

UNICOQUE
noisettes et noix de France

La nocciaola francese Modello e densità

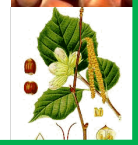
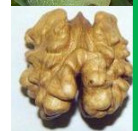


Bruno SAPHY
Coopérative UNICOQUE
Responsable de développement





Ciao a tutti i produttori e tutti gli organizzatori



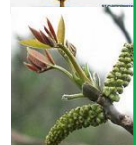


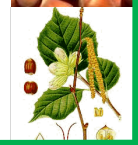
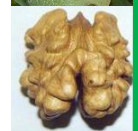
una storia molto recente nell'agricoltura francese.



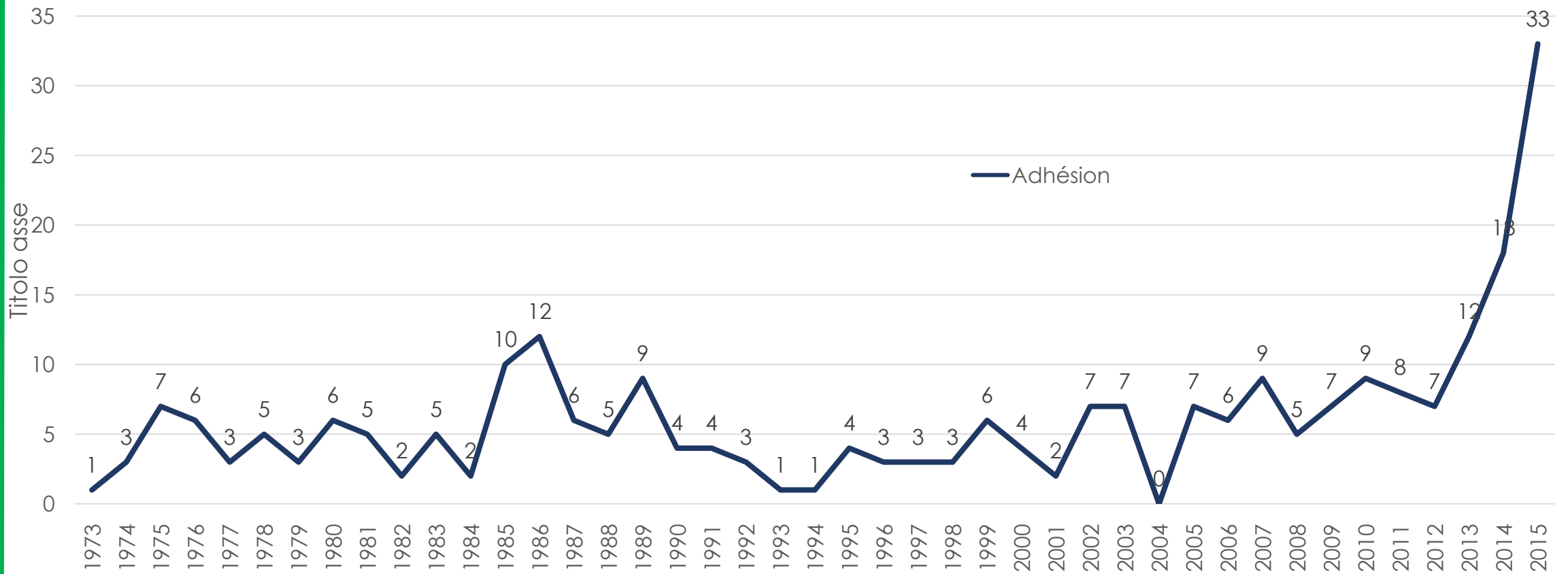


La coltivazione del nocciolo presentava questi vantaggi





300 produttori

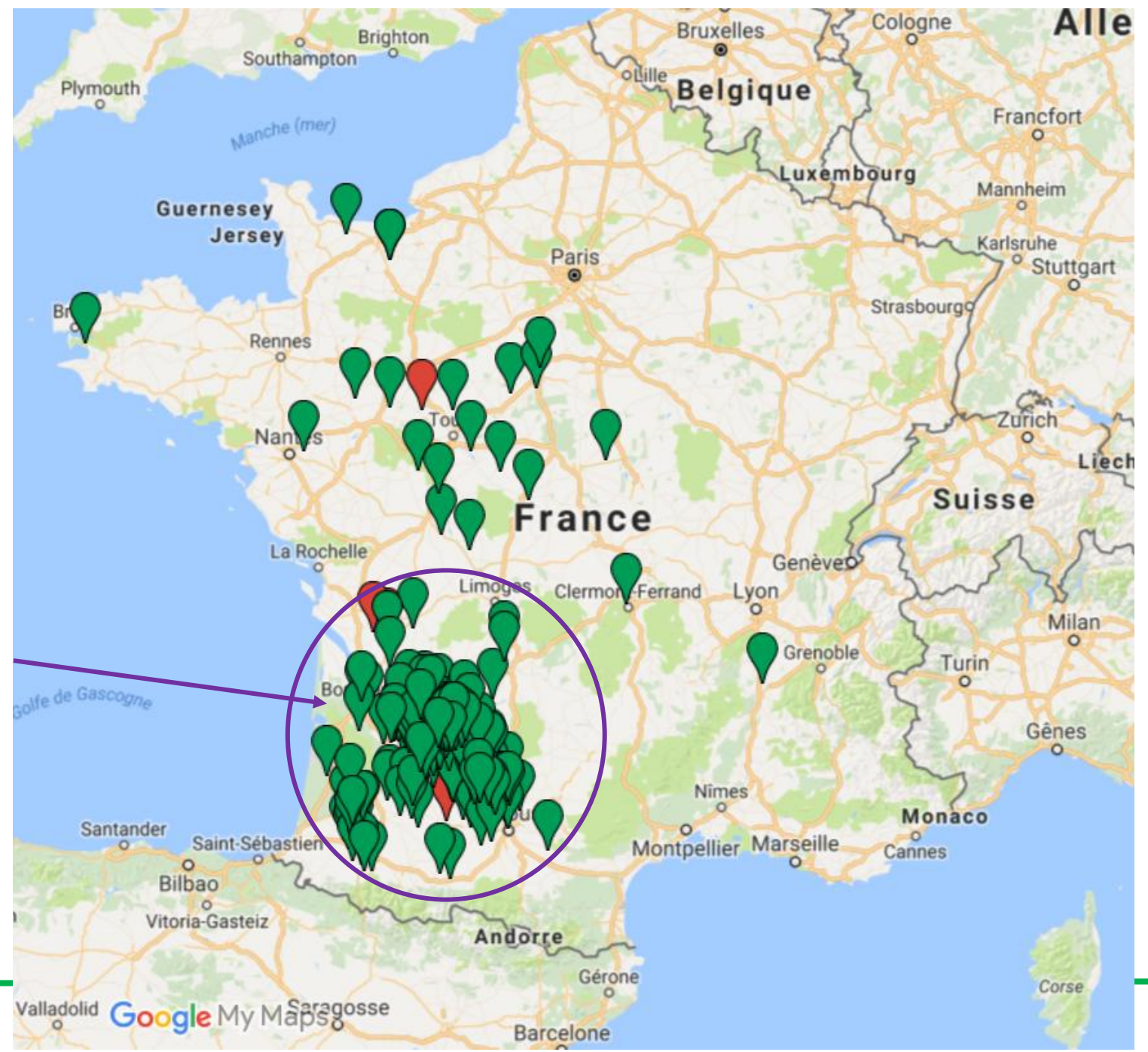




La zona di produzione

300 produttori

80% dei produttori nel sud-ovest





aziende agricole

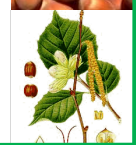
Superficie noccioli

Mini : 5 ha

Media : 19 ha

Maxi : 93 ha

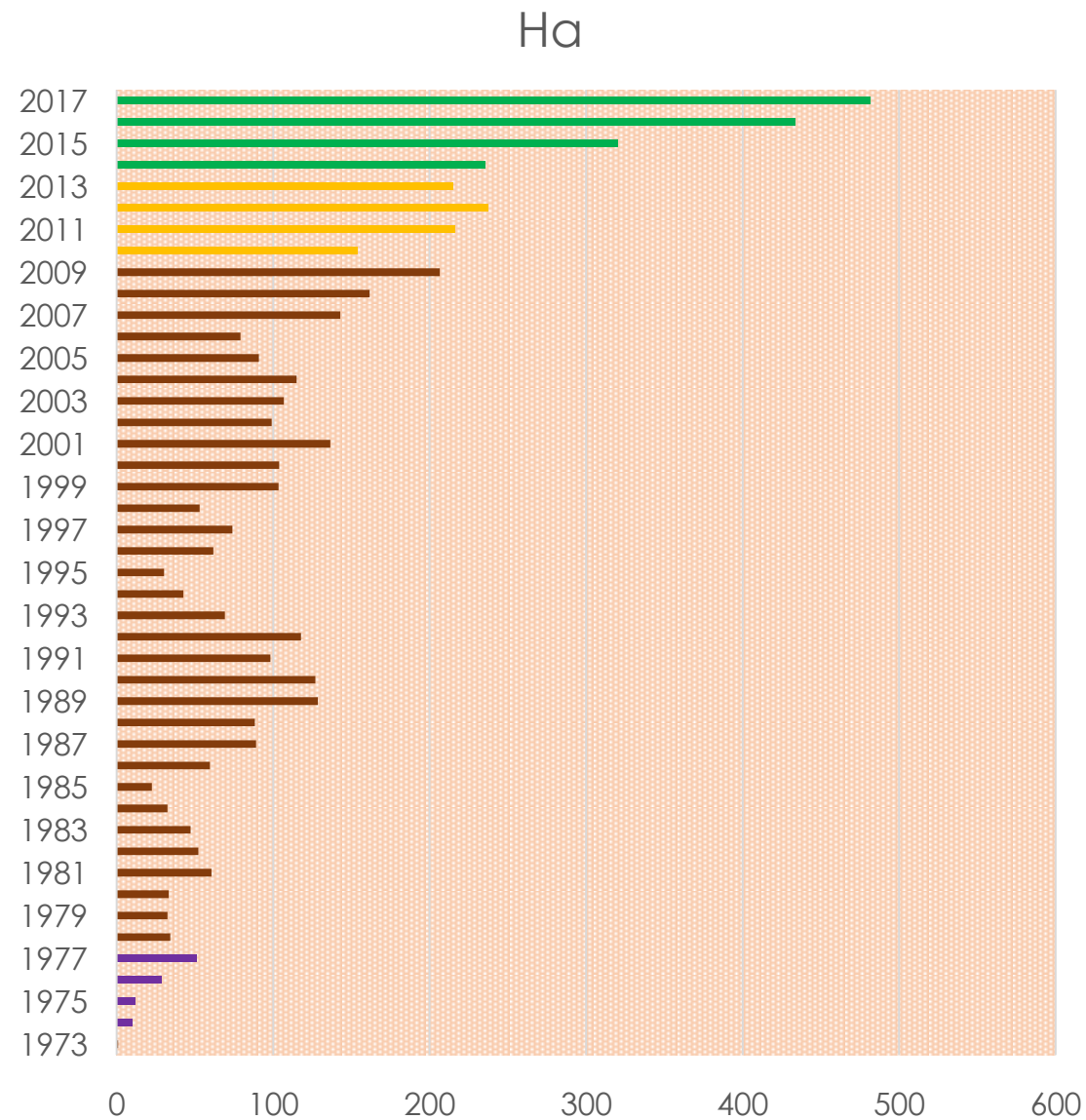
	NB		HA	
