

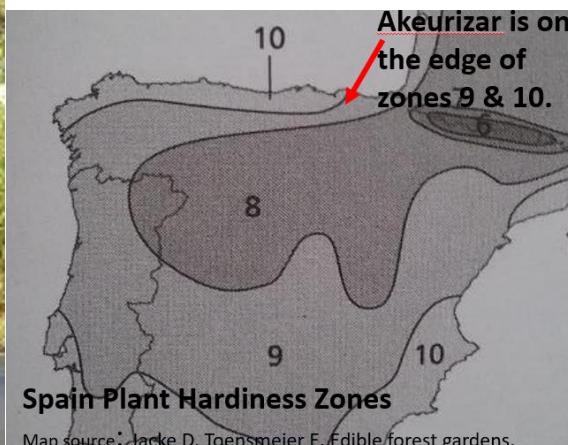
# Akeurizar Food Forest Research Site Opportunity

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[Link to google maps](#)



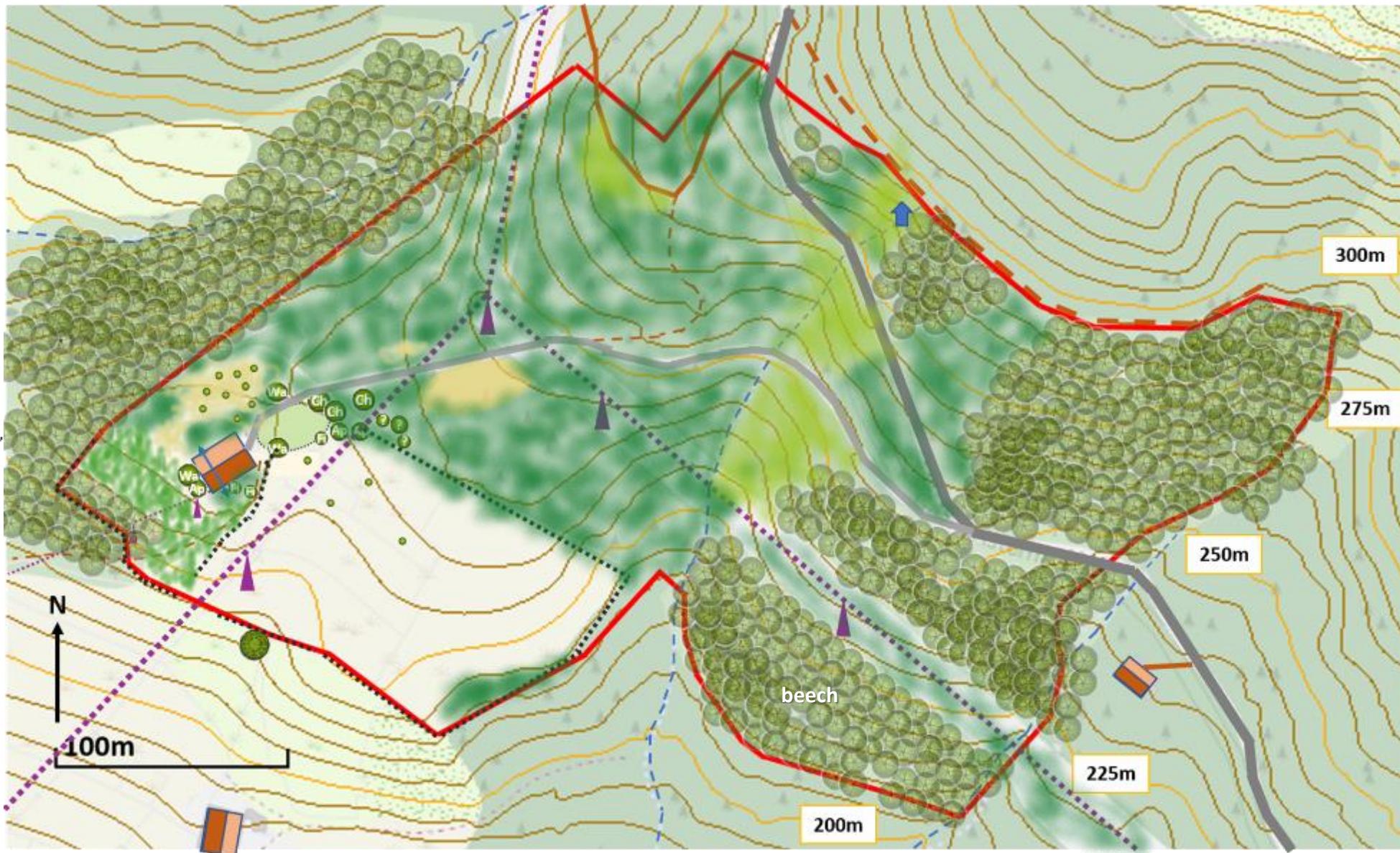
Akeurizar is approx. 8.5 ha (20 acres), about half of which is dense shrubbery and young pine, willow and oak on land that was harvested for pine 8 years ago. There is also pasture and remnants of oak and beech woodland. This year we start our ambitious dream of converting about 1.5 ha of the pasture and parts most degraded by the former pine plantation into a food forest, leaving the other parts to nature.



