
OUTLINE

ONLINE COURSE

E-ACADEMY AGROFORESTRY

Version March 2024



FARM LIFE
Farming the future
LIFE17-CCA_NL_000093



The project Farming the Future – Building Rural Networks for Climate-Adaptive Agriculture - FARM LIFE – is co-funded by the LIFE Programme of the European Union under contract number LIFE17 CCA/ NL/000093

LIFE Project Number LIFE17-CCA_NL_000093

LIFE Project acronym: FARM LIFE

Data Project

Project location:	Netherlands and Belgium
Project start date:	01/09/2018
Project end date:	31/08/2023 Extension date: 31/08/2024
Total budget:	€ 2,439,287
EU contribution:	€ 1,463,570
(%) of eligible costs:	60%

Data Beneficiary

Name Beneficiary:	Van Hall Larenstein University of Applied Sciences
Contact person:	Euridice Leyequien
Postal address:	Larensteinselaan 26-A, 6882 CT Velp
Telephone:	+31 636562213
E-mail:	euridice.leyequienabarca@hvhl.nl
Project Website:	www.farm-life.eu

Report information

Name	Outline Online Course E-academy Agroforestry
Related action	C6
Produced by	Suzanne van der Meulen (VHL) & Sarah Carton (ILVO)
Original delivery time	December 31, 2023
Actual delivery time	January 31, 2024 for the online E-academy March 8, 2024 for this report
Version number	1

Content

Introduction to the course.....	2
Learning outcomes.....	3
Methodology.....	4
Future developments.....	5
Programme of the course	6
Outline of the six e-Modules.....	8
e-Module 1 – What is agroforestry?.....	8
e-Module 2 – Interactions between trees, crops, and animals	10
e-Module 3 – Tree species selection	12
e-Module 4 – Planting techniques and tree management.....	14
e-Module 5 – Formulating a vision: strategic goals for a futureproof agroforestry system	16
e-Module 6 – Agroforestry: the design phase	18
References	21
Annex video setting	22

Introduction to the course

The E-Academy Agroforestry is an online learning journey created for people who wish to learn more about agroforestry at their own pace. This course focuses on the Flemish (Belgium) and Dutch context: even if a lot of principles are generally valid, actors active in Belgium or The Netherlands are hence the main target group. To lower the barriers for participation, the complete E-Academy is in Dutch, hence understanding Dutch at the EQF 5 (+) level or beyond is a prerequisite.

The E-Academy tries to meet the diverse needs of Belgian and Dutch interested parties, including farmers, consultants, students and teachers in agricultural education, policy actors, agrotechnicians, tree nurseries, volunteers who work in the sustainable agriculture segment, and other agroforestry stakeholders. We further refer to this diverse target group as “students”.

At present, six e-learning modules are available:

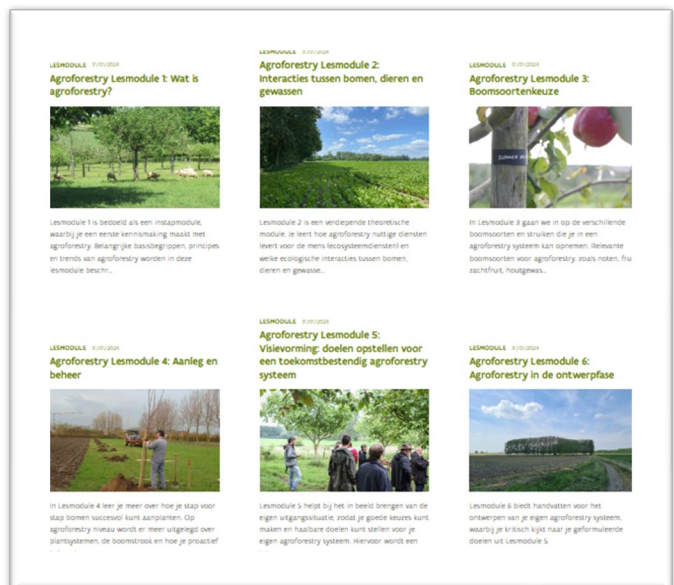
- e-Module 1: What is agroforestry?
- e-Module 2: Interactions between trees, crops, and animals
- e-Module 3: Tree species selection
- e-Module 4: Planting techniques and tree management
- e-Module 5: Formulating a vision: strategic goals for a futureproof agroforestry system
- e-Module 6: Agroforestry: the design phase

In the future, further development of new e-Modules is envisioned. Nevertheless, these six topics should already equip the students with the main theoretical and technical knowledge that can be implemented in starting new agroforestry practices, guiding people who want to implement agroforestry on their farms, and understanding the assets, challenges and different steps involved in implementing agroforestry systems.