moins 10 ha	83	32%	534	10%
10 à 20	79	30%	1162	23%
20 à 30	52	20%	1265	25%
30 à 40	25	10%	838	16%
40 à 50	13	5%	580	11%
50 à 60	5	2%	265	5%
60 à 70	3	1%	189	4%
plus 70 ha	3	1%	252	5%
totale	263		5085	

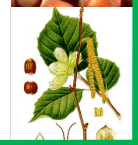
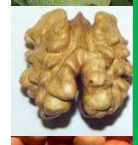


la piramide di età frutteti nocciole

giovani frutteti = **1471 ha 29%**
Frutteto di media età = 823 ha 16 %
Frutteto età adulta = 2666 ha 52%
Vecchio frutteto = 138 ha 3%
totale = 5098 ha

Serv sziluppo : unicoque





Superficie per tipo varietà

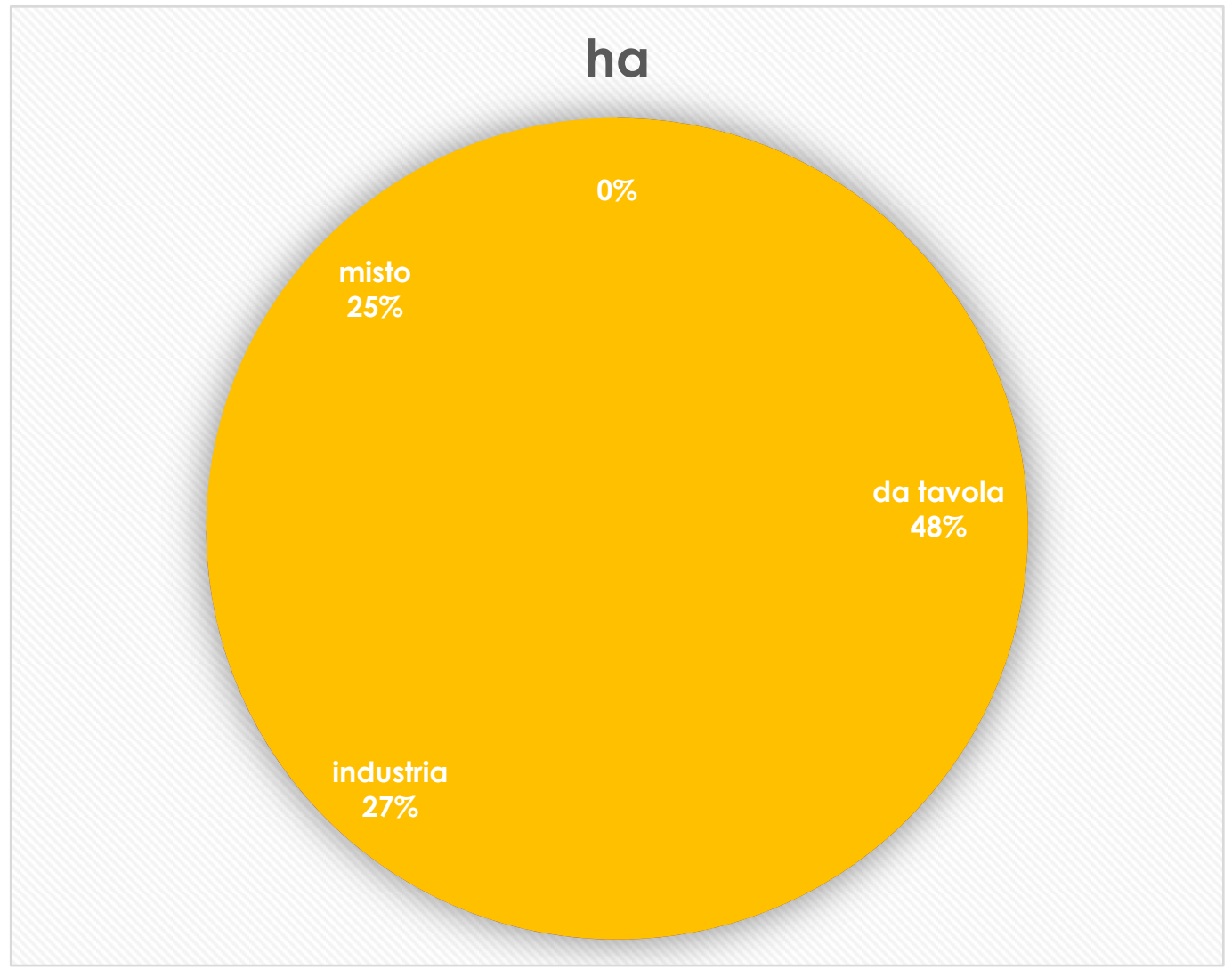
Da tavola = 2444 ha

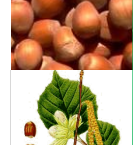
Industria = 1375 ha

Misto = 1279 ha

Totale = 5098 ha

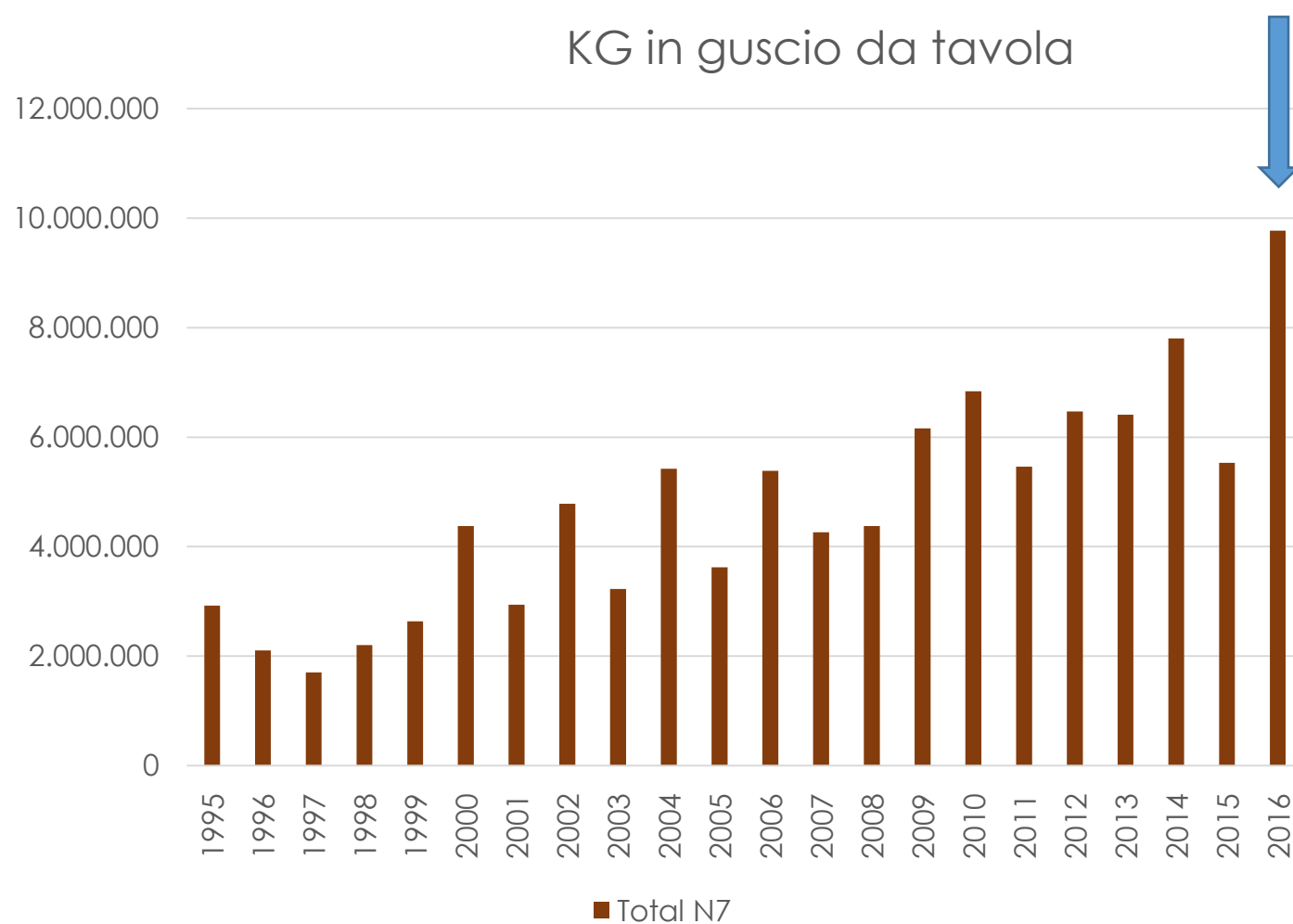
En 2017

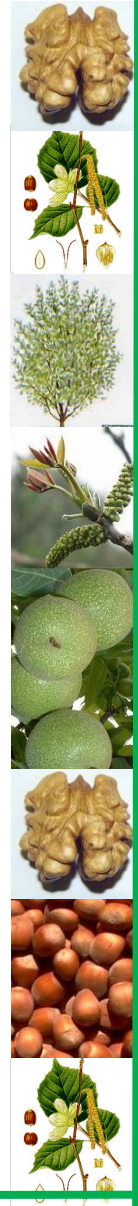




Produzione di nocciole

La produzione di nocciole in guscio attuale si aggira sulle 10.000 tonnellate nel 2016.





