

# Welcome to our Food Forests Program



*We believe the passion of our citizens can change the world.  
Our mission is to support and encourage them.*

## Hilkensberg Food Forest

The EDSP ECO Foundation works on sustainable solutions in the field of food, raw materials, mobility and energy with the aim of promoting health, restoring nature and the climate and thus securing our future. One of the ways we support these goals is by growing a 1,8 hectare (4,5 acres) Food Forest.

The Hilkensberg Food Forest is an initiative where we try to bring nature and agriculture closer together and to give both a place in mutual respect: Nature-inclusive agriculture and thus shaping nature in a way that we can live from it without causing damage to the environment, nature or the climate is our dream. We anticipate climate change and its consequences and apply new insights into nature, food and soil processes in practice.

We've created an extensive Action Plan and Food Forest Design based on thorough Research, Field Tests, Monitoring, Automation and Robotics.

Click the buttons below for the Action Plan or the Food Forest Design.

[Food Forest Action Plan & Research](#)

[Food Forest Design Interactive Map](#)

## Climate Solutions

Food Forest Hilkensberg implements several Climate Actions from [the Dutch Climate Coalition](#) and the renewed Trees Policy of the [Dutch Tree Union](#) in which we actively focus on limiting CO2 emissions and increasing CO2 absorption to prevent climate warming and also to implement climate-adaptive and mitigating solutions to be better prepared for the harmful consequences of global warming. We also ensure the plan takes into account the conservation of nature and biodiversity and does not compromise health. The felling, burning and fermentation of (woody)



## Automation, Mechanization and Robotics

With automation, mechanization and robotics, a lot of manual work and time can be saved. In fruit growing, 37% of production costs consist of labor costs. In general, the labor intensity per hectare of fruit cultivation is higher than that of other open crops. In the cultivation of low-stem fruit, for example, approximately 160-200 hours per hectare per year are spent on cultivation maintenance. With larger tree forms, such as plum or cherry, this amounts to 320-380 hours per hectare per year. For most berry crops, the working hours amount to approximately 500 hours per hectare per year. These numbers are all exclusive of labor around the harvest. Sensor technology, image recognition and robotics can play an important role in this. It is estimated that even 40% of the labor can be saved with robotization in top fruit cultivation. Precision techniques are currently being developed by researchers and companies. Precision techniques cover a wide range of options for making agriculture less labour-intensive.

The aim of our Sensor & Robotics program is to deliver a productive Food Farm Harvester within five years and accelerate the transition to circular nature-inclusive agriculture by making it profitable and less

biomass, for example, is not part of the plans and the focus is on natural solutions.



## EDSP ECO Automation & Robotics

Creating an environment that is necessary for the development of tooling (robotics) to automate the harvesting of food forests is also a goal of Food Forest Hilkenberg. By [automating harvesting](#), we hope to accelerate the transition to circular nature-inclusive agriculture by making it profitable and less labor-intensive for farmers, so that they can easily switch to a nature-inclusive form of agriculture.

## Food Forest Harvester

Our latest project is building the Food Forest Harvester (FFH) which is intended to help save the world by automating harvesting Food Forests.

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Secure and nutritious food supplies are the foundation of human health and development, and of stable societies. Yet food production also poses significant threats to the environment through greenhouse gas emissions, pollution from fertilizers and pesticides, and the loss of biodiversity and ecosystem services from the conversion of vast amounts of natural ecosystems into croplands and pastures.

Agriculture uses 85% of freshwater and, directly or indirectly, produces nearly half of all greenhouse gas emissions. Industrial agriculture accounts for a large proportion of these ecological costs and also depends on high energy use and toxic chemicals. Global agricultural production is on a trajectory to double by 2050 because of both increases in the global population and the dietary changes associated with growing incomes.

Agroforestry and Food Forests are part of a design philosophy called permaculture that approaches agriculture from the viewpoint of self-sufficiency. It is an agricultural principle that uses the patterns and features observed in natural ecosystems and works with nature rather than against it. Permaculture looks at all the functions of plants and animals, not treating

labour-intensive for farmers so that they can easily switch to a nature-inclusive form of agriculture and promote development in the areas of transparency, Open Data and Citizen Science. Regional groups consisting of designers, developers, journalists and others meet regularly in Labs. They develop apps that inform, positively shape and support society and make the work of administrations and authorities more transparent. The digital tools, the Maker Movement and Citizen Science are leading to more and more people being given the opportunity to design the future & their preferred way of living themselves.