The E-Academy Agroforestry will remain available free of charge through www.agroforestryvlaanderen.be, also after the end of the FarmLIFE project. Also, the website of Agroforestry Netwerk Nederland will provide access to the E-academy. As each of the e-Modules is accessible separately, the student is flexible in choosing which e-Module(s) he or she wishes to follow.

With the E-Academy Agroforestry, we aim to increase awareness about agroforestry among people in the Netherlands and Belgium to stimulate the implementation of professional, feasible, and viable agroforestry practices.

Click [HERE](#) for a direct link to the E-academy



Learning outcomes

After finishing this online course, you will be able to apply the following learning outcomes:

<p>e-Module 1: What is agroforestry?</p>	<p>“The student can explain in detail how agroforestry looks like in practice, including the spatial arrangement of trees in combination with crops and/or animals.”</p> <p>“The student can identify and understand ecosystem services provided by agroforestry, such as functional agrobiodiversity and carbon sequestration, and can assign an ecosystem service to one of the four groups where it belongs.”</p>
<p>e-Module 2: Interactions between trees, crops, and animals</p>	<p>“The student can describe the ecological interactions between trees, crops and animals within agroforestry systems, paying attention to complementary, supplementary, and competitive interactions, and the student can distinguish between them.”</p> <p>“ The student understands why ecological interactions can have an effect on the design, including how it is possible to maximal positive ecological effects and minimize negative ecological effects.”</p>
<p>e-Module 3: Tree species selection</p>	<p>“The student is aware of the characteristics, advantages and disadvantages of some of the most commonly used tree species in agroforestry. With this knowledge, the student can judge other information about tree species to make an informed decision about what might be potentially interesting for a specific agroforestry plan.”</p>
<p>e-Module 4: Planting techniques and tree management</p>	<p>“The student can identify and assess suitable plant material for agroforestry systems, taking into account e.g. ecological, climatological, and desired production criteria.”</p> <p>“The student can match the appropriate planting techniques to the plant material and apply them for the correct planting and protection of trees in agroforestry systems.”</p> <p>“The student will learn effective strategies for designing the tree strip and managing it, considering ecological benefits, labor, and complexity.”</p> <p>“The student can apply proactive management strategies within agroforestry systems, including monitoring growth conditions, anticipating potential (climate) issues, and taking preventive measures.”</p>
<p>e-Module 5: Formulating a vision: strategic goals for a</p>	<p>“Based on the provided options (and perhaps other alternatives), the student can make a well-considered choice for the goals and functions to work with for the design of a specific agroforestry system.”</p>

futureproof agroforestry system	
e-Module 6: Agroforestry: the design phase	"Based on the functions the student wants to work within a specific agroforestry system and the technical information from previous modules, the student can create a zoning plan* and subsequently a planting plan* for an agroforestry system." * Note of care: this should not replace consultancy or expert guidance process because it just provides tools for sketching a plan. The student can bring his/her created plans to a professional, so that he/she can collaborate to improve the student's sketches and to finally implement a well-thought-out agroforestry design.

Methodology

Xerte

The six e-Modules were created by using Xerte Online Toolkits (Xerte) which is an open-source authoring tool to easily design interactive learning pathways without needing programming skills. A Dutch version of Xerte was accessible through Toll-net from the platform [KlasCement](#).

Videoclips

For the E-Academy Agroforestry, it was necessary to record video clips with teachers who explained the course material. These videos acted as an interactive component and to guide the student from a distance. In order to guarantee a good quality output, a film studio was used at the University of Applied Sciences Van Hall Larenstein. For the autocue, the free online software at www.telepromter-online.eu was used. In the editing process, filmed material and powerpoint presentations were combined, using the free version of [VSDC Video Editing Software](#).