due strutture
principali

**Il 95% dei produttori
francesi aderisce a 2
strutture che
organizzano il settore**

UNICOQUE

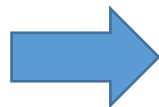
noisettes et noix de France





65% sul mercato europeo delle nocciole da tavola



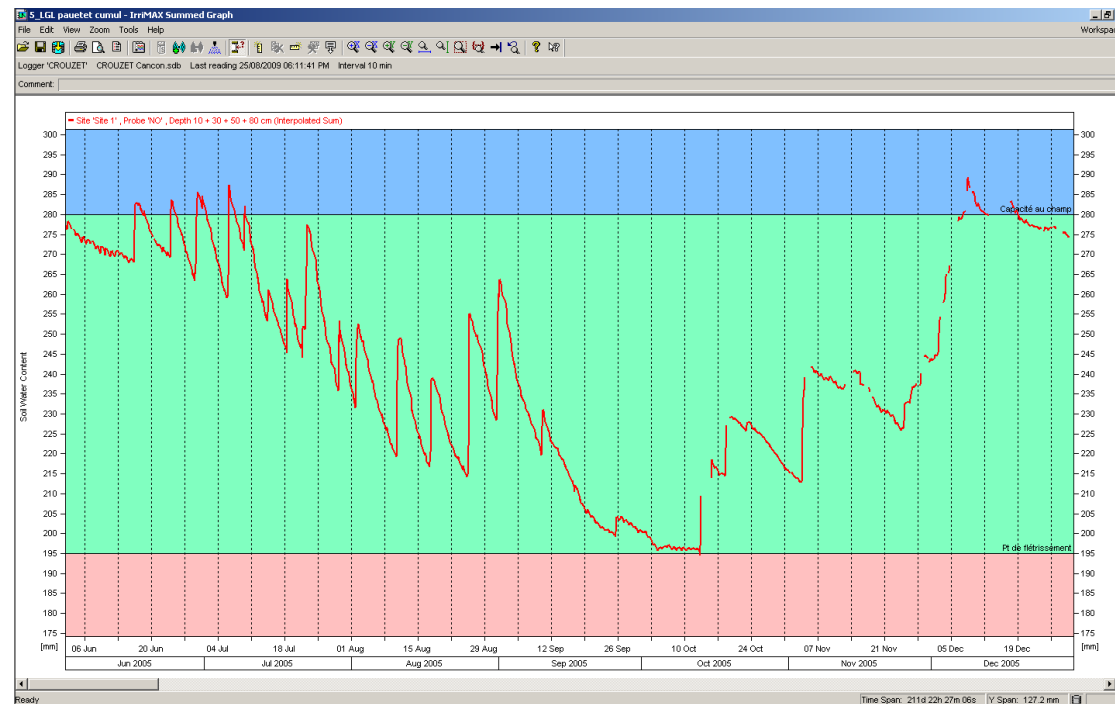
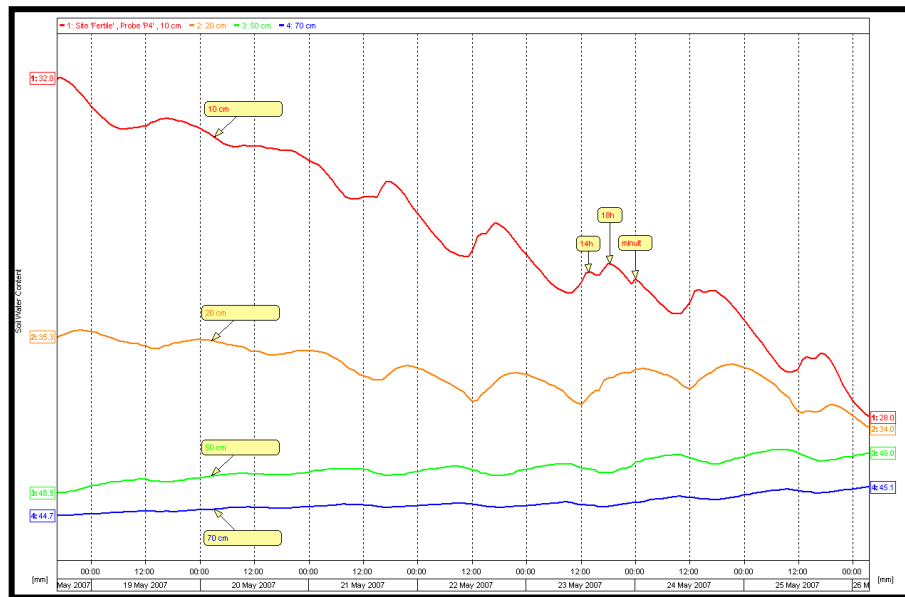


KOKI[®]
Noisettes & Noix de France





Evoluzione del contenuto di acqua a profondità diverse



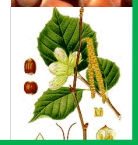
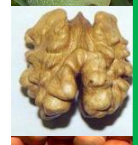


35% della produzione
viene venduta sgusciata
alle industrie



nutella
FERRERO





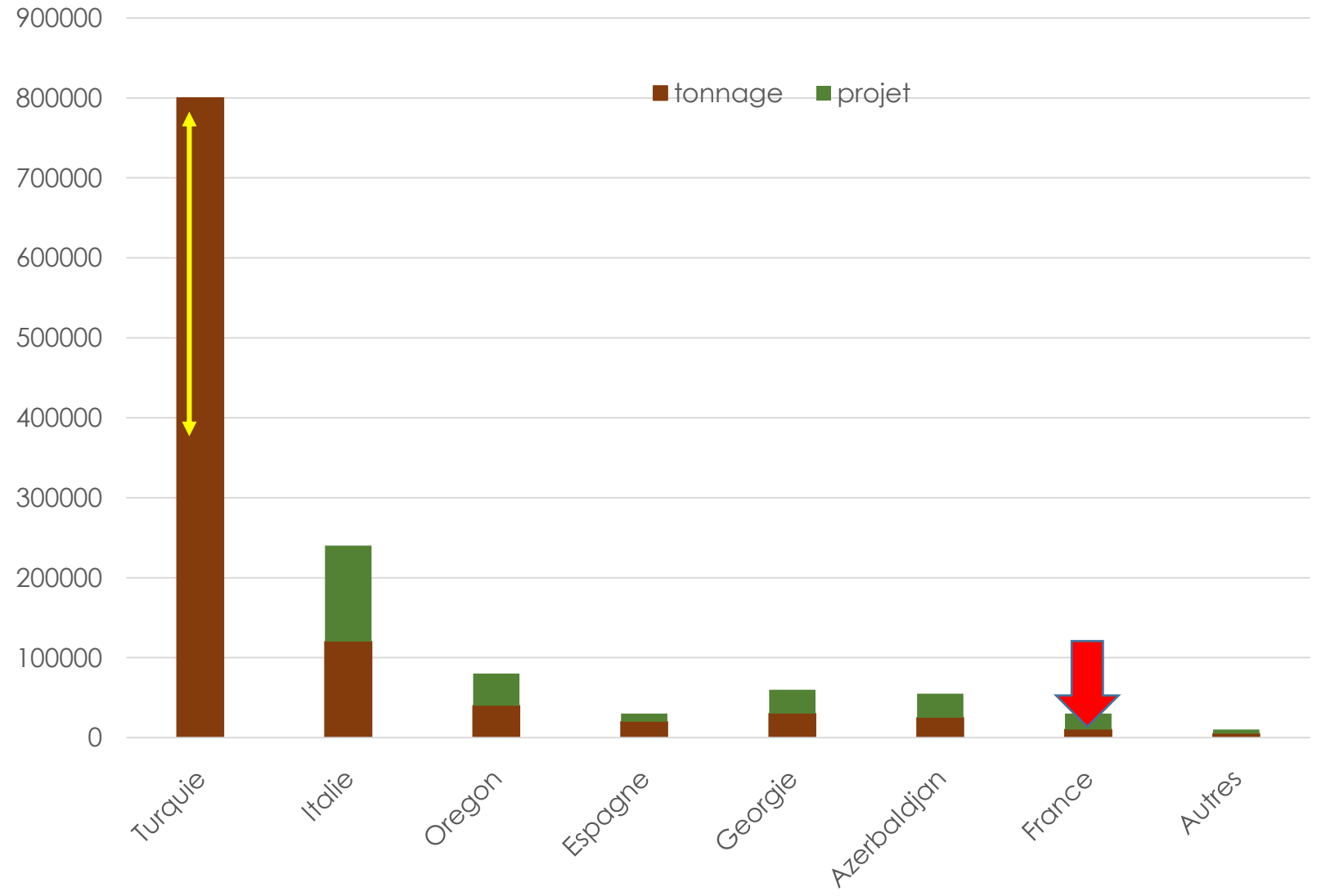
Le noccioline
francesi
hanno un progetto