# Base Map

Akeurizar Food Forest Research Site Opportunity | Google maps [Link](#) to site location

- Site boundary
- Road
- Main site access road
- Dirt track
- Pine plantation access track
- Overgrown old dirt road
- House with rain runoff
- Brook
- Spring
- Powerline and towers
- House electricity supply (broken)
- Fence (in disrepair)
- Nut / fruit tree (walnut, chestnut, apple, fig)
- Self-seeded walnut saplings (~1m tall)
- Dense vegetation dominated by bramble, with young pine, oak and willow trees, some gorse and ferns
- Robinia pseudoacacia, considered invasive in the region, useful for fencing and building
- Clearing in the bramble areas
- Pasture (overgrown)
- Pine tree plantation
- Closed canopy wood (all oak except the south eastern patch is beech as indicated)



**Mission:** To maximise nutritional yield, human well-being and environmental enhancement (soil building, biodiversity & ecosystem health, carbon sequestration, etc) **measured relative to the inputs** (land, organic and non-organic material imports) and negative outputs (GHG emissions, polluting waste etc). \*labour can be a positive or negative thing, but here we hope to have work that is meaningful, diverse, satisfying and not over-taxing as part of the human well-being aspect, as opposed to labour in the negative, monotonous, exploitative sense of the word

## Goals

**Maximise nutritional yield:** By 2030, 1.5 to 2 hectares will be productive, at least half of this with highly diverse food forest in a way that best meets the mission statement. We are not aiming for self-sufficiency on our site, but hope to create very diverse food forest systems generating nutrition-dense produce and barter for a more varied diet, as well as sell surplus to contribute to regional food security and sovereignty

**Maximise environmental enhancement / regenerative production:** We would like to collaborate with institution(s) and researchers to measure environmental impact of our site and compare this to more conventional forms of food production:

- ✓ soil building & soil health
- ✓ Biodiversity and ecosystem health through comparison with nearby woods and sites in similar microclimates
- ✓ Carbon sequestration

**Minimise and measure negative outputs such as GHG emissions, polluting waste and others.** Collaborate with the relevant institutions / researchers to do this as well as possible & **Carefully consider the impact and need for external inputs**

**Maximise human well-being:** We will monitor and strive to support human well-being, possibly by identifying a before / during / after survey to document this, focusing on three groups of people: a. permanent workers (ourselves), b. temporary volunteers such as wwoofers and c. environmental activists and underserved communities in need of a place for reconnection and rest.

**Collaborate** with organisations and researchers doing policy and campaign work aimed at **increasing the support for permaculture & agro-ecological production systems and the wider food system change movement (e.g. [feedbackglobal.org](http://feedbackglobal.org))**



Averages for Igorre 2012 -2019, Altitude 150 m (6 km from Akeurizar)

