

Wheat straw and chaff harvesting Demo-day of the mechanization available in the market

Le Martin (La Rochelle, France), 11th of July 2017

The Demo-day has been organized by CREA with the support of Thierart and the collaboration of Service Coop de France (SCDF) and CIRCE, in the framework of the European project AGROinLOG

AGENDA			
11th July 2017 – Martinet (La Rochelle, France) Address: ETA CORBINEAU Les pins - 85150 MARTINET			
1	09:00 h	Welcome	Dr. Luigi Pari, Research leader CREA (Italy)
2	09:15 h	Presentation of AGROinLOG project	Dr. Fernando Sebastian, Coordinator of the EU project Agroinlog CIRCE (Spain)
3	09:35 h	Chaff characteristics and market uses	Dr. Alessandro Suardi Researcher CREA (Italy)
4	09:55 h	Coffee break	
5	10:10 h	Thierart technologies of chaff and straw collection: <ul style="list-style-type: none"> - Chaff recovery tank - Swather (chaff on straw) - Twin stage turbine (chaff on straw) 	Ing. Benjamin Vauchelet Thierart (France)
6	10:30 h	Chaff and straw harvesting demonstration	Thierart technologies field demonstration
7	13:30 h	End of the demo-day	

➔ [More information about the Project and the event in the following pages](#)

The main goal of AGROinLOG is the demonstration of Integrated Biomass Logistics Centres (IBLC) for food and non-food products, evaluating their technical, environmental and economic feasibility.

An IBLC is defined as a business strategy for agro-industries to take advantage of unexploited synergies in terms of facilities, equipment and staff capacities, to diversify regular activity both on the input (food, feed and biomass feedstock) and output side (food, feed, biocommodities & intermediate biobased feedstocks) thereby enhancing the strength of agro-industries and increasing the added value delivered by those companies.

As part of AGROinLOG project, demonstrations of innovative harvesting machinery will be performed in order to make stakeholders know about it, discuss about the feasibility and understand potential uses of the products.

In that sense AGROinLOG would like to invite you to the demonstration of Thierart machineries to the collection of wheat straw and chaff.

Straw is a byproduct of wheat cultivation that, if it is not burned on field (30-50%), it is collected for animal litter (40-50%), animal feeding (5-10%) or paper industry (5-10%). Apart from the straw, a lighter part called chaff and compound by leaves, chaff (glumes and husk), thinner part of the plant stem and a certain amount of whole or broken seeds (Fig.1) is left on the ground.



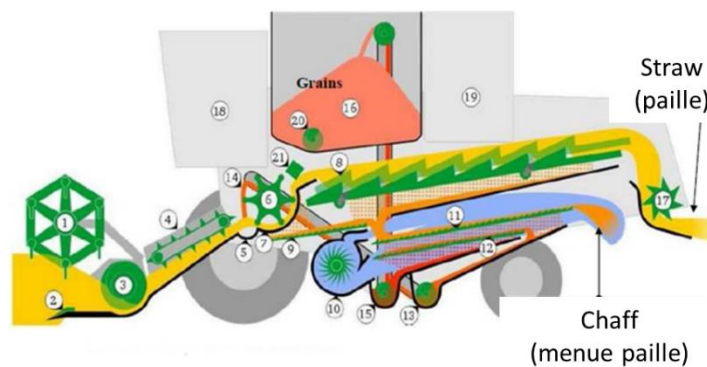
Cereal chaff

The **chaff** collection can provide a series of advantages:

- 1) Agronomic advantages: reduced herbicide treatment necessary. The seed stock in the soil will not disappear overnight, but the collection of the chaff can reduce it.
- 2) Economic advantages: An higher amount of biomass is possible to be collected per hectare (0.5 – 2 t/ha more)
- 3) Logistic advantages: The bales with higher density (straw and chaff collected together)



Chaff can be valued especially in animal feed or litter, however, it can be used as feedstock for biogas power plant or in boilers to produce energy.

The chaff collection technologies can be summarised in three main mechanical chains:



Scheme of combine harvester product and by-products

Regarding the technology proposed in the market by Thierart, the chaff collection can be carried out in three different ways:

1	Chaff discharged to a back container	
2	Chaff discharged on top the straw swath (different systems have been developed, according to the combine harvester firm to be mounted)	
3	Chaff discharged to a towed trailer (A) or no-stop baler (bales of chaff) (B)	 (A)  (B)