Produzione mondiale

Ma un progetto modesto



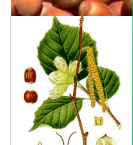


un'agricoltura industriale, rispettosa dell'ambiente, e competitiva



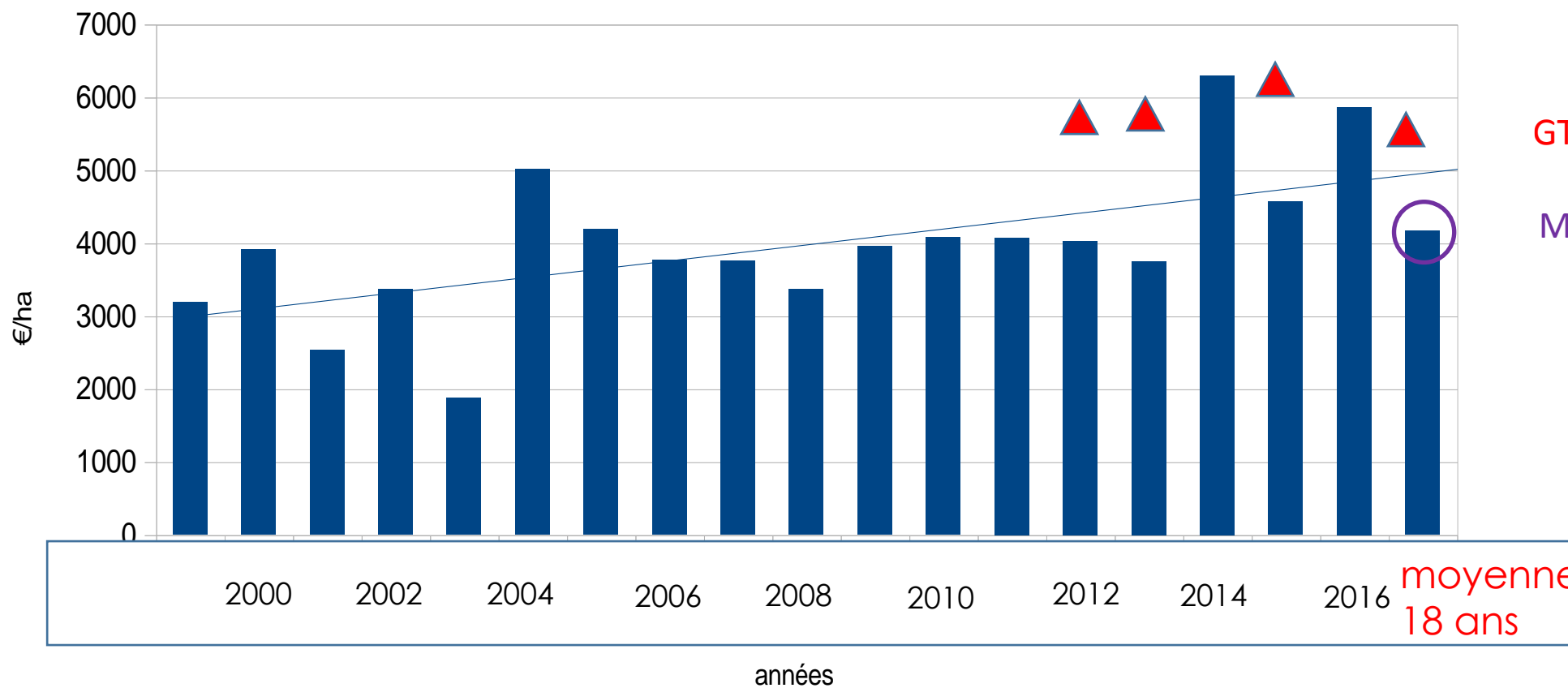


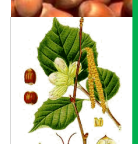
Obiettivo economico: Prodotto Grezzo 5000 €/ha



NOISETTES

■ PB_€ha_SEA





Il modello di
produzione ottimale

1 uomo

40 ha

**1600 ore di lavoro all'
anno**

**1 macchina per la
raccolta**

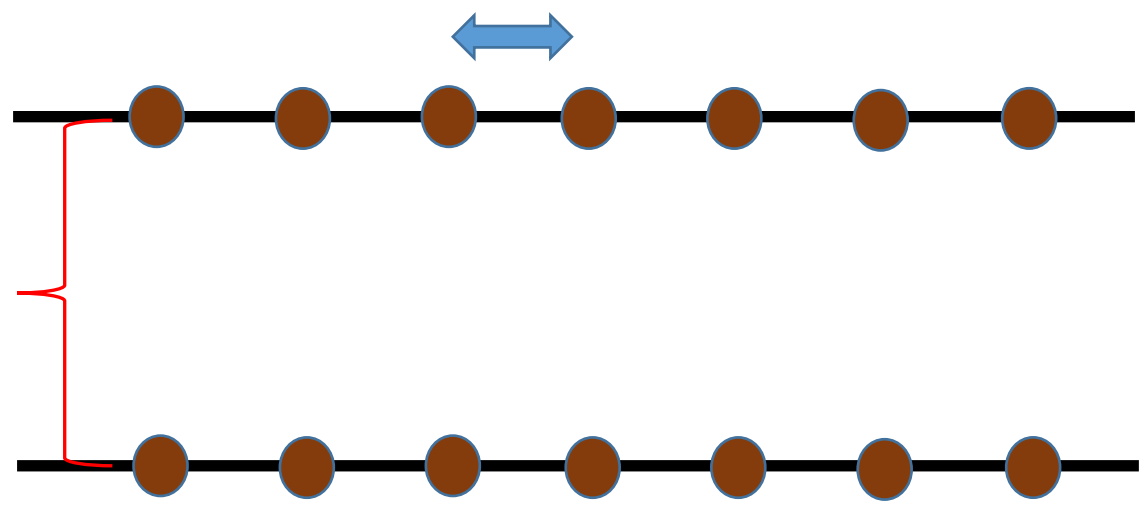




la densità d'impianto

$$\Rightarrow EF \times SF = \text{Numero alberi / ha}$$

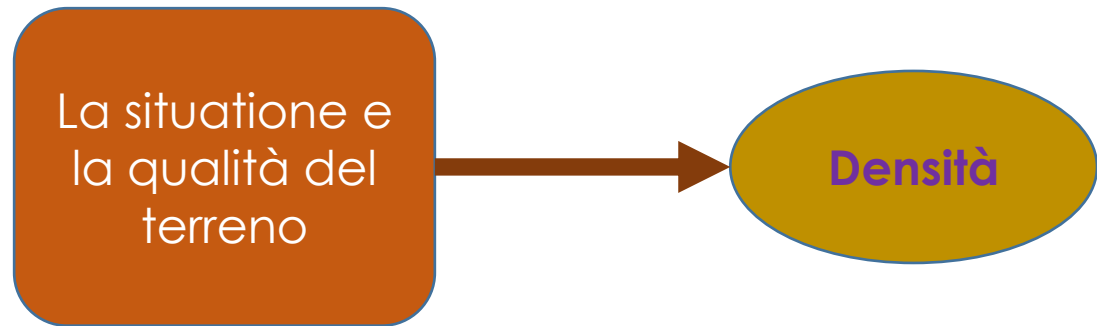
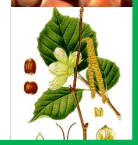
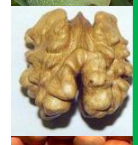
Spazio sulla fila : SF

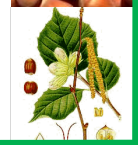
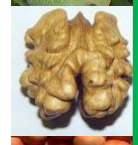


Spazio
entro fila : EF



La densità del impianto ...