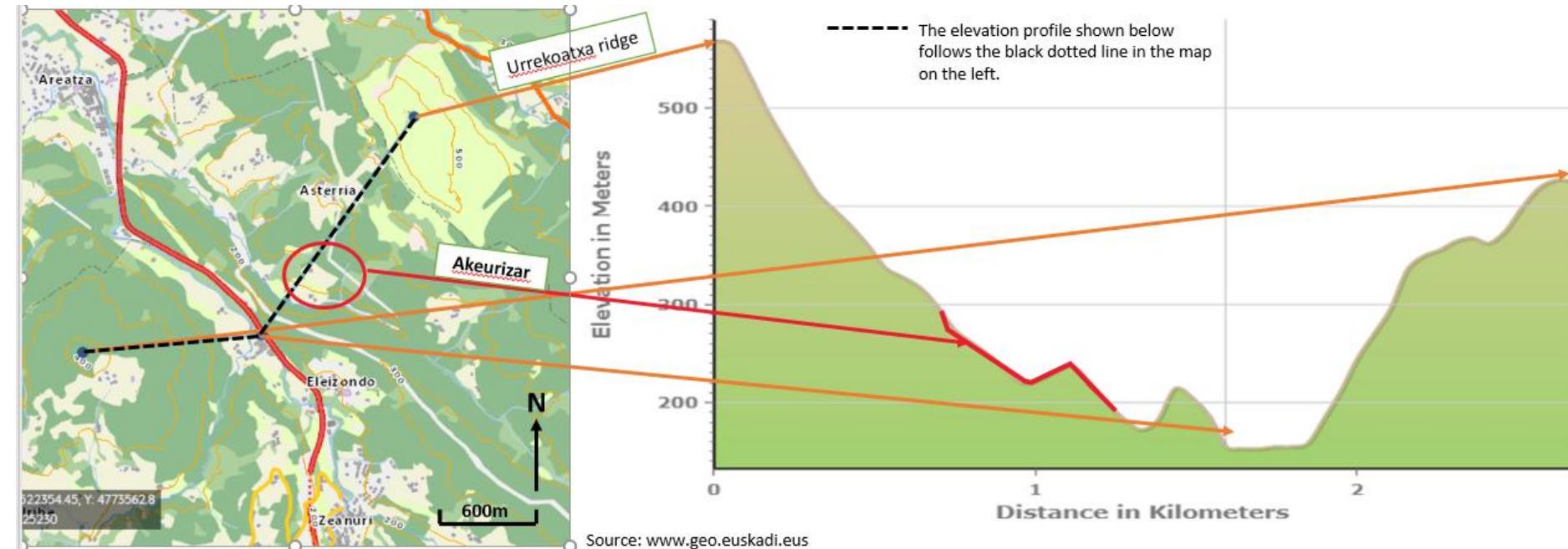
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (l/m <sup>2</sup> )	226	228	149	114	88	65	61	38	64	98	232	103
Absolute min temp (Celsius)	-1.3	-1.4	0.4	1.2	3.3	7.5	9.0	8.6	7.2	3.3	1.1	-0.9
Days of frost	3.4	4.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0
Absolute max temp (Celsius)	20	22	26	27	31	35	37	37	34	30	24	20

**Record high** temperatures (Degrees Celsius), all in August: 42.4 (2012), 41.8 (2002), 40.2 (2019)

Average annual rainfall 2012–2019: 1470 liters/ m<sup>2</sup>

**Record low** temperatures (Celsius): -8.2 (Dec 2001), -6.1 (Mar 2005), -4.8 (Jan 2017 & Feb 2018). The winters (Dec, Jan, Feb) of 2018 & 2019 had 10 days of frost each, and 2017 had 17 days of frost. **Frost free growing season** runs from mid-March until end November: 260 days.

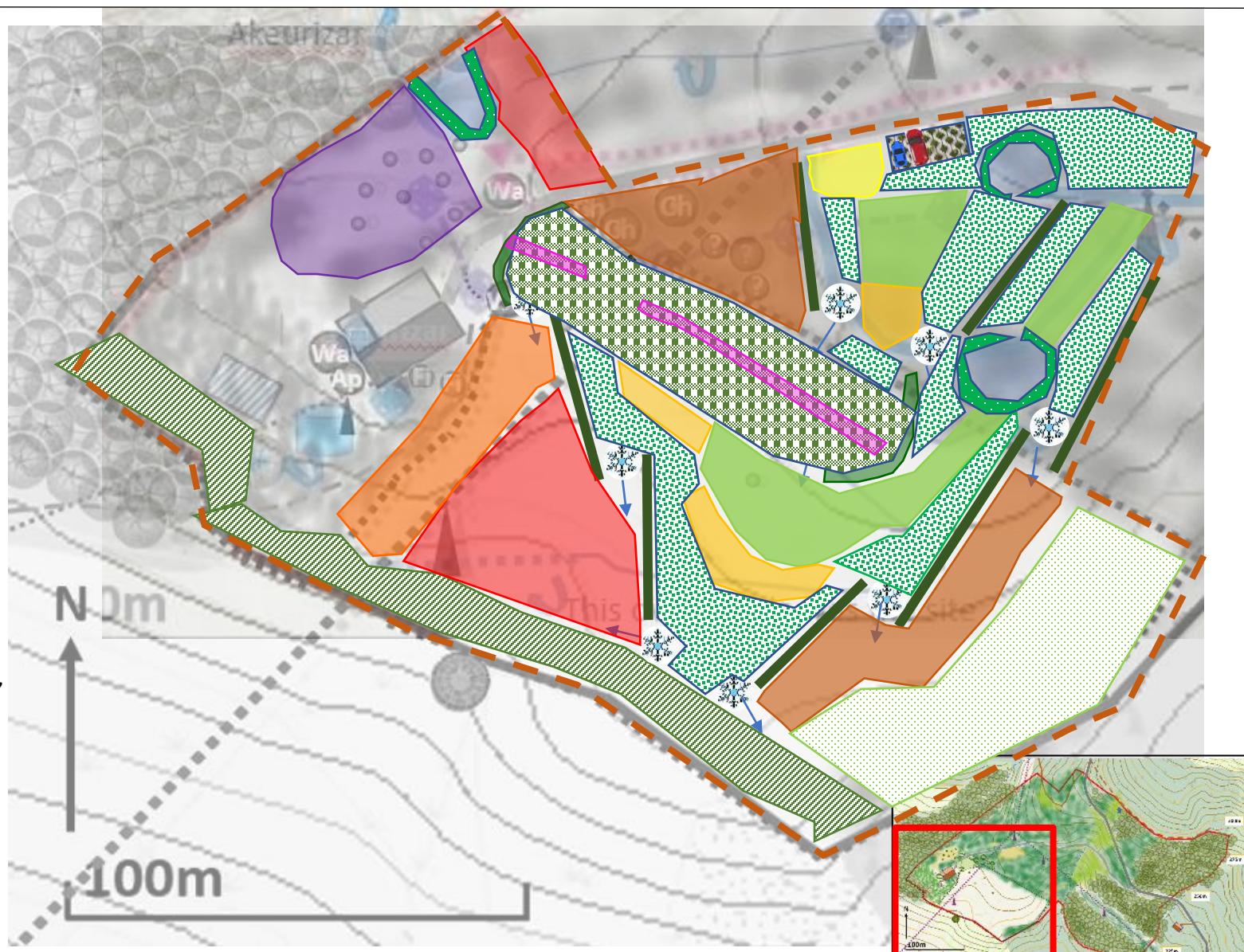
Akeurizar is located on a South-West facing slope benefiting from a microclimate that avoids frost pockets lower in the valley where the above temperature data apply. One challenge we have identified is strong southern winds needing careful windbreak design and planting. The ridge to the North protects the site from the colder Northern winds.



