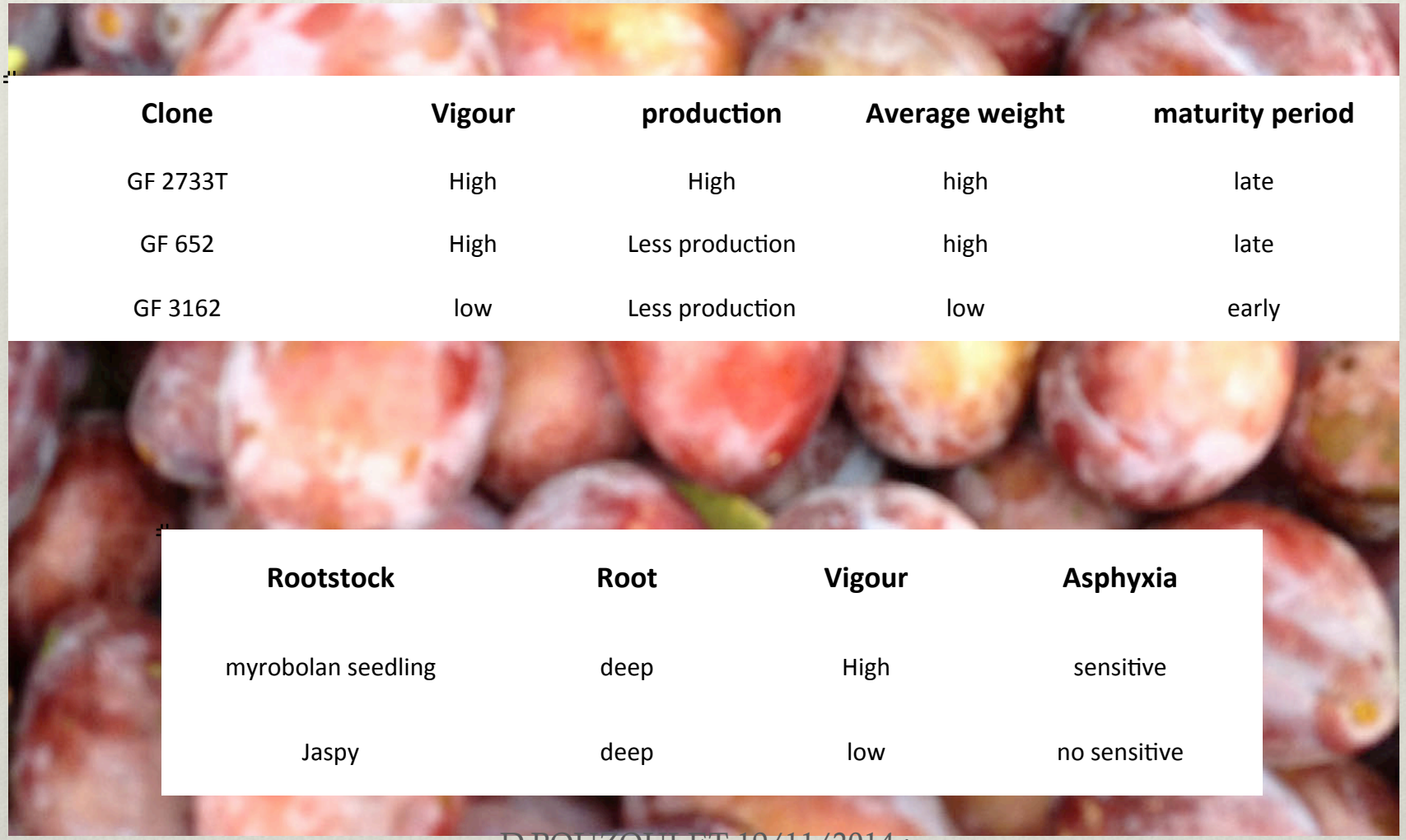
Yield Factors and Quality on prune orchard

❖Plantation Density:

- 1980 => 8m X 8m => 156 arbres par Ha => 5T/ha => 100 kg/tree => 66/500 gr
- 2000 => 6m x 6m => 277 arbres par Ha => 6T/Ha => 65 kg/tree => 62/500 gr
- 2010 => 6m x 3m => 555 arbres / Ha => 8T/Ha => 43 kg/tree => 60/500 gr
- 2015 => 5m x 2m => 1000 arbres /ha => 10 T/Ha => 30 kg/tree => 56/500 gr
- 2015=> 4m x 1,5 m => 1666 arbres / Ha => 15T/Ha => 27 kg/tree => 5./500 gr

D.POUZOULET 19/11/2014 :
Congreso Ciruelas Monticello

Variety and Rootstock



Clone	Vigour	production	Average weight	maturity period
GF 2733T	High	High	high	late
GF 652	High	Less production	high	late
GF 3162	low	Less production	low	early

Rootstock	Root	Vigour	Asphyxia
myrobolan seedling	deep	High	sensitive
Jaspy	deep	low	no sensitive

Pruning

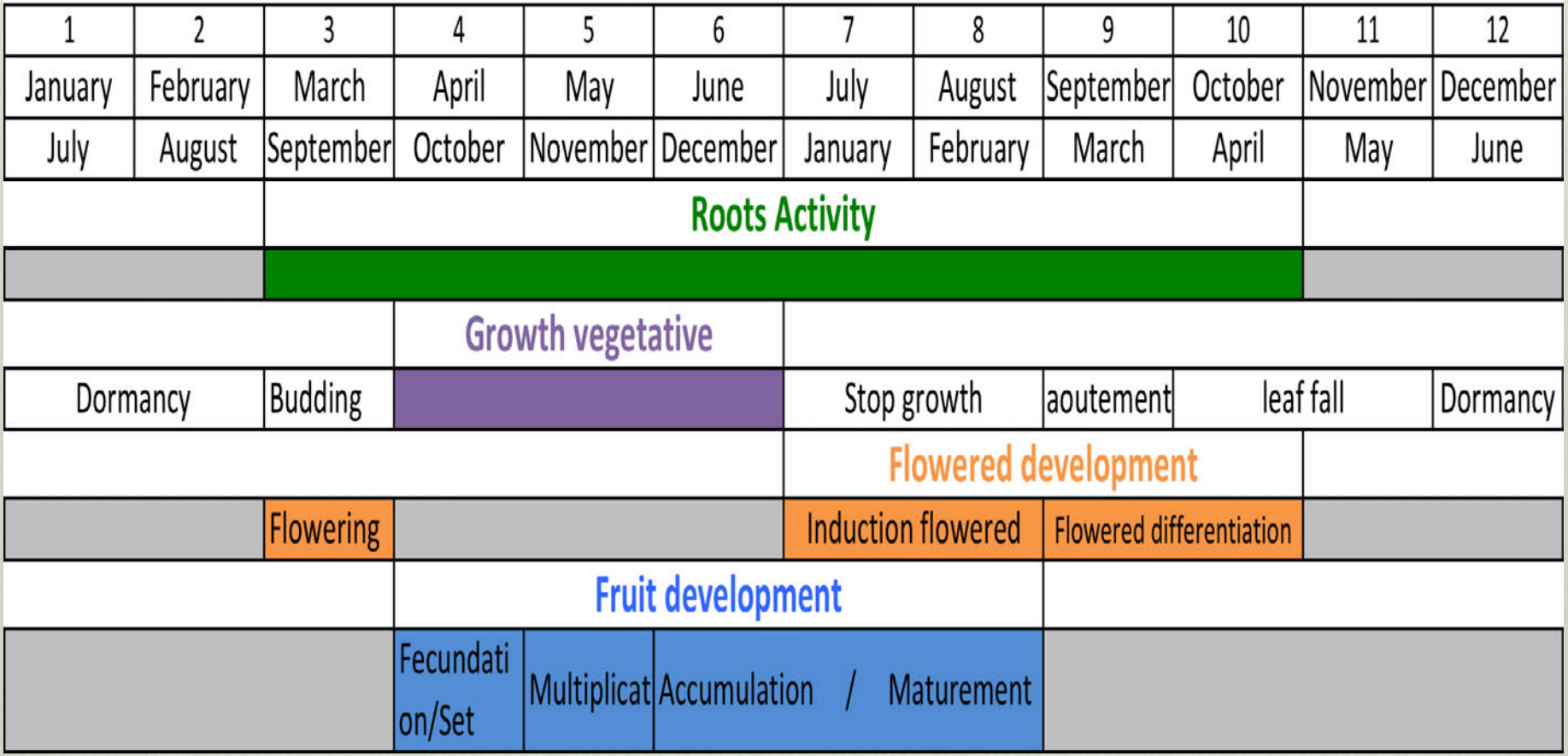
- **Balance between one/two and three years old wood,**
- **Keep in your mind « water course » as straight as possible,**
- **Pruning for grade and not for quantity**