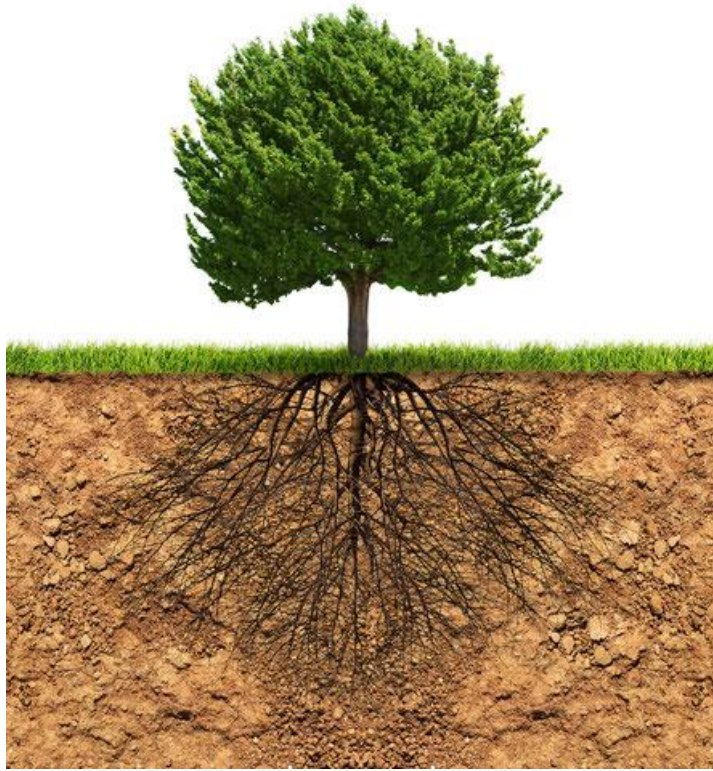


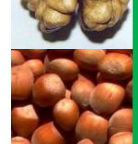
La variabilità del suolo è molto larga





La profondità, la tessitura e la struttura dei suoli e molta diversa

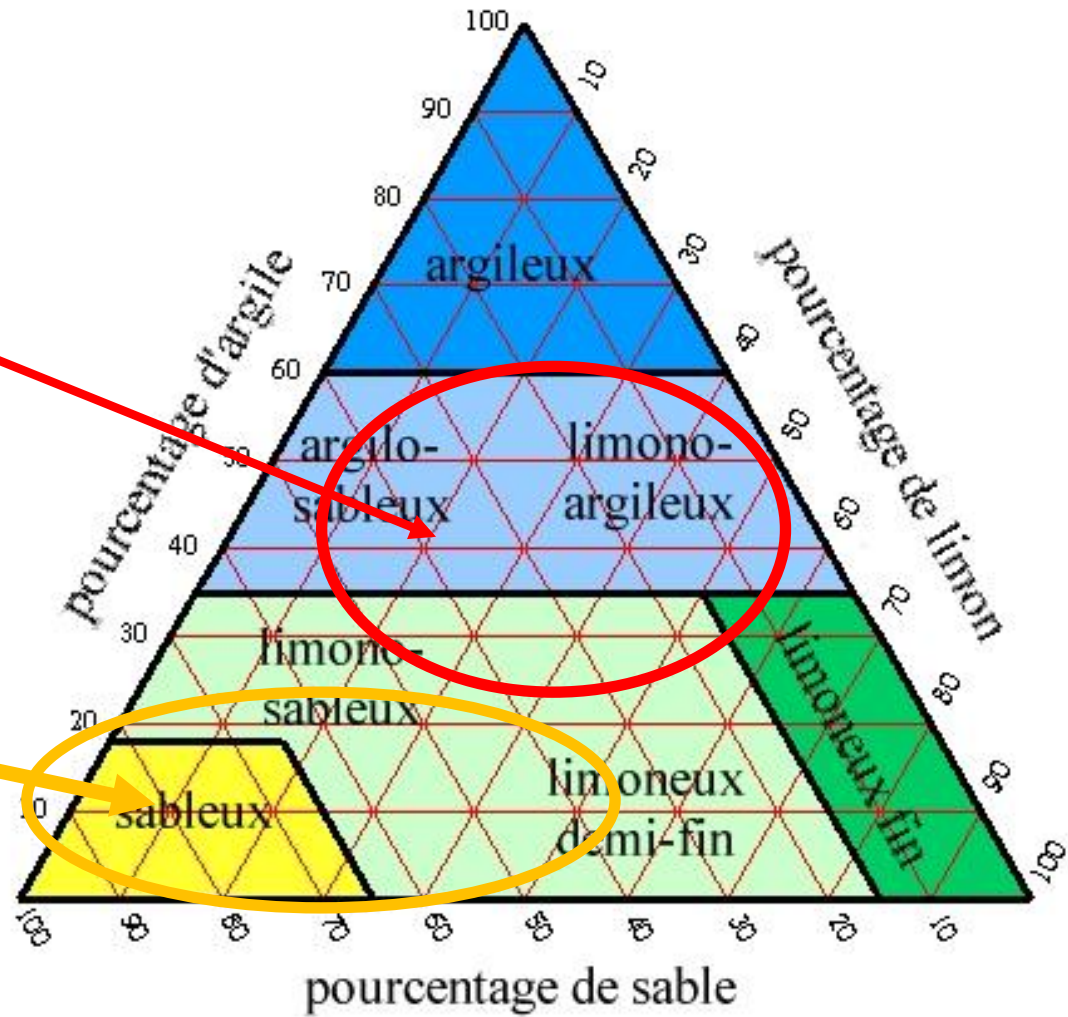




Il triangolo della tessitura

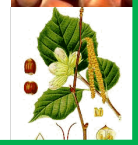
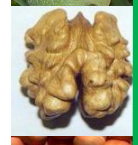
Favorevole alla crescita

Sfavorevole alla crescita
(crescita debole)





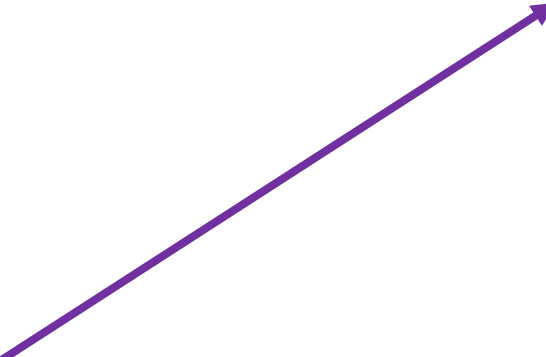
La densità ...



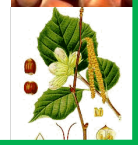
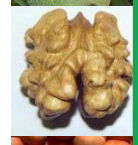
La situatione e
la qualità del
terreno



Densità

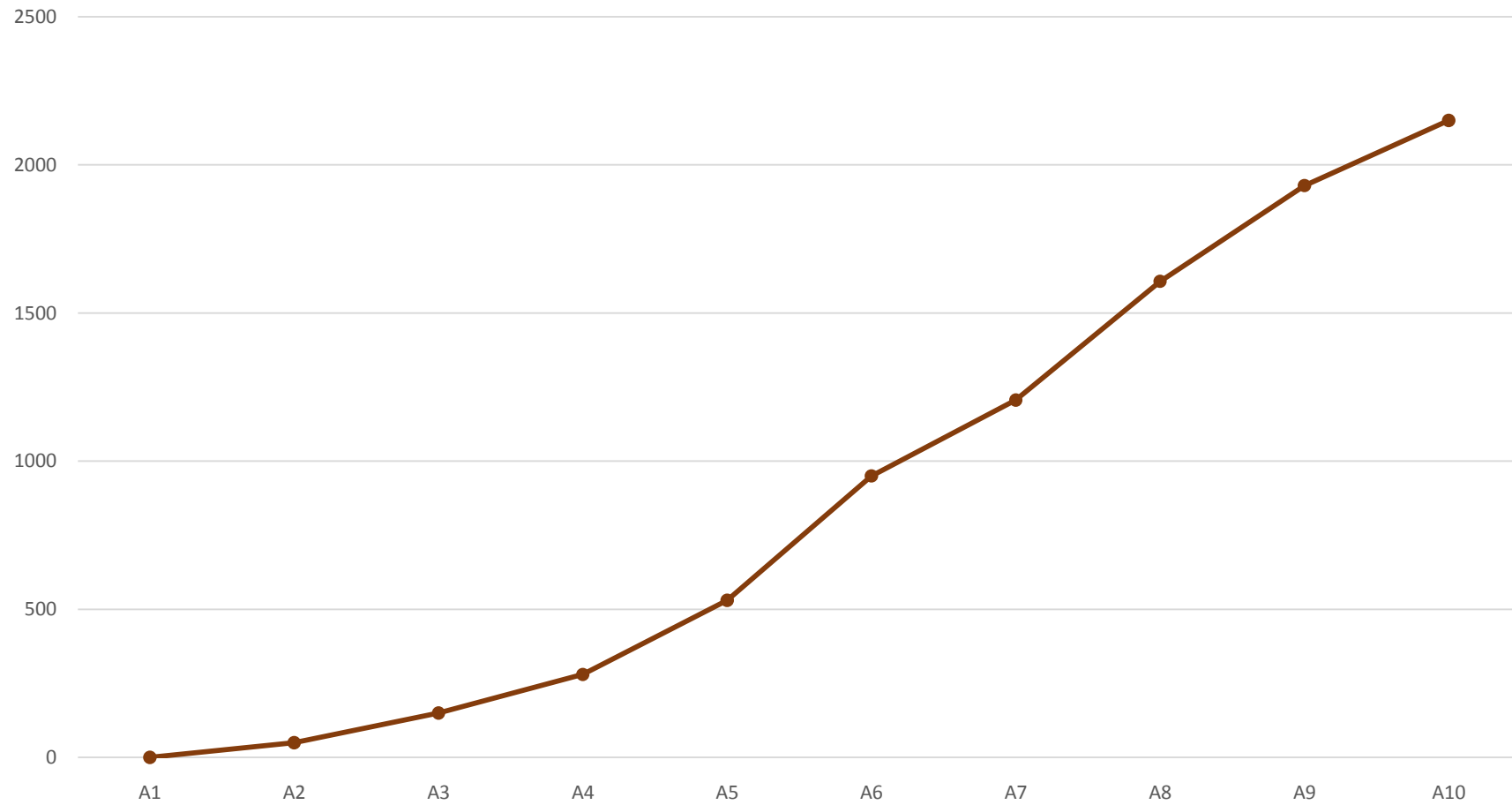


Velocità d'incremento
della produzione



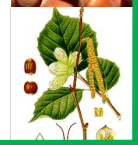
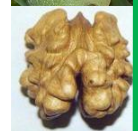
Incremento produzione teorico

numeri di frutti / albero

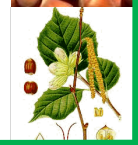
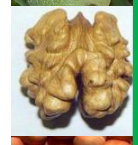