## FarmBot - Take Back Control

FarmBot



Bekijken op

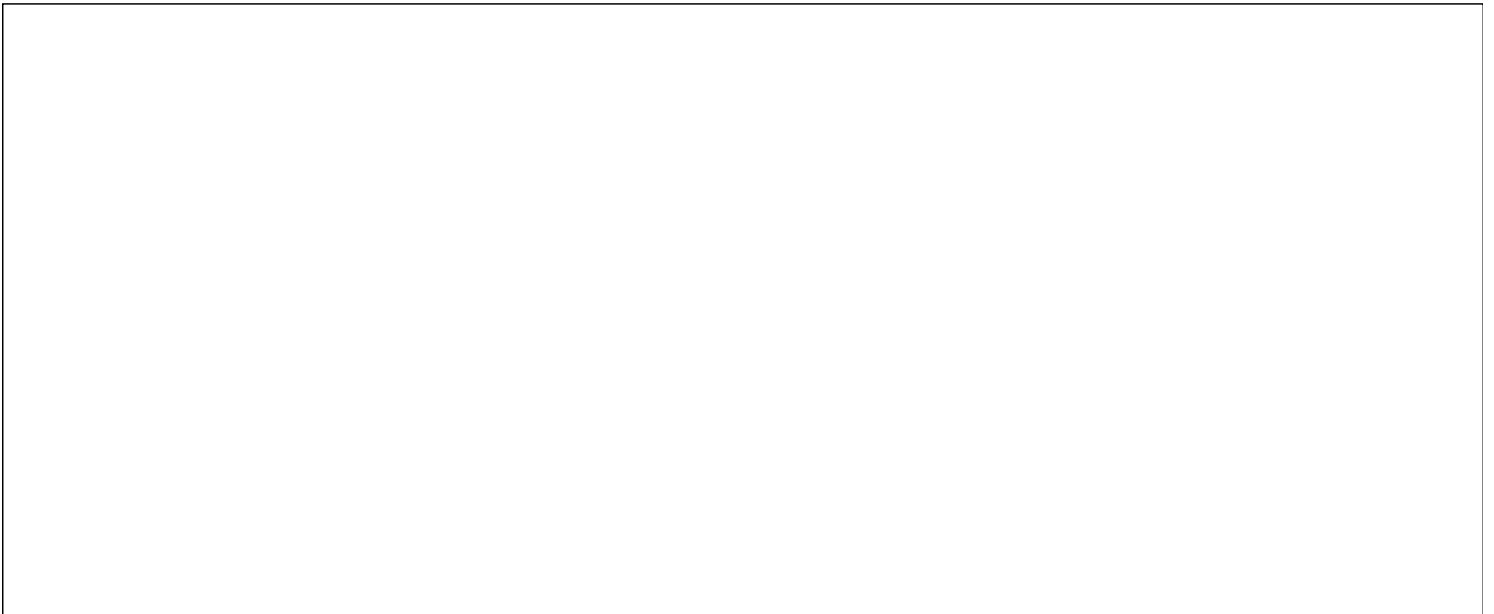
## FarmBot - Take Back Control

FarmBot is a great example of an open source precision agriculture CNC farming project consisting of a robot farming machine, software and documentation including a farming data repository. The project aims to "Create an open and accessible technology aiding everyone to grow food and to grow food for everyone." FarmBot is an open source project allowing hardware, software and documentation modifications and additions from users. The FarmBot project was started by American Rory Aronson who published a white paper outlining the goals of the project to "Grow a community that produces free and open-source hardware plans, software, data, and documentation enabling everyone to build and operate a farming machine."

any as a single product. It has ethical principles like taking care of the earth and sharing the output of the land. Agroforestry and Food Forest harvesting are currently very labour intensive and therefore not a viable alternative to current industrial agriculture harvesting methods.



## EDSP Sustainability Priorities





Affordable and Clean Energy



Clean Water and Sanitation



Climate Action



Decent Work and Economic Growth



Gender Equality



Good Health and Well-being



Industry, Innovation and Infrastructure



Life Below Water



Life On Land



No poverty



Peace, Justice and Strong Institutions



Quality Education



Reduced Inequalities



Responsible Consumption and Production



Sustainable Cities and Communities



Zero hunger