

Willow production and applications

Bvba De Vos 'Salix'
ir. Bart De Vos

Summary

Introduction: Basket willow in Belgium

Metrics

Varieties:

- then and now
- pro's and con's

Problems

New varieties

Evolution: processing

New products

Phyto-remediation



Introduction: Basket willow in Belgium

Schelde: Temse

Maas: Dilsen-Stokkem

Zuidlede/Moervaart: Eksaarde

Conditions: then and now

Metrics:

Plant density: 60cm, 15-18cm

→ +/- 100k cuttings/ha

Row distance: 50-100cm



Varieties

Then:

Kletters: *Salix gmelinii*

Frans geel: *Salix x fragilis* var. *Vitellina f. basfordiana*

Wiedauw: *Salix viminalis*

Duits rood: *Salix eriocephala*

Leentjes: *Salix purpurea*



Varieties

Now:

Belgian red: *Salix x rubens* var. *Basfordiana forma sanguinea* (stem 56 vs 60)

Leentjes: *Salix purpurea*

Noir de Villaines: *Salix triandra*



Varieties: Pro's and con's

Belgian red:

- + Binding material
- + Baskets: dry and peeled
- Branches >200cm



Varieties: Pro's and con's

Leentjes:

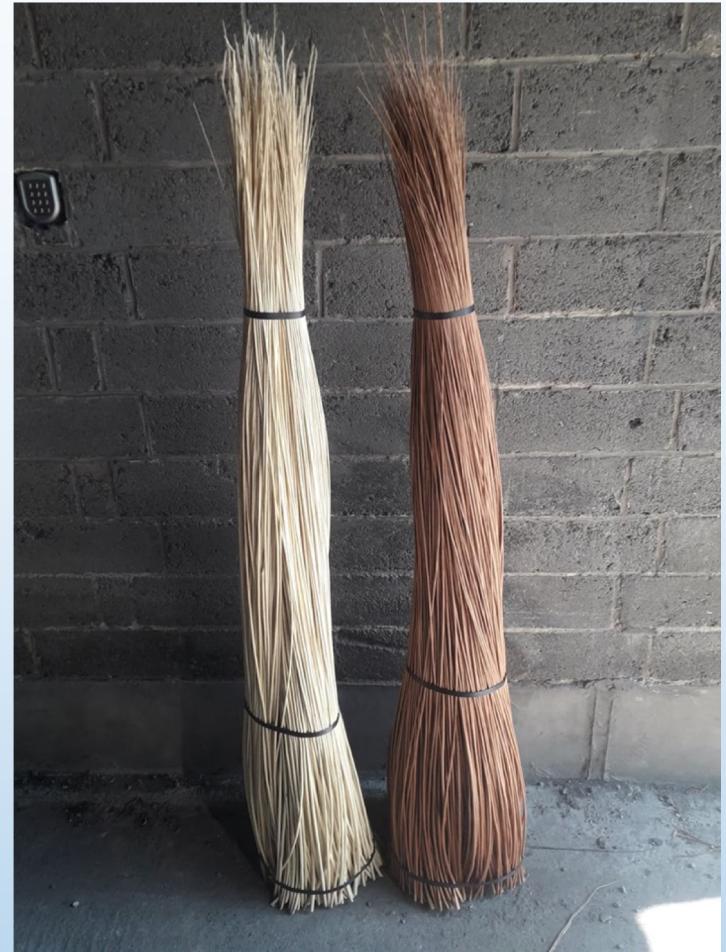
- + Baskets: color + flexibility
- + Unbranched
- +/- Binding material
- Treatment
- Peeling



Varieties: Pro's and con's

Noir de Villaines:

- + Quality: hard
- + Peeling: both white and buff
- + Unbranched
- Treatment



Problems

Hail

Rust: Fast growing varieties, high N values

Game damage: rabbits, deer: Belgian red

Insects: Beetles (Chrysomelidae), Rabdophaga heterobia

Perennial weeds: root system + seeds:

- Bindweed (*Convolvulus sepium* / *Calystegia sepium*)
- Pitrus (*Juncus effusus*)
- Wolfspoot (*Lycopus europaeus*)
- Perennial grasses



Problems



© PCS



New varieties:

Criteria:

Quality, low/no treatment needed, no diseases,
new colors

Evaluation: +/- 5 years: quality, production

Salix purpurea 'nana'