Spazio di impianto

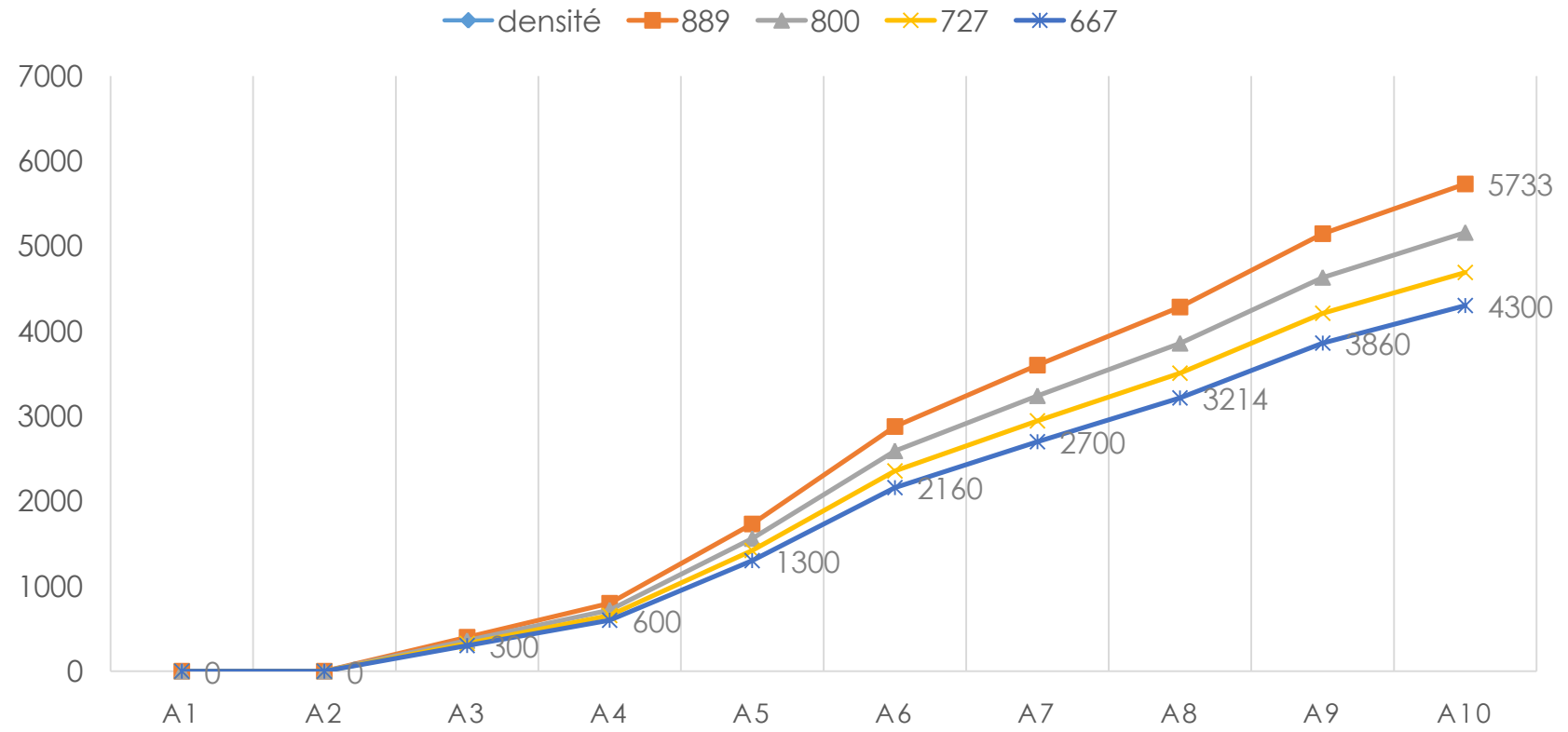


densità	Numero alberi per ha				
	5	5,25	5,5	5,75	6
entra fila (m)	5	5,25	5,5	5,75	6
sulla fila (m)					
2,25	889	847	808	773	741
2,50	800	762	727	696	667
2,75	727	693	661	632	606
3,00	667	635	606	580	556



La velocità del crescita della produzione

PRODUZIONE PER DENSITÀ





la crescita della pianta giovane



Anno 1



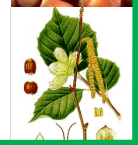
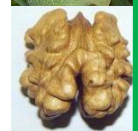
Anno 2



Anno 3

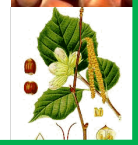
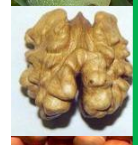


giovane frutteto e il lago





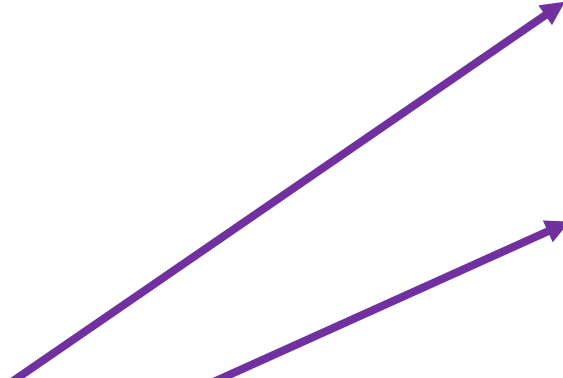
La densità ...



La situazione e
la qualità del
terreno



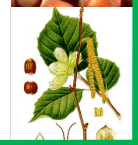
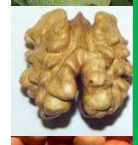
Densità



Velocità d'incremento
della produzione

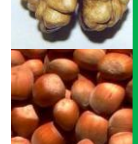
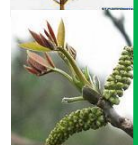


Investimento dell' impianto



Impianto meccanico

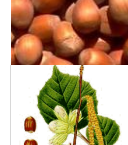
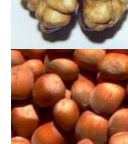




Costo impianto

**Spazio entro fila
5 metri**

Critères	666	727	800
drenaggio	1900	1900	1900
amendamento	500	500	500
Préparzione del terreno	331	331	331
piante	3730	4071	4480
protezione delle piante	233	254	280
impianto macchina	300	400	500
irrigazione GGE	2800	2800	2800
S/T impianto	9794	10257	10791
		1,05	1,10



Costo impianto

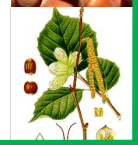
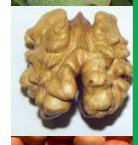
**Spazio entro fila
6 m**

Critères	666	727	800
drenaggio	1900	1900	1900
amendamento	500	500	500
Préparation del terreno	331	331	331
piante	3730	4071	4480
protezione delle piante	233	254	280
impianto macchina	300	400	500
irrigazione GGE	2240	2240	2240
S/T impianto	9234	9697	10231
		1,05	1,11

- 20 % (meno lunghezza di tubo, e numeri di raccordo)



La densità ...



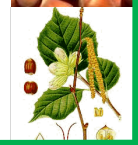
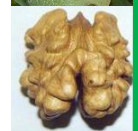
La situazione e
la qualità del
terreno

Densità

Velocità d'incremento
della produzione

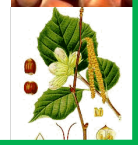
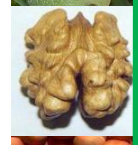
Investimento dell' impianto

la capacità di mantenere
la produttività



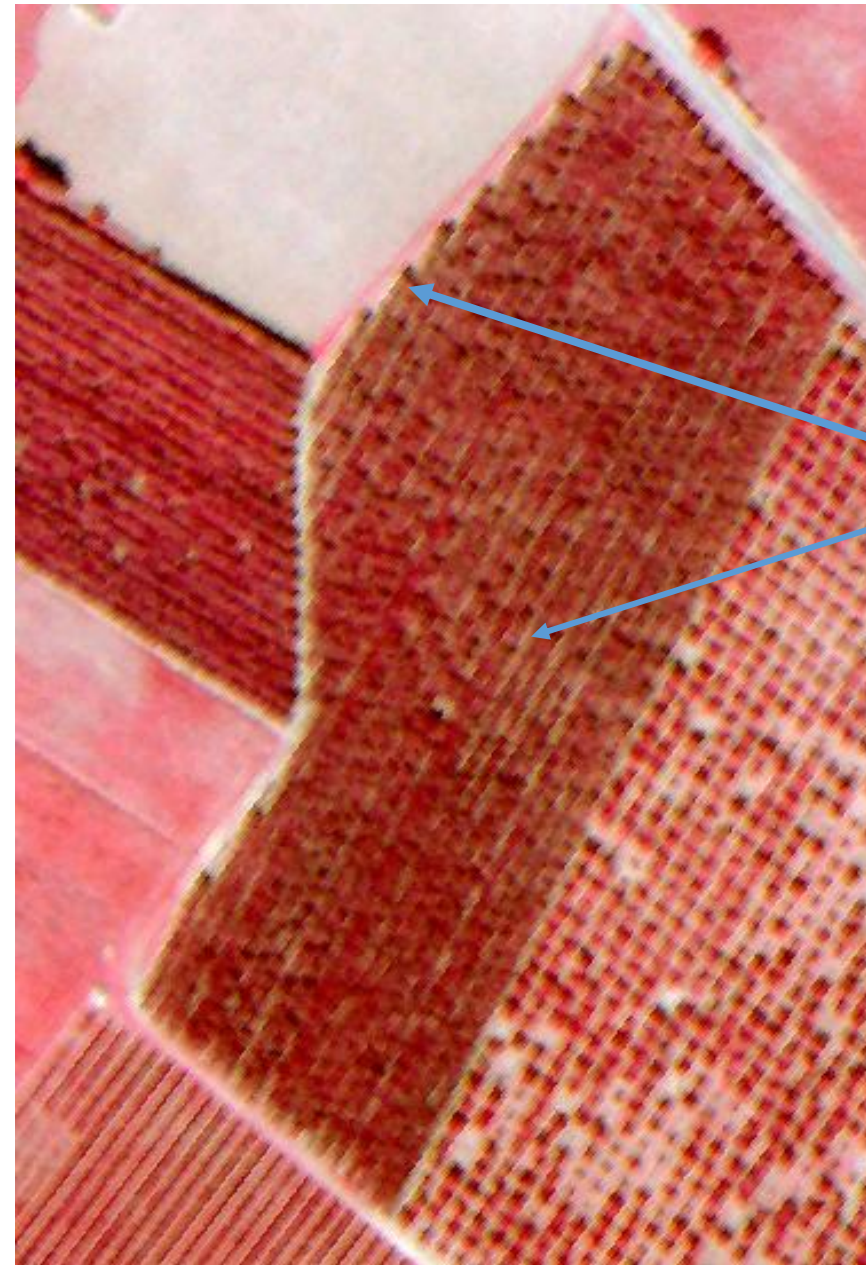
Come mantenere la
produttività
del frutteto ?



