural areas; availability mobile broadband all over the rural areas in EU
  - b. **boost farmers' ability to invest in those innovative** digital technologies and equipment
6. **Dealers, manufacturers, farmers and contractors need communication and interface standards** that facilitate vertical and horizontal communications i.e. permit data exchange between machines, business partners, as well as different data portals and platforms
7. **Ensure** that the necessary **digital and technical skills** are developed
8. **Elaborate new business models for dealers**, for example a service concept for advising on analysis and information from data

**Climmar starts 4 initiatives** that will ensure results for the national member-organisations and dealers in the EU.

1. **Establish awareness-project** and pilots for dealers to getting access to and participate in Smart Farming;
  - Access to EU- and national programs/projects for development of Smart Farming
2. **Speeding up EU-regulation on RMI**: dealers getting access to RMI data and diagnostic tools:
3. **Participate in round table CEETAR, CEMA, COPA** on code of conduct on data exchange
4. Start **Think Tank on "Smart farming and new business models"** for Dealers
  - Select Universities, Academies and Colleges in Europe that will provide students which will assign for specific investigations on Smart Farming