Interreg North-West Europe
AgriWasteValue
EUROPEAN UNION
European Regional Development Fund

Biomass from orchards & vineyards : from extraction raw material to fertilizers
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Mid-term event of the AgriWasteValue project

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From biomass residues to fertilizers

- Pruning residues from orchards and vineyards are generally poorly valued

- Removed from the field and/or burned

- One of our goals : a better valorization by extraction and the return to the field in the form of fertilizers
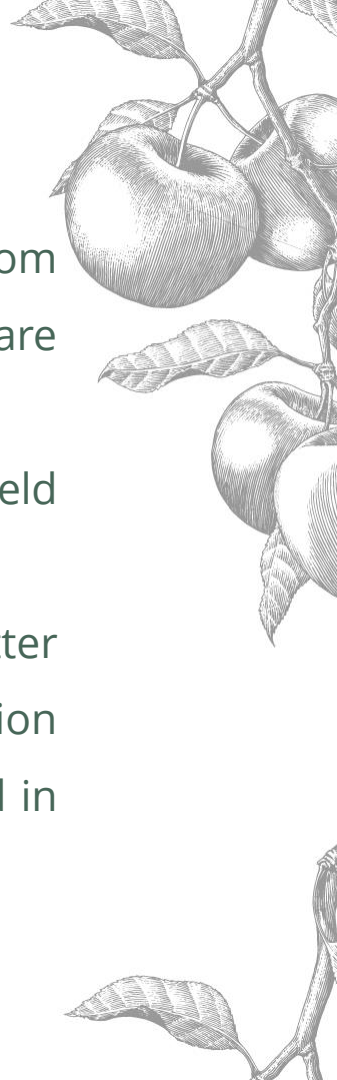
Raw material for extraction process

How much and where are the agriwastes side streams for the sourcing ?

Steps

Sourcing availability (data) :

- Areas of orchards and vineyards

- Selecting the most promising sources

  ➔ Apple trees, pear tree and vines pruning residues

- Potential production / ha

- Total potential (economy of scale)

Samples collection :

- Selected orchards and vineyards

- Collection campaign
  - 2019, 2020, 2021 (next)

- Samples for
  - Extraction and others analysis
  - Data on yield of pruning residues

Sourcing : raw material availability
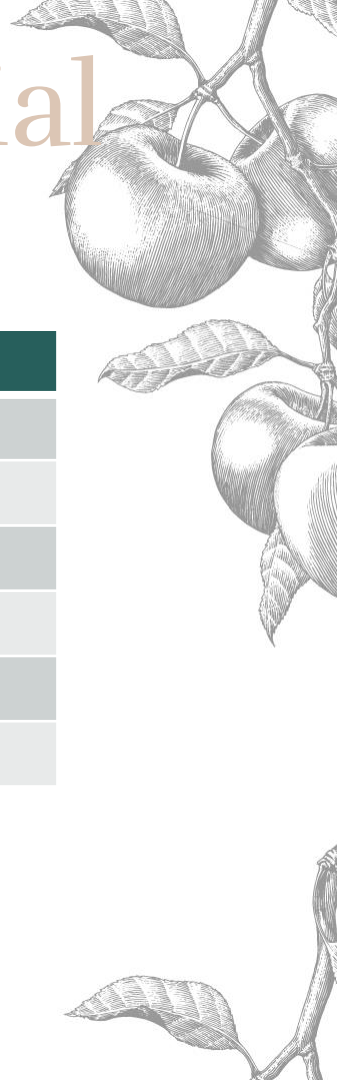
| Action	Source	
Surface of orchards	Statistics	Per country/ for total region
Potential yield of cuttings	Research done	Per country
	Interview (online)	Min 100 replicants
	Interview (in person)	20 / country – key figures
		E.g. Holland : NFO
	Research	Actual measurements

Most promising: apple, pear & grapes

Mapping :

- 'Hot spots'

- Geolocation

- Total potential by geographic

  region (localization

  opportunities)

Geolocation of biomass side streams

- By type and origin
  - Apple tree pruning
  - Pear tree pruning
  - Vine stalks / branch
- By quantity
- By region