In addition, video clips were recorded in the field with professional filmmaker Joris van der Kamp (Future Farmers Film Productions) to give the student real life examples into how agroforestry looks like in both the Netherlands and Belgium. Through these films, some of the dilemmas and choices that farmers face are explained from a farmers' point of view rather than from an academic viewpoint.

Testing

The first versions of the E-academy were tested in several ways:

- Draft versions of some of the modules were tested during a live session, organized by ILVO on September 2023
- To get insight into how people experienced the content and user-friendliness of the e-modules, approximately 300 farmers, policymakers, and other interested were invited to review the first version of the e-modules. 96 people responded positively and received the link for evaluation. This evaluation was open from November 17 until November 29 2023:
 - o e-Module 1: 172 views
 - o e-Module 2: 97 views
 - o e-Module 3: 57 views
 - o e-Module 4: 26 views

- e-Module 5: 51 views
- e-Module 6: 28 views

With a high number of views, the E-academy could be improved and finally be published in January 2024.

Lessons learned

During the process of the development of the E-academy, the following important lessons were learned:

- Different target groups have different starting points and different requirements. When there is no real life contact during a learning trajectory, it can be difficult to cater for everybody's needs. However, having a good constructive alignment¹ and choosing interactive methods helped to structure the E-academy²
At the same time, you have to realise that you cannot cater for everybody's needs. Therefore we made the choice to target interested people with relative little knowledge about agroforestry. Also, in the later modules (5 and 6), we target mainly farmers as we describe how to work towards an agroforestry plan on an actual farming plot. However, this will also be interesting for other, who want to gain an understanding in how complex the design of an agroforestry plot actually is.
- The inclusion of the farmers biopics added a lot in making the whole course more practical and less academic
- When recording the studio-films, more attention is needed in how the speaker interacts with the camera (looking into the lens, clarity of speaking, etc.)
- The E-academy is not meant to replace professional advice and consultancy. During the development of later modules, the developers made it clear that site-specific advice has a role to play

Future developments

Promotion of the E-academy

During the FarmLIFE project, a total of 6 modules have been developed. The consortium of Agroforestry Vlaanderen hosts these modules, with the clear intention of further developing the e-Academy.

- The first step will be the development of module 7, about business models, in 2024
- Next developments will be decided in 2025 and further

International presentation

At the EURAF-conference (May 2024 in Brno, CZ) the E-academy will be presented in an oral presentation. It will be presented as one of the options for knowledge transfer about agroforestry.

¹ Constructive alignment (Biggs and Tang, 2011) refers to the structure of a curriculum: starting from what the student needs to know at finish a course (or an education), breaking this down to the various steps he/she/they need to take from the beginning. It also makes sure that methods and content of testing the students align with these final goals. Learning activities then should prepare for the testing and clearly contribute to the learning goals of the curriculum

² We took the lessons from Surma et al (2019) and adapted them for an online environment

Programme of the course

The student can follow the full course (6 e-Modules) to understand the entire process of implementing agroforestry on the field. Though, as flexibility is key, it is also possible to follow single courses to learn more about a specific topic of interest.

Topic	Knowledge offered	What will you do?	How can you test yourself?
e-Module 1: What is agroforestry?	<p>Explanation of:</p> <ul style="list-style-type: none"> - The course; - Basic principles; - Development in time; - Agroforestry around us (also in Europe); - Various forms of agroforestry; - Ecosystem services; 	Work through the interactive pages on the website: a combination of video's, text, images and interactive exercises	<p>Interactive pages with tasks</p> <p>The final quiz</p>
e-Module 2: Interactions between trees, crops, and animals	<p>Explanation of:</p> <ul style="list-style-type: none"> - Negative, neutral and positive interactions in agroforestry systems - Tree-crop-interactions - Effect of tree and crop grow season on crop yield - Tree-livestock-interactions 	Work through the interactive pages on the website: a combination of video's, text, images and interactive exercises	<p>Interactive pages with tasks</p> <p>The final quiz</p>
e-Module 3: Tree species selection	<p>Explanation of:</p> <ul style="list-style-type: none"> - Various commonly used tree species: nuts, hard fruit, soft fruit and wood producing species - Harvesting options 	Work through the interactive pages on the website: a combination of video's, text, images and interactive exercises	<p>Interactive pages with tasks</p> <p>The final quiz</p>