❖Thining

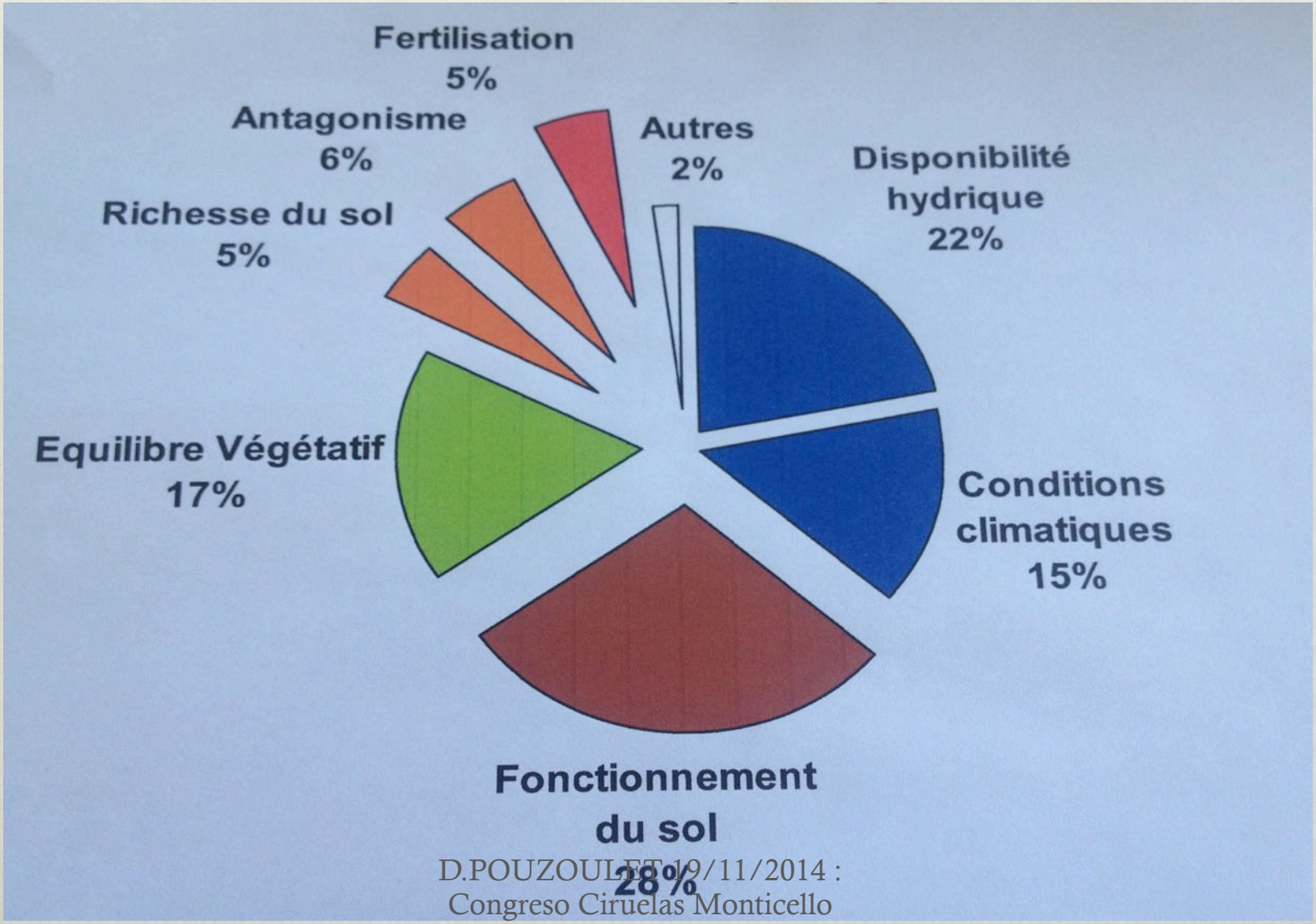
- Early you reduce the quantity of plums better should be the effect on quality size,
- Minimun 30 % of fall,
- Chemical on flower : sulfur, copper, …
- mechanically on flower
  - ❖ Darwin in next slide,
  - ❖ shaker: after set,