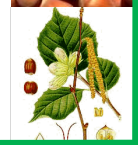
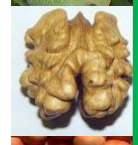


Densità e variabilità

foto aerea
in modalità
primo infrarosso




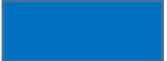


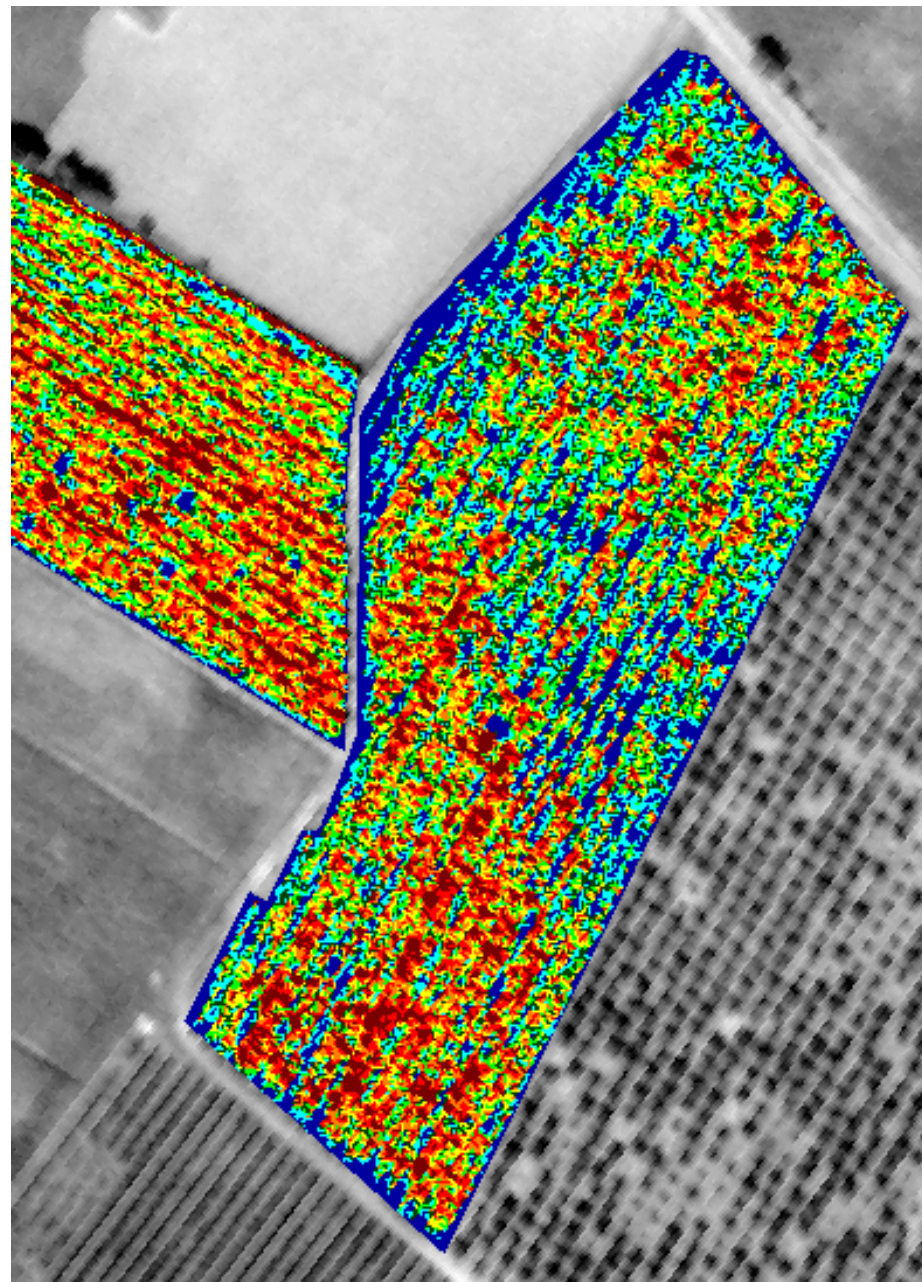
Zona più chiara



Densità e variabilità

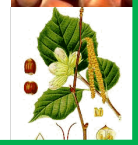
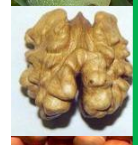
foto aerea ritrattata in indice vegetativo

-  Piante vigore alto
-  Piante vigore medio alto
-  Piante vigore medio
-  Piante vigore basso





La densità ...



La situazione e
la qualità del
terreno

Densità

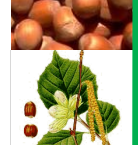
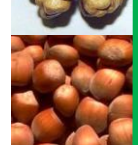
Velocità d'incremento
della produzione

Investimento dell' impianto

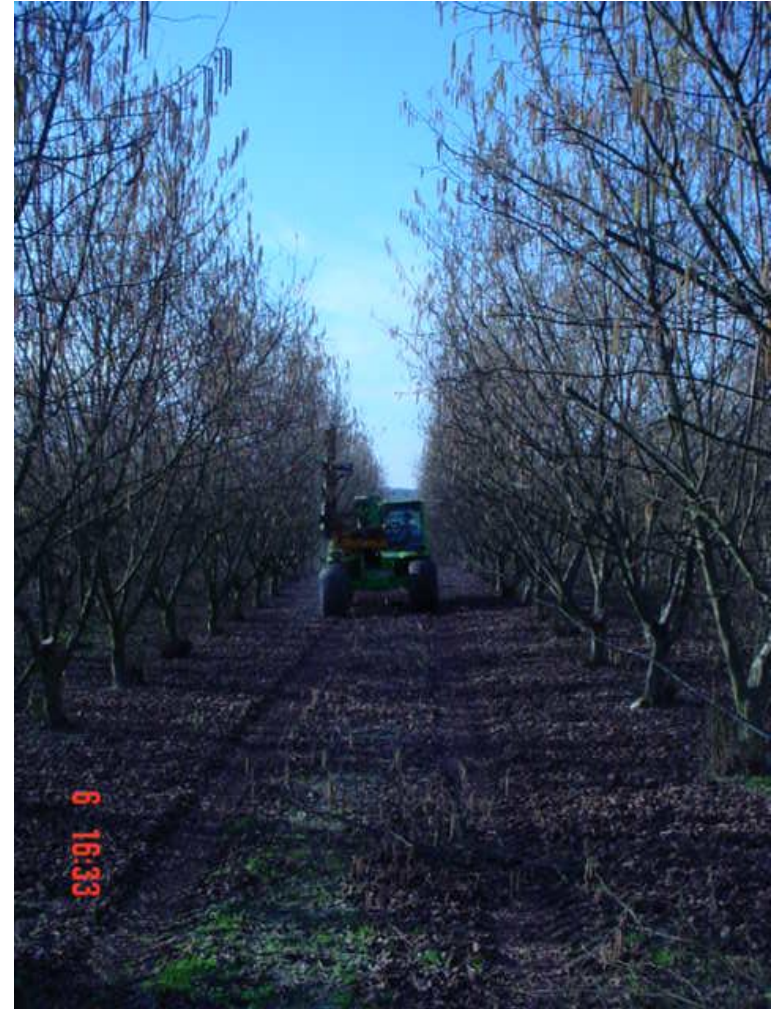
la capacità di mantenere
la produttività