Show result for

Agricultural waste

All

2255.4 T   30634.1 T   18428.6 T   3695.6 T
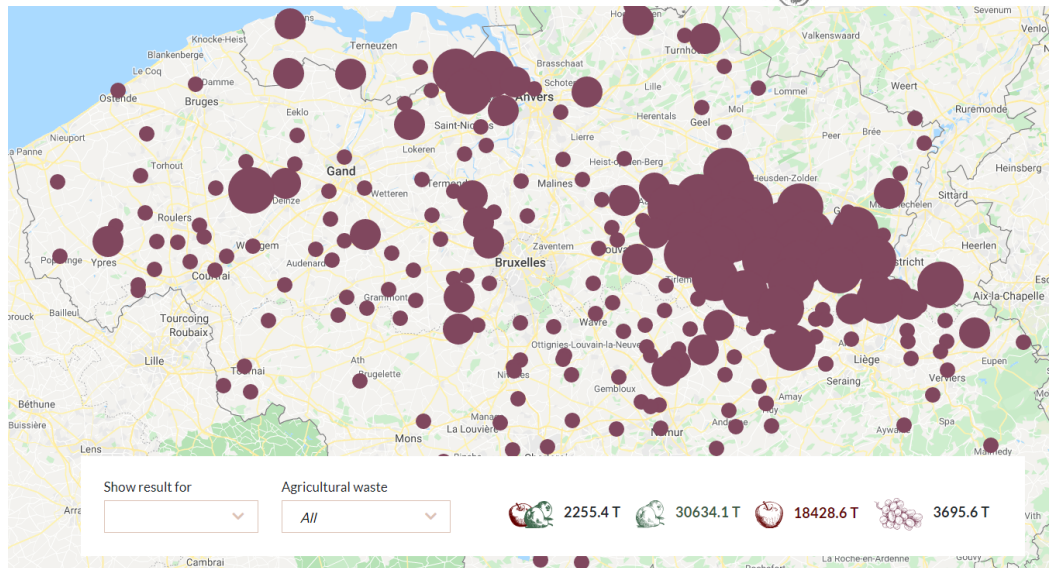
➔ Connect potential users with a new source of raw material

Map available on the AgriWasteValue website www.agriwastevalue.eu

By-products & residues from viticulture & arboriculture : promising natural & local ingredients!

Cor van Oers, Delphy BV

First fertilizator test

About Delphy BV

- Private company
- 240 employees
- 65 not in the Netherlands
- All plant related sectors

- Worldwide Expertise for Food & Flowers
- Knowledge Development
- Knowledge Implementation
- Independent Experts

Experimental design

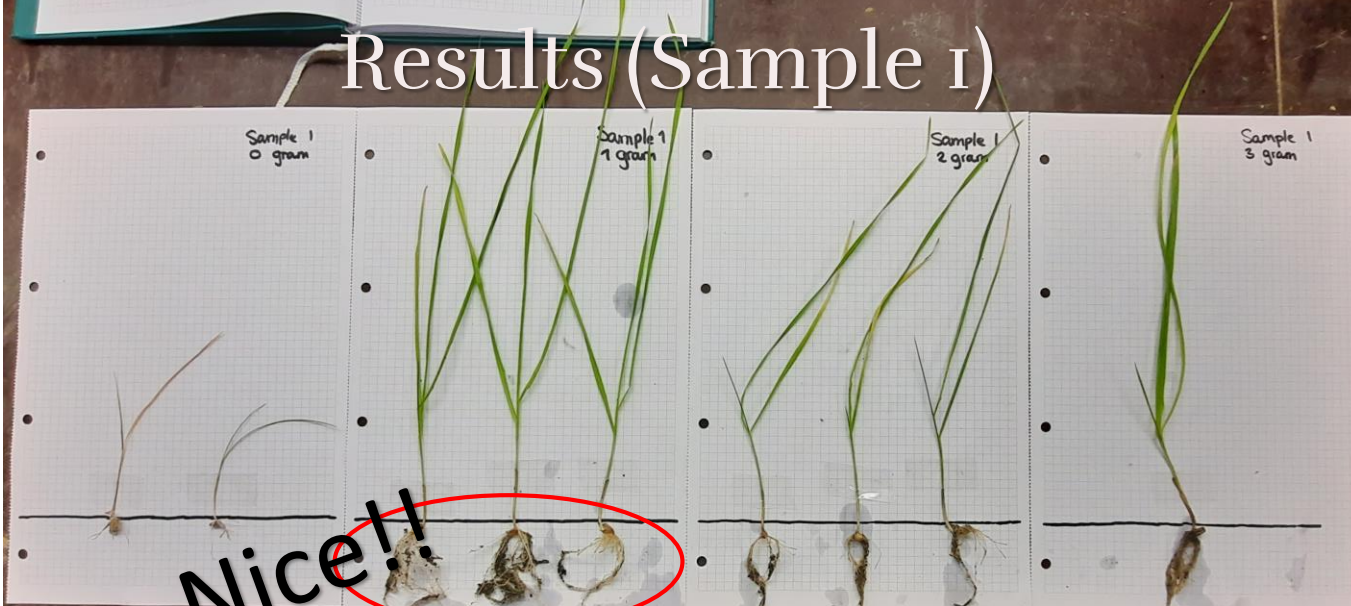- 5 departments per sample (2 samples)

gram	Ton/ha
0	0
1	2
2	4
3	6
4	8

Growth

30 sept

5 oct

9 oct

13 oct

Results (Sample 1)

	Sample 1				
grams	0	1	2	3	4
growth point (in cm)	8	8	9	10	
amount of leafs	2	4	3	4	

	Sample 2				
Grams	0	1	2	3	4
Growth point (in cm)	6	21	11	9	7
amount of leafs	4	3	3	3	3

Almost 4 leafs

Preference: 1 gram (2ton/ha)
Because: ahead in development and more roots

First trial : conclusions

- 1 gram (2 ton/ha) is in both samples the best.

To have a better results, we need to do field trials in more replicates.

But this looks very promising!!

2021 ?

- New trails in containers again with more new material.

- Set up larger scale field trials

- Economic assesment

Delphy

Thank you