Blossom Thining

Growth cycle and Development



Origin of the mineral levels in the wood



Regularity of production:
(Alternate bearing)

- Pruning (keep a good balance between one year two years and three years old wood)
- Irrigation (hydric comfort after set time and after harvest),
- Thining (depends on quality of pruning and spring climate) , before hard stone,
- Nitrogen manure,

Irrigation

Main factor of quality (nitrogen and potassium)

- Regularity of irrigation: just enaugh (no stress set time and after harvest)

Fertility

- **Organic level (relation clay),**
- **Organic quality (live),**
- **Limestone level (micronutrients assimilation),**
- **Compaction,**

NITROGEN

	March/April	Mai/Juin	Juillet/Aout	sept/Octobre
	Sept/Oct	**Nov/Dec**	**Jan/Feb**	**March/April**
Needs	high	low	very low	high
soil support	low	high	related water	high
Objectives	start up	vegetative growth	/	root reserve
Soil fertiliser	N03 P2o5	/	/	urea
Foliar fertiliser	N03 P2o5 MgO	No3 K2O	/	B/N/Mgo/ZN

PHOSPHORUS

	March/April	Mai/Juin	Juillet/Aout	sept/Octobre
	Sept/Oct	**Nov/Dec**	**Jan/Fev**	**March/April**
Needs	high	very low	very low	very low
soil support	low	medium	high	high
Objectives	start up	fruit	wood	root reserve
Soil fertiliser	N03 P2o5	/	/	/
Foliar fertiliser	N03 P2o5 MgO	N03 P2o5 MgO	/	/

POTASSIUM

	March/April	Mai/Juin	Juillet/Aout	sept/Octobre
	Sept/Oct	**Nov/Dec**	**Jan/Fev**	**March/April**
Needs	low	very high	high	/
soil support	low	related water	related water	related water
Objectives	/	fruit	fruit	root reserve
Soil fertiliser	/	S03 K20	/	/
Foliar fertiliser	/	NO3 K20	/	/

MAGNESIUM

	March/April	Mai/Juin	Juillet/Aout	sept/Octobre
	Sept/Oct	**Nov/Dec**	**Jan/Fev**	**March/April**
Needs	medium	high	very low	very low
soil support	related water/T °c	medium	medium	high
Objectives	leaf	leaf	leaf	root reserve
Soil fertiliser	No3 Mgo	/	/	
Foliar fertiliser	No3 Mgo	No3 Mgo	/	SO3 Mgo

CALCIUM

	March/April	Mai/Juin	Juillet/Aout	sept/Octobre
	Sept/Oct	**Nov/Dec**	**Jan/Fev**	**March/April**
Needs	medium	high	very low	very low
soil support	low	medium	medium	high
Objectives		fruit		root reserve
Soil fertiliser		winter		
Foliar fertiliser	/	lithotame	/	/

❖Micronutrients:

	Boron	Zinc	Mgo	Ca	Iron
Needs	Blossom/cells accumulation	growth vegetative	growth vegetative	cells multiplication/ accumulation	growth vegetative
Foliar fertiliser	root reserve/cells multiplication	root reserve/ growth vegetativ	set time to cells multiplication	cells multiplication/ accumulation	growth vegetative
What for ?	speed fecondation/ cells elasticity	wood quality	photosynthesis	cells accumulation (grade)	photosynthesis

Thank You Very Much for your attention

QUESTIONS ?