

Value chains : Prime mover and Main Characteristics

- Stakeholder Type
- | | |
|---|---|
| <input checked="" type="checkbox"/> Farmer | <input type="checkbox"/> Agrarian Cooperative |
| <input type="checkbox"/> Public Institution | <input type="checkbox"/> Agro-Services |
| <input type="checkbox"/> Final Consumer | <input type="checkbox"/> Farmer Association |
| <input type="checkbox"/> ESCO | <input type="checkbox"/> Agro Industry |
| <input type="checkbox"/> Pellet Producer | <input type="checkbox"/> Biomass Supplier |

Location of Prime Mover

Municipality : Wieniawa

Latitude : 51.919438

Longitude : 19.145136



- Type of Residue used in value chain
- | | | |
|---|---|-------------------------------|
| <input checked="" type="checkbox"/> Pruning | <input type="checkbox"/> Plantation Removal | <input type="checkbox"/> Both |
|---|---|-------------------------------|
- Crop Species used in Value Chain
- | | | | |
|-------------------------------------|------------------------------------|--|----------------------------------|
| <input type="checkbox"/> olives | <input type="checkbox"/> vineyards | <input checked="" type="checkbox"/> apples | <input type="checkbox"/> pears |
| <input type="checkbox"/> peaches | <input type="checkbox"/> apricot | <input type="checkbox"/> nectarine | <input type="checkbox"/> plum |
| <input type="checkbox"/> cherries | <input type="checkbox"/> oranges | <input type="checkbox"/> tangerines | <input type="checkbox"/> lemons |
| <input type="checkbox"/> grapefruit | <input type="checkbox"/> hazelnuts | <input type="checkbox"/> chestnuts | <input type="checkbox"/> almonds |

Total Plantation Area involved in the Value Chain (ha) 36

Typical APPR biomass production (tonnes/year) 21.6-28.8

Start Date of the APPR value chain (Month-Year) _____

Key success Factors in Value Chain

Keys of success

Select the key success factors of your value chain in scale 0-3. Then indicate the 3 most crucial factors.

Check as many as apply

Factor Group	Description	Check the influence in success:(0)- Not relevant;(1)-May have influenced;(2)-Important for success;(3)It was crucial;(?)-Unknown					Check the 3 most crucial factors in WHOLE table
		0	1	2	3	?	
Project	There was an important effort in determining the feasibility and planning prior starting the business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The implementation of the chain considered the target consumers and their quality requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Market was analysed, and contracts prepared prior start	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	There is a local final consumer for such biomass source and form.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product Quality	Biomass was labelled or certified according to existing standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The quality of the biomass product is object of an assurance process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The biomass has appropriate properties according to the needs of final consumer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community	Permanent crop plantations are quite extended. The use of the agrarian residues for biomass was regarded by community as quite beneficial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	There was an intense information campaign to promote social acceptance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Argarian residues utilisation for energy was subject of debate by policy makers and/or by social groups in months, or years before the investment was done	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	There were intense conversations to convince local final consumers to use these biomass for energetic purpose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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		0	1	2	3	?	
Logistics Chain	There were pre-existent collaborations established between farmers sector and biomass cosumers/traders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The introduction of new technologies (machine, handling systems, logistic chain) supported the implementation of new chains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Private investment for entepreneurs was incentivised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The present of local heating units/plants that can burn such type and form of biomass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Short summary of the initiative (<100 words)

Summary of the value chain

The orchards company GOSPODARSTWO SADOWNICZE is 36 ha and it is an apple orchard focused on good quality apples and juice production. The apples trees are pruned twice a year. The winter/spring prunings/branches are harvested using baler machinery and stored on site along the communication internal roads. As a result an open air drying of the bales is performed. After ca. 3-4 months the biomass is transported by the farmer to the local heating units. There are two local heating units fired by the biomass bales located ca. 6 km from the orchard.

Tomasz Bankiewicz (Wieniawa)

VALUE CHAIN ACTORS		Farmers	Farm cooperative / agro productive organization	Agro services Company	Techno-logistics services in agriculture	Biomass energy plant builder /dealer	Energy service company	Biomass consumer / energy user
VALUE CHAIN PROCESSES	APPR biomass producer	1						
	Harvesting & conditioning	1						
	Biomass 1 st haulage/ Transport	↓						
	Pretreatment & Storage	1						
	Biomass further processing	1						
	Biomass transport	1						
	Energy conversion							2

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Mr. Tomasz Bankiewicz

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Local heating units

Fuel Specifications

Final form of Biomass prior to Exploitation

- Bales of branches
 Hog fuel-shredded

- Wood chips
 Pellets

Moisture content (%) :

12-15

Max Content of Ash (% a.r.) :

Min LHV (kj/kg a.r.) :

Value Chain Details and Prices of fuels

End-users

- Self-consumption
 Public-private buildings
 Biomass to Market

- Industrial heating
 Distributed heat networks

Distance between biomass production and its final use (km) :

6.0

Storage options

- On-farm storage
 Intermediate storage prior transporting to end user
 Direct delivery and storage at final user
 No storage

Ownership of the APPR harvesting machinery

- Farmer
 Leasing
 3rd party-private

- Farmer's community
 Municipality-public

Prices of fuels sold
to final consumers

Price of APPR biomass (€/t)

Price of regular woodchips (€/t)

Price of ENPLUS pellets (bulk-€/t)

Price of domestic heating gasoil (€/l)

Have you filled the questionnaire about
mechanized pruning/plantation removal ?

Yes

No

If yes, please provide the name or e-mail you have
used on that questionnaire