Topic	Knowledge offered	What will you do?	How can you test yourself?
e-Module 4: Planting techniques and tree management	Explanation of: <ul style="list-style-type: none"> - Choosing the right planting material - How to prepare for planting - Planting system and adaptation measures - Management of the young trees (in regard to climate change) 	Work through the interactive pages on the website: a combination of video's, text, images and interactive exercises	Interactive pages with tasks The final quiz
e-Module 5: Formulating a vision: strategic goals for a futureproof agroforestry system	A broad comprehension of the various possibilities in agroforestry Participants are explicitly challenged to think beyond agrotechnical aspects, and take environmental and socio-economical aspects also into account.	Work through the interactive pages. Gather information of the starting point for the plots where an agroforestry system is planned. Play the card game: make a (first) list of what is important in the planned agroforestry system.	Review the list with the goals you want to work on after a few days (or longer). Reconsider the choices, are they still the best? Have a look at various other initiatives and consult experts to find more input, until you are satisfied with the goals.
e-Module 6: Agroforestry: the design phase	Explanation of: <ul style="list-style-type: none"> - basic design principles for agroforestry 	Make a first design/sketch that fits in your/a potential agroforestry plot	Review the design after a few days (or longer). Are you still happy? Have a look at various other initiatives and consult experts for more input, until you are satisfied with the design.

Outline of the six e-Modules

The e-Academy is developed in such a way that the makers advise beginners in agroforestry to follow the order in which the modules are offered.

Participants can still choose to be flexible and follow the modules in an order that suits them or follow only part of the modules that are offered.

e-Module 1 – What is agroforestry?

1.1 Introduction E-Academy

- Video 1.1: explaining the E-Academy
- Homepage
- Interactive page: what caused the gained interest into agroforestry?

1.2 Introduction agroforestry

- Video 1.2: explaining basic principles of agroforestry
- Information: Agroforestry as a land use
- Interactive page: enter an agroforestry field
- Information: groups of agroforestry
- Interactive page: link the description to the image – tree spatial distribution

1.3 Ecosystem services

- Video 1.3: explaining ecosystem services (what can trees offer?)
- Information: agroforestry as a land use and linking this to ecosystem services
- Interactive page: link the right description to the right column – regulating ecosystem services
- Information: important aspects to consider when starting with agroforestry (planting technique, finance, subsidies, and laws)

1.4 Agroforestry in practice

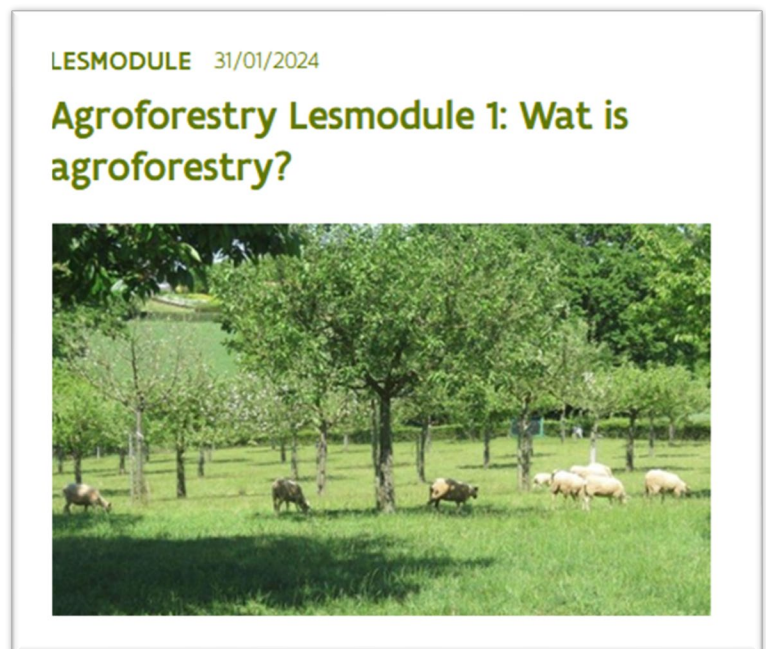
- Quiz: multiple choice test based on the topics addressed in 1.1 up to 1.3
- Video 1.4: Future Farmers Film Productions video about agroforestry farmers

Result page

- An overview of the results

Evaluation form

- A Microsoft Form is added to gather feedback about e-Module 1 for further improvements.



