



## Opportunities for agriculture and forestry in the circular economy

**The 'circular bio-economy' is one where farmers and foresters take a leading role in developing the bio-economy and making it more sustainable by integrating circular activities and natural cycles into existing and new practices.**

Circular economy places resource-efficiency at the centre of economic decision making and practice, ensuring added value and making sure that resources are maintained as long as possible so that they can be re-used again and again. Avoidable wastes are eliminated, demands on resources are minimised, efficiency is improved and costs reduced.

In agriculture and forestry this means:

- ▶ preserving and enhancing natural capital by balancing renewable resource flows
- ▶ optimising natural resource yields by circulating products, components and materials
- ▶ identifying waste outputs and detrimental practices from the beginning and conceiving/designing a process that eliminates them from the start
- ▶ encouraging interaction between people, understanding our resources and making the most of our unavoidable wastes

This means turning our wastes and residual materials into a 'resource', linking the end of one process to the beginning of another, creating feedback loops. This can be achieved at a variety of scales, whether on farm or within the forest, or through connecting a variety of individuals, businesses and sectors to make efficient use of resources over broader geographical areas.

*"Ensuring that farmers and foresters benefit from circular activities is critical to their engagement and to the long-term sustainability of circular bio-economy in practice."*

- Ben Allen (UK), Institute for European Environmental Policy -

## Highlights from the EIP-AGRI workshop on circular economy

### Opportunities

- ▶ new income streams and jobs by using new resources and opening up new markets
- ▶ diversifying practices and establishing links to new sectors and businesses
- ▶ reducing exposure to risk from product prices, by transitioning to more resource-efficient business models
- ▶ reducing costs through more sustainable resource use and by making more out of waste resources
- ▶ producers and users of resources are more closely connected and they all share the benefits of resource-efficient activities

### Tools and actions

- ▶ connecting relevant actors and building partnerships through mediators, facilitators and online tools such as online portals
- ▶ strengthening the involvement of primary producers in the 'circular partnership' and ensuring that they harvest the benefits of new circular loops
- ▶ ensuring a more systematic approach to circular economy and a long-term vision policy framework
- ▶ securing adequate financial support for new circular economy activities

### Research needs

- ▶ defining, categorising and standardising secondary raw materials and wastes so that they can be seen as a resource
- ▶ understanding nutrient content from particular waste streams for use as inputs in the primary sector. This should include the technical and agronomic characteristics (as are being explored through the [INEMAD project](#)), economic and environmental viability
- ▶ understanding how other by-products of waste management processes can be re-used, such as cleaned waste water from bio-digesting processes

**More opportunities, tools, actions and research needs can be found in the EIP-AGRI workshop report**

### More information

<a href="#">Workshop webpage</a>	Inspirational idea: <a href="#">Biovakka, Manure management to produce biogas and nutrients in Finland</a>
	Press article <a href="#">Tomato grower and fish farmer create profits through water re-use and energy exchange</a>
<a href="#">Workshop report</a>	<a href="#">European Commission's circular economy package (released 2 December 2015)</a>

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### Join the EIP-AGRI Network!

Register to the EIP-AGRI website where you can find peers, projects, ideas and resources to catalyse innovation in agriculture, forestry and horticulture together.