# Akeurizar food forest long-term design idea

Akeurizar Food Forest Research Site Opportunity | Google maps [Link](#) to site location

- Windbreaks against prevailing southeasterly and southwesterly winds.
- Windbreak / pollinator attracting hedgerows
- Cold air can slide down with downhill placement of windbreaks to avoid frost pockets
- Year-round pollinator attracting plantings
- Annual vegetable garden
- Walnut (*Juglans regia*) guilds
- Apple (*Malus domestica*) and plum (*Prunus domestica*) guilds, and other fruit trees with higher winter chilling requirements
- Pond edge planting
- Visitor camping area
- Subtropical plant guilds placed for maximum sunlight and wind protection
- Warm temperate guilds (apricots, peaches, grapes)
- Temperate climate nut trees and shrubs (but not walnut).
- Perennials that tolerate some shade, leaf-producing perennials, ecosystem support plants and larger pathways.
- Closed canopy wildlife (though unfortunately not boar and deer) corridor linking the woods to the West and South East of our site.
- Wildflowers and medicinal meadow plants.
- Deer and boar excluding fencing.
- Native groundcover vegetation / or pasture, prevent shading of chestnut guilds.



If you are looking for a site to do research in relation to any of the topics mentioned in this presentation (or others that you think are relevant), we would love to hear from you.

As we are completely at the beginning, starting small, there is plenty of opportunity to develop baselines and measure impact.

Once we have some very basic infrastructure in place (we have just arrived and are living in a caravan), we would also love to share this beautiful place with anyone wanting to join part of the learning journey. We will be advertise these opportunities via WWOOF.

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Further thoughts on the initial design idea:

- The design may substantially change in response to collaboration with researchers, initial test planting and ongoing observation of the site.
- Overall, we are planning a quite open woodland density with multi-layered guilds clustered in such a way as to ensure sun requirements of plants are fulfilled.
- We are aiming to mix a wide diversity of species and varieties to add resilience into the system. We will start out small to test out different varieties and species.
- We will not aim for a closed canopy food forest for the subtropical and warm temperate guilds (where perhaps we will have only 50% canopy cover), though may create more shade in the leaf producing and colder climate guilds in the shadows of the windbreaks.
- We may also choose to reduce layers where this might facilitate harvesting or maintenance. For example, in nut guilds we will want low groundcover plants underneath the canopy, or plants that can be chopped down prior to harvesting and not shrubs to ensure ease of harvest.
- Whilst we are clustering plants with similar microclimate requirements, the idea is to separate plants of the same type and variety to prevent spread of disease.