License and disclaimer

- Licenses and disclaimers of Toll-Net (Xerte), Creative Commons, media, and a disclaimer about the used learning resources.

Bibliography and sources

- A summary of used sources (with links) from Agroforestry Flanders, Agroforestry Network Netherlands, Dutch sources, English sources, and illustrations. Links to other websites and interesting reading material are added both to this page and to the information pages throughout the course.

2 Groepen agroforestry

1 Video 2 heb je gezien dat de mens binnen een agroforestry systeem de volgende 3 componenten kan beheren, namelijk omen en/of struiken, landbouwgewassen en landbouwdieren. Klik op de lichtbruine knoppen om voorbeelden te ontdekken.

Agroforestry Driehoek Silvicultureel Silvopastoraal Agrosilvopastoraal

Door de 3 componenten met elkaar te laten integreren, kunnen er 3 groepen ontstaan: silvicultureel, silvopastoraal en agrosilvopastoraal. We spreken van de agroforestry driehoek, zoals hieronder is afgebeeld.

De agroforestry driehoek

e-Module 2 – Interactions between trees, crops, and animals

1.1 Ecological interactions

- Homepage
- Video 2.1: explaining ecological interactions
- Information page: trees induce changes on the field
- Interactive page: retrieving interactions from different agroforestry scenarios
- Interactive page: an exercise to determine whether an interaction is positive or negative

1.2 Nutrient cycle

- Video 2.2: explaining basic principles of the nutrient cycle of an agroforestry system
- Information: mycorrhiza
- Interactive page: compare the nutrient cycles of forest, agroforestry, and conventional agricultural systems
- Interactive page: link the right description to the right nutrient cycle component

1.3 Competition between trees, crops, and animals

- Video 2.3: explaining which types of competition can occur in agroforestry systems.
- Information: understanding how can one limit competition in an agroforestry system
- Interactive page: link the right description to the right column – regulating ecosystem services
- Information: important aspects to consider when starting with agroforestry (planting technique, finance, subsidies, and laws)

1.4 Impact of trees on crop yield

- Video 2.4: explaining why and to what degree trees can affect crop yield
- Information: extra reading material about the paper which was mentioned in video 2.4

1.5 Agroforestry with animals

- Video 2.5: explaining positive and negative aspects of having animals in an agroforestry system
- Interactive page: link the right description to the right column – advantages and disadvantages



1.6 Agroforestry in practice

- Video 2.6: Future Farmers Film Productions video about agroforestry farmers
- Information: important aspects to consider when starting with agroforestry (planting technique, finance, subsidies, and laws)
- Quiz: multiple choice test based on the topics addressed in 2.1 up to 2.6

Result page

- An overview of the results

Evaluation form

- A Microsoft Form is added to gather feedback about e-Module 2 for further improvements.

License and disclaimer

- Licenses and disclaimers of Toll-Net (Xerte), Creative Commons, media, and a disclaimer about the used learning resources.

