



Alley cropping: an opportunity for agroforestry in Finland

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Alley cropping, or planting trees or other woody perennials in rows in arable or vegetable fields, is an innovative idea worthy of exploration by farmers seeking both an additional long-term income, rather than income based solely on annual or perennial production, and to increase the environmental resilience of their farming system.

Trees recommended for alley cropping are those providing fine hardwood timber or edible nuts or fruits, but also other added-value products, like syrup or medicine: alder, birch, European ash, black walnut, aspen, poplars, willow, maple, apple, pear, cherry and plum are examples of these type of trees.

Alley crops that can be grown are fruit bearing shrubs, regular and forage crops, ornamental and medicinal crops, coppice biomass crops, ornamental woody plants (dogwood, curly birch, curly willow), high value fruits or superfood: blueberries, currant, saskatoon, gooseberries, American hazel...

Producing agricultural products combined with trees or other woody perennials leads to a diversification of the farm products, thus minimizing risks due to climatic events or to uncertain markets. At the same time as increasing the resilience of the system and increasing biodiversity. Trees contribute to reduce soil erosion and leaching of excess nutrients, improving at the same time the soil organic matter content, and storing more carbon compared to conventional agriculture. When planted as a windbreak on erosion prone slopes in southern Finland, trees reduced wind speed and wind erosion. In addition, the tree rows reduced damages due to exceptional

summer drought. Due to climate change, periods of exceptional summer drought are expected to become more frequent also at northern latitudes in the near future.

North-South orientation of tree lines is better at high latitudes to reduce light competition. As the trees grow, shade will increase, thus understory crops might need to change over time to adapt to the new conditions.

References:

AFINET Factsheet:

https://euraf.isa.utl.pt/files/pub/20190127_-_factsheet_11_-_web.pdf#overlay-context=afinet/materials/factsheet

Finnish RAIN alley cropping field trip 15 June 2018, Pusula, Finland:

http://eurafagroforestry.eu/afinet/events-news/Finnish_RAIN_alley_cropping_field_trip

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<https://doi.org/10.1007/s10457-018-0214-x>



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