



Establishing an hop garden.

Taking those first steps



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Why grow hops ? In Portugal ? In Braganca ?

- A truly national product.
- Supporting local economy, agricultural production –
- A trend towards ‘local sourcing’
- Carbon miles
- A unique Terroir ?
- Fresher and better product ?
- Price advantage ?
- BUT we must ask why did hop production decline in Portugal and what do we need to do differently to make it successful.



Which hops shall I grow ?

- ▶ What is the market demand ? What drives market demand ?
- ▶ What hops do Portuguese Brewers want ?
- ▶ Which varieties will grow well in Braganca ?
- ▶ Good characteristics / yield / disease resistance
- ▶ What is the market price ?
- ▶ What is the demand ? Today ? In 3 years ? In 10 years ?
- ▶ Locally ? Internationally ?
- ▶ Varietal protections eg Nelson Sauvin, Citra, Amarillo
- ▶ What varieties are other producers planting ? Locally ? Internationally ?
- ▶ Where do I get the info ? Talk, ask, research.



Other practical considerations

- Availability of local knowledge, labour, equipment - new / 2nd hand
- What scale production ?
- Availability of financing, government / EU grants
- Who are you going to sell your hops to ? Nationally? Internationally?
- Direct to client ? Hop trader ? Use for your own brewery ?
- How are you going to sell it ? Contract ? Spot ? Yourself or via a cooperative?
- Future oversupply of hops globally ?



Moving forward



Lots of questions..... So how to move forward.

- We looked at several options. Renting land, buying land, finding disused installations.
- Then perfect opportunity presented itself. Disused experimental hop field form IPB.
- 0.5 Ha on the Quinta do Poulao.
- Partnership combining experimental, research and commercial

Quinta do Poulao



Rehabilitating

- Sorry no nice photo !
- Repairing poles
- Installing new anchors and wires
- Re-tensioning wires



Preparing the soil



Ferti-irrigation system – 3 sectors



Planting

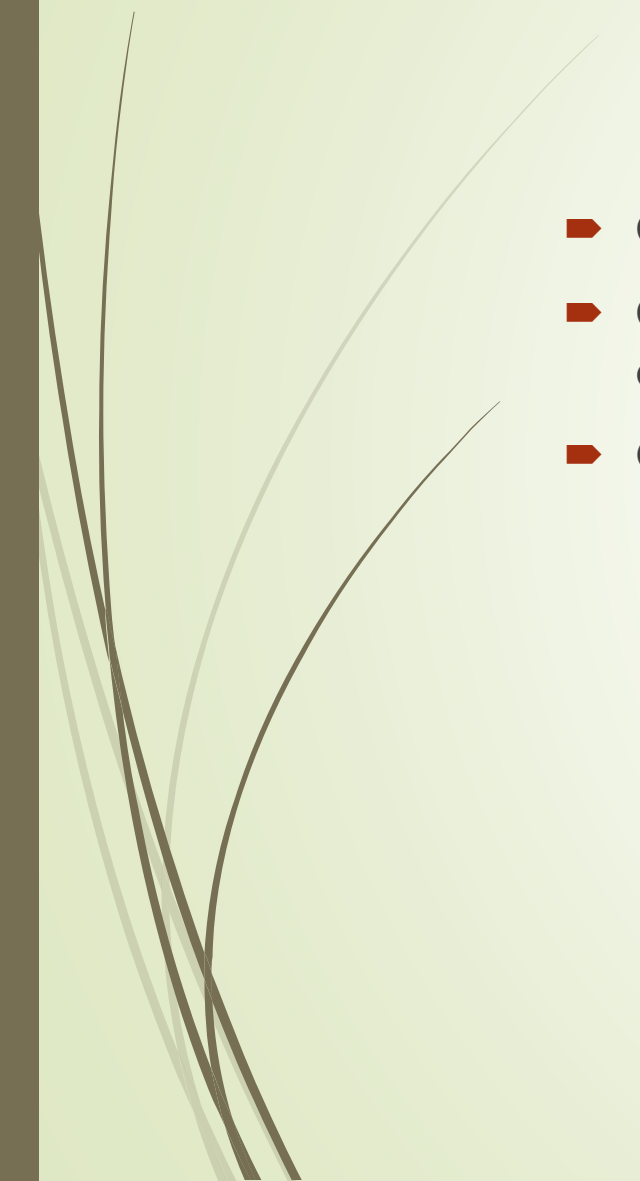


12 main varieties

- ▶ Bullion – developed as high alpha / strong flavour
- ▶ Centennial – developed as high alpha – but also great aroma
- ▶ Chinook – developed as high alpha – also great aroma
- ▶ First Gold / Prima Donna – dwarf variety
- ▶ Fuggle – English classic gentle flavour aroma
- ▶ Magnum – German bittering said to like hot weather
- ▶ Mount Hood – Mild aroma
- ▶ Saaz – classic Czech land race
- ▶ Santiam – gentle aroma / high yield
- ▶ Target – Gentle dual purpose
- ▶ Willamette – US aroma hop
- ▶ Yeoman – classic English hop no longer commercially grown



And a few more for good measure...

- ▶ Cascade - Classic US Aroma hop
 - ▶ Comet – developed as high alpha variety – but now appreciated for aroma
 - ▶ Galena – developed as high alpha / also aroma
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Irrigation and technology



Setting the strings



Stringing the hops



Progress !



Caterpillars !



Aphids !





Desenrascar vs 7Ps

but there is no substitute for experience

- ▶ Non-level field due to partial ploughing – problem stringing
- ▶ Ploughing took much longer due not having adjustable plough
- ▶ Irrigation – existing pump does not allow automatic irrigation
- ▶ Had to shift irrigation tubes to ensure new plants with no developed root system getting water.
- ▶ Failures due to planting hop roots upside down and/or too deep
- ▶ Not planting accurately in straight lines. Digging too big holes. Not digging along the line.
- ▶ Delay installing irrigation system
- ▶ Delay planting
- ▶ Delay start fertilization
- ▶ Not tying strings tight enough so wasted several days having to redo.

Thank you !