Wild seedlings



Evolution

Harvest

Grading

Peeling / debarking

Further mechanisation



Evolution: harvest



Evolution: peeling



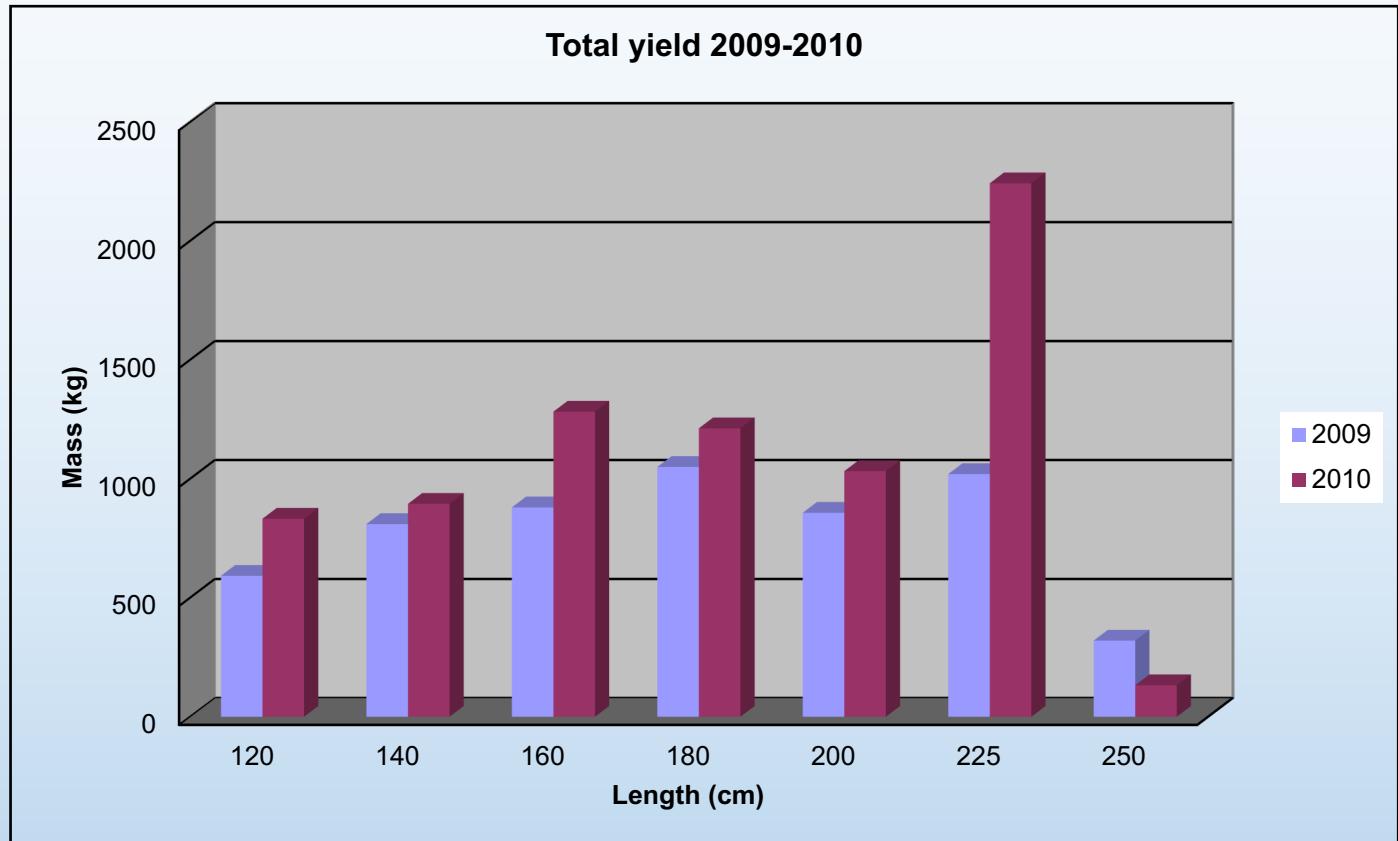
New products

Growth

Rolls: salimat, erosion

Bark: bio aspirin and more

Heavy metals



New products: rolls



Phyto-remediation

Lommel: Zn and Cd in the upper 30cm

Threshold:

Cd: 80-130 years

Zn: 37-40 years

Phyto ‘extraction’: Loden

Phyto ‘attenuation’: Jorr

Alba *Salix alba* L. var. alba

Belgian red: *Salix x rubens* var. basfordiana

Zwarte Driebast *Salix triandra*

Christina *Salix viminalis*

Inger *Salix triandra* x *Salix viminalis*

Jorr *Salix viminalis*

Loden *Salix dasyclados*

Tora *Salix schwerinii* x *Salix viminalis*

Thank you