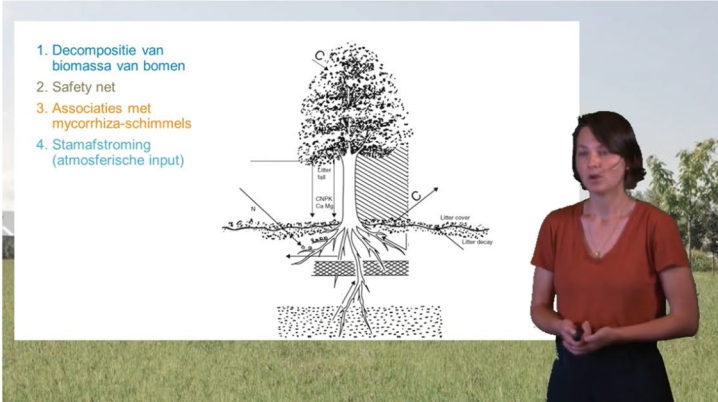
Bibliography and sources

- A summary of used sources (with links) from Agroforestry Flanders, Agroforestry Network Netherlands, Dutch sources, English sources, and illustrations. Links to other websites and interesting reading material are added both to this page and to the information pages throughout the course.

Module 2: Interacties tussen bomen, gewassen en dieren

2.2 Nutriëntencyclus

Hoe ziet de nutriëntencyclus eruit in een agroforestry systeem?



1. Decompositie van biomassa van bomen
2. Safety net
3. Associaties met mycorrhiza-schimmels
4. Stamaftroming (atmosferische input)

7/25

e-Module 3 – Tree species selection

3.1 Tree Species and climate change

- Homepage
- Video 3.1: explaining the steps needed to choose correct tree species

3.2 Nut producing trees

- Video 3.2 Nut Producing Species
- Walnuts
- Hazelnuts
- Chestnuts
- Interactive page: match descriptions of nut trees with the correct species

3.3 Fruit producing trees

- Video 3.3 Fruit Producing Trees (Main Species Likes Apples And Pears)
- Interactive Page: Information on other fruit producing trees (e.g. apricots, cherries, mulberries) and their requirements (mainly soil type)

3.4 Soft fruit

- Video 3.4 soft fruit producing species (shrubs)
- Information : extra info regarding soft fruits

3.5 Wood production

- Video 3.5 wood production (poplar)
- Information : maintenance and harvest of poplar trees, including an examples of costs and benefits

3.6 harvesting

- Video 3.6: various forms of harvesting from trees
- Information: mechanized harvesting, including a link to a simulation of options and costs involved for participants own agroforestry system

3.7 Agroforestry in practice

- Video 2.6: Future Farmers Film Productions video about agroforestry farmers
- Information: important aspects to consider when starting with agroforestry (planting technique, finance, subsidies, and laws)
- Quiz: multiple choice test based on the topics addressed in 3.1 to 3.6



3.8 More help and information

- Links to other tools and information that aid in choosing species

Result page

- An overview of the results

Evaluation form

- A Microsoft Form is added to gather feedback about e-Module 3 for further improvements.

License and disclaimer

- Licenses and disclaimers of Toll-Net (Xerte), Creative Commons, media, and a disclaimer about the used learning resources.

Bibliography and sources

- A summary of used sources (with links) from Agroforestry Flanders, Agroforestry Network Netherlands, Dutch sources, English sources, and illustrations. Links to other websites and interesting reading material are added both to this page and to the information pages throughout the course.

5 Houtopbrengst

Vanaf wanneer spreken we van een houtopbrengst? Het [agroforestryskip](#) heeft een berekening gemaakt, waarbij de kosten en baten van populierenteelt naast elkaar worden gezet. De volgende uitgangspunten zijn gebruikt:

- 1 hectare populieren onder ideale omstandigheden (goede groei op geschikte grond) met 160 bomen per hectare;
- Populieren 'poten' (zonder wortel) worden aangeplant met een boor (diameter 6 cm);
- Plantmateriaal inclusief aanplant en wildbescherming is geschat op €11,- per boom;
- Kosten voor snoei worden geschat op €400,- per snoeibeurt per hectare. Snoeien vindt regulier plaats in jaar 5 en jaar 10 na aanplant. Dat is dus minder frequent dan op de vorige pagina wordt aangeraden;
- De omlooptijd van de bomen is 20 jaar;
- Er worden geen pacht of grondprijzen meegerekend;
- Uitgegaan wordt van een rente van 5%;
- Hout wordt op stam verkocht met een gebruikte houtprijs is €20 per m³.

