# Pioneer Species for Temperate Climates

A plant guide for sustainable and regenerative agriculture.

## Trees

<table>
<thead>
<tr>
<th>Attributes</th>
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<tbody>
<tr>
<td>A</td>
<td>B</td>
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## Climbers

## Shrubs

## Herbaceous

## Annuals

### What are Pioneer Species?

Pioneer species are plants, often considered weeds, which nature uses to transition from bare soil to a climax forest. They cover the soil quickly and reduce erosion. They often have deep taproots that pull nutrients from the depths. They can thrive in drought, full-sun, and bare soil conditions, and they pave the way for slower growing plants that need more moisture. The first pioneer plants are annuals and herbaceous perennials. Eventually shrubs and then trees appear. Pioneer species can be all of these types of plants, but the larger shrubs and trees often take many years to appear.

By using pioneer species with modern forest garden, agroforestry, and permaculture techniques, we can speed up the natural succession process to develop (or redevelop) sustainable and regenerative ecosystems for wildlife, agricultural, or personal use.

This infographic provides key information on growing conditions, attributes, and edible parts of many important pioneer species.

### What Makes a Pioneer Species Desirable?

- Grows Well in the Soil We Have - usually poor
- Grows Well with Available Moisture - usually low
- Fast Growing
- Nitrogen Fixing - plants that form symbiotic relationship with bacteria and put nitrogen into the soil which can be used by other plants
- Produces High Levels of Biomass - leaves and branches that fall off every year which increase the organic components of the soil
- Dynamic Accumulators - plants that put nutrients into their leaves, often mined from well below the soil surface through deep taproots, and then lose those leaves each year increasing the mineral content of the top soil
- Tolerates Frequent Pruning - we can build soil faster by chopping back leaves and spreading them around on the ground (a.k.a. "chop and drop")
- Producer - if the plant can provide us a harvest, all the better!

## Key to Plant Attributes

- N = Nitrogen Fixer
- D = Dynamic Accumulator
- I = Attracts Beneficial Insects with Pollen/Nectar
- P = Aromatic Pest Confuser - heavily scented plant that confuses/distracts, or repels plant pests
- B = Biomass Plant
- C = Plant can be Copied
- E = Provides Erosion Control
- G = Can be a Groundcover
- S = Short-Lived Plant
- St = Shade Tolerant
- F = Wood/Fibers used for Fuel
- T = Wood used for Timber, Tobis, Posts, Crafts, etc.
- Wb = Windbreak
- Wt = Provides Food for Wildlife
- Ws = Provides habitat and Shelter for Wildlife
- A = Leaves, Seeds, Roots, etc. used for Animal feed/kidder
- F = Fruits
- Fl = Flowers
- Fl = Flowers
- S = Seeds
- Sh = Shoots
- Sp = Sprouts
- St = Stalks
- Sg = Greens
- P = Posts
- R = Roots
- H = Culinary Herb
- T = Tea Plant

## KEY TO EDIBLE PLANT PARTS