Illuminazione solare e
potatura



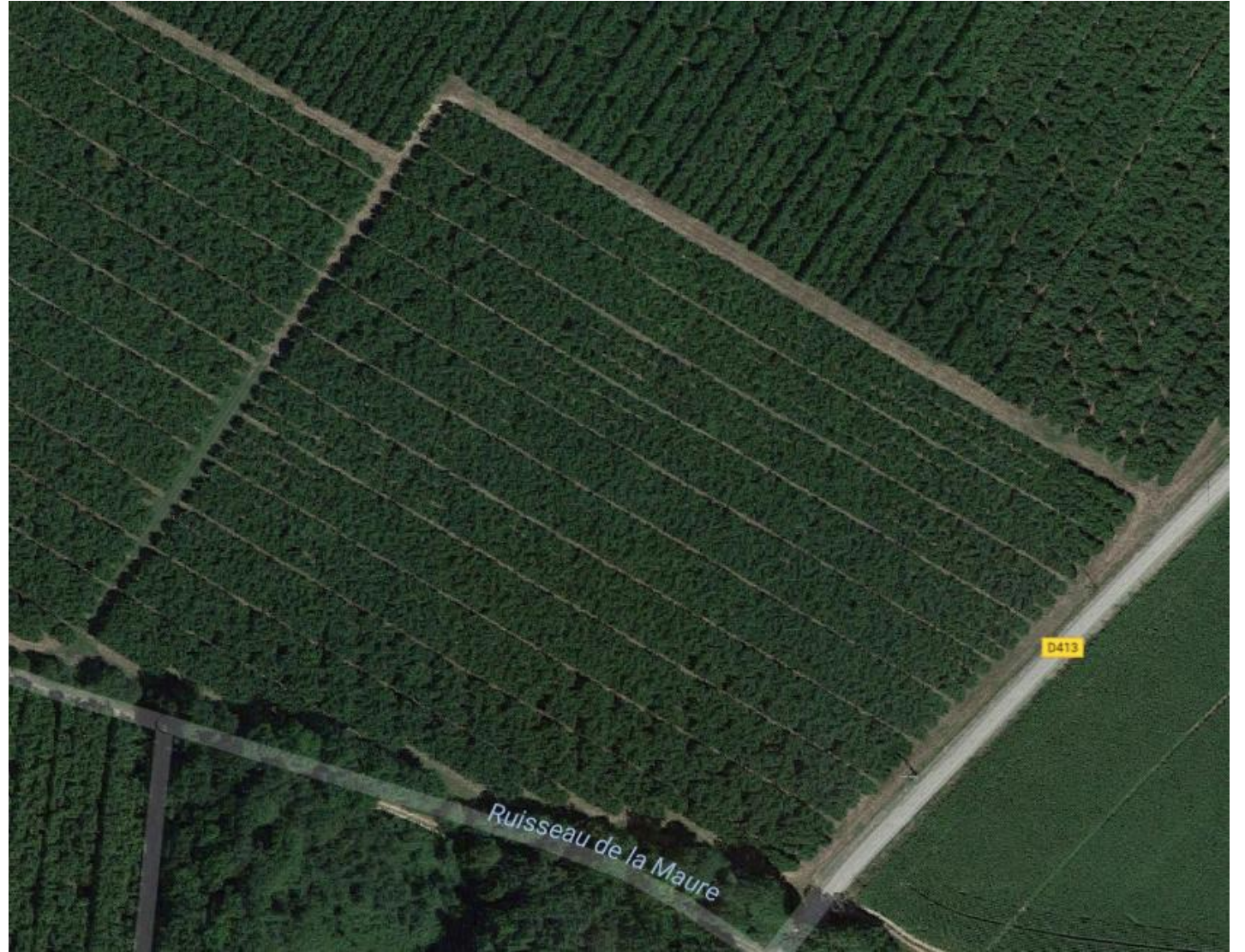


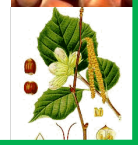
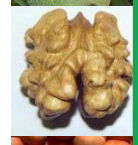
La potatura per dare luce





La potatura



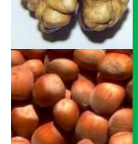
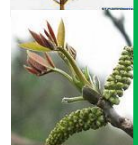


La potatura

**quando sono a 2,5 m
o 3 m sulla fila**

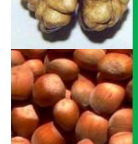
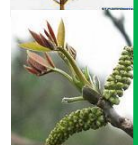
**bisogna intervenire
per togliere gli alberi
troppo vicini**





Alberi eliminati





Legno di potatura

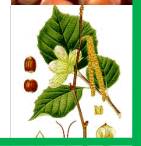




Prova fila strappata

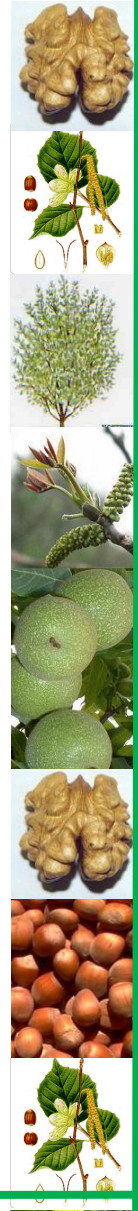


NON da Fare !





La densità ...



La situazione e la qualità del terreno

Densità

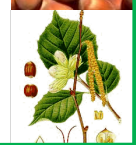
Velocità d'incremento della produzione

Investimento dell' impianto

la capacità di mantenere la produttività

Illuminazione solare e potatura

Interventi e costi dell' attrezzatura



In base alla distanza entro fila

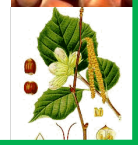
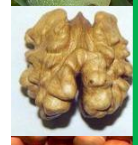
spazio de 5 m

- 2 km / ha de fila
- Trituratori erba 3 m

Spazio de 6 m

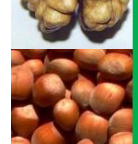
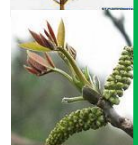
- 1,66 km /ha de fila
- Trituratori erba 4 m





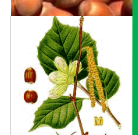
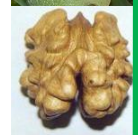
Raccolta





Media tempi lavoro 45 h/ha



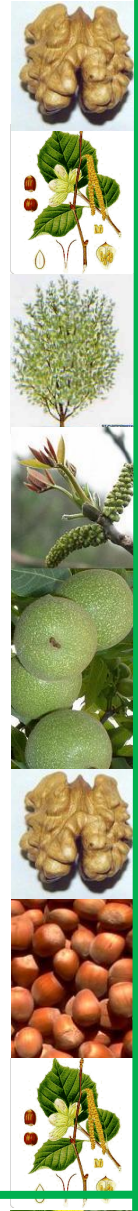


la distanza entro fila influenza

- Il tempo dei interventi
- La larghezza dell'attrezzatura
- La potenza dei trattori
- il costo delle attrezzature
- ...



La densità ...



La situazione e
la qualità del
terreno

Densità

Velocità d'incremento
della produzione

Investimento dell' impianto

la capacità di mantenere
la produttività

Illuminazione solare e
potatura

Altri Interventi

.... una scelta strategica



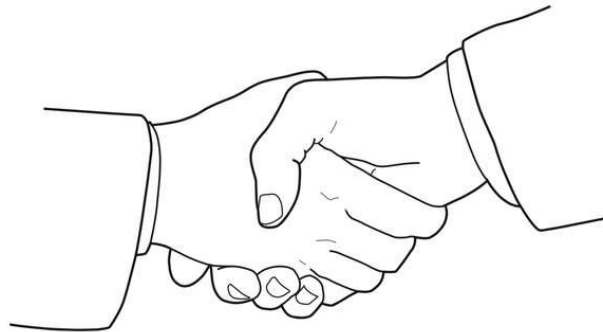
Per saperne di più

- <http://www.unicoque.com/>
- **A vostra disposizione**





vi ringrazio molto per la vostra attenzione



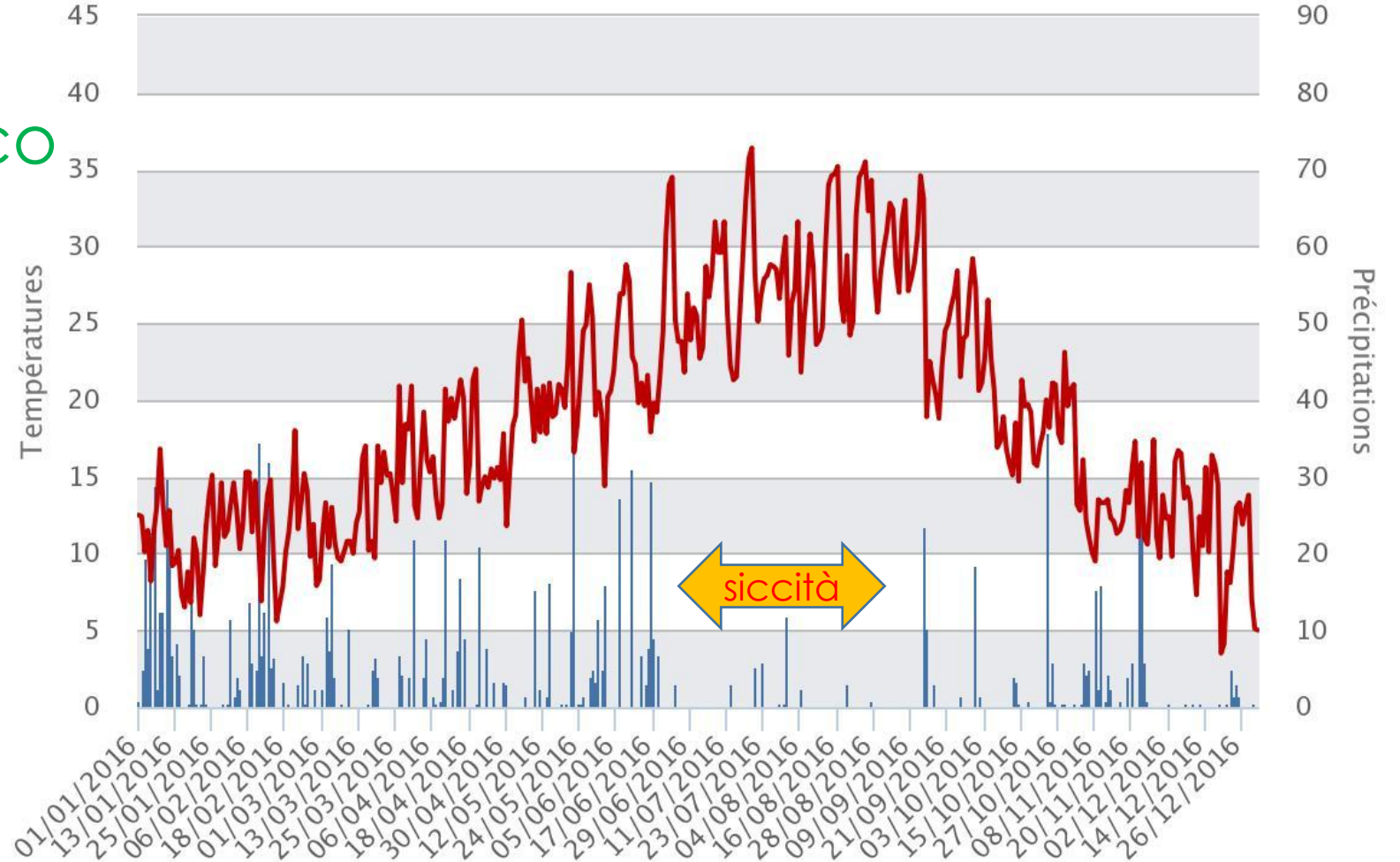


Il Bisogno d'irrigazione Diagramma termo-pluviometrico



Météorologie Cancon

Maximum: 36.4°C - Minimum: 3.5°C



■ Cancon - Précipitations (mm) (Cumul: 1169)
● Cancon - Température Max (°C) (Moy: 18.75)



Irrigazione di controllo