Pas na ongeveer 20 jaar wordt het hout geoogst en komen de opbrengsten vrij:

Post	Kosten per hectare
Investeringskosten	-
Aanlegkosten, incl. plantmateriaal, arbeid en wildbescherming (eenmalig)	€ 1.920
Onderhoudskosten	-
Snoeikosten (in jaar 5 en jaar 10)	€ 400
Post	Opbrengsten per hectare
Opbrengst na 20 jaar	€ 5.000
(verwachte oogst 250 m ³ per ha)	-

e-Module 4 – Planting techniques and tree management

4.1 Homepage

- Video 4.1: explaining what choices have to be made when selecting trees (saplings)
- Information page: overview of plant sizes
- Information page: advantages and disadvantages of plant sizes
- Information page: overview of stem height
- Information page: which plant size is popular?
- Interactive page: time of planting
- Interactive page: Google Earth - where to find and buy plants?

4.2 Planting trees

- Video 4.2: explaining the correct planting techniques
- Information: planting tips and techniques - tree root cage
- Information: planting tips and techniques – “pralineren”
- Information: planting tips and techniques – bare-root tree
- Information: planting tips and techniques – balled and bur lapped tree (with wire basket)
- Information: planting tips and techniques - tree in pots or containers
- Interactive page: step-by-step planting trees
- Information: tree protection
- Information: types of tree protection
- Interactive page: enter an agroforestry field
- Interactive page: exercise about getting the right tree planting activities at the timeline

4.3 Planting systems for agroforestry

- Video 4.3: explaining which planting systems are suitable for agroforestry systems
- Information: rules of thumb for determining planting systems
- Interactive page: link the right description to the right column – regulating ecosystem services
- Information: important aspects to consider when starting with agroforestry (planting technique, finance, subsidies, and laws)

4.4 Tree strip design and management

- Video 4.4: explaining different ways of designing and managing the tree strip
- Interactive page: enter an agroforestry field
- Information: “black tree strip” versus “tree strip with mulch”
- Information: “grass-clover tree strip” versus “tree strip with flowers”



- Information: “secondary production at the tree strip” versus “wood production at the tree strip”

4.5 Proactive tree management

- Video 4.5: explaining that tree management has a long-term effect
- Information page: important remarks for the first years after planting trees
- Information page: why fruit trees are sensitive to diseases
- Information page: how to prevent tree diseases

4.6 Agroforestry in practice

- Video 4.6: Future Farmers Film Productions video about agroforestry farmers

Result page

- An overview of the results

Evaluation form

- A Microsoft Form is added to gather feedback about e-Module 2 for further improvements.

License and disclaimer

- Licenses and disclaimers of Toll-Net (Xerte), Creative Commons, media, and a disclaimer about the used learning resources.

Bibliography and sources

- A summary of used sources (with links) from Agroforestry Flanders, Agroforestry Network Netherlands, Dutch sources, English sources, and illustrations. Links to other websites and interesting reading material are added both to this page and to the information pages throughout the course.

The screenshot shows a video player interface. At the top, there is a green header bar with the text "4.2 Bomen planten". Below this, the video title "Plan van aanpak: hoe plant ik een boom op de juiste manier?" is displayed. The main content of the video is a slide titled "Stappenplan: succesvol bomen planten". The slide lists seven steps in a numbered list, each with a corresponding colored box and a text input field:

1. Grondvoorbereiding en afpalen
2. Het plantgat voorbereiden
3. Steunmateriaal
4. Water
5. Mulch
6. Snoeien na aanplant (niet in deze video)
7. Stambescherming (niet in deze video)

To the right of the slide, a man with a beard and a dark jacket is speaking. At the bottom of the video player, there is a green progress bar and a timestamp of 10:38.

e-Module 5 – Formulating a vision: strategic goals for a futureproof agroforestry system

5.1 General goals of agroforestry

- Introduction in to the topic
 - Video 5.1 mapping the starting point of the designated agroforestry plot
 - o Ownership of the plot, layout of the plot
 - o Current land use and how do you see this changing in the (near) future
 - o Soil and water on the plot
 - o Other stakeholders around the farm (e.g. Neighbors, local government)
- Interactive page with a form that a farmer can use to map the starting point

5.2 What personal goals can you work on, and what agroforestry system fits with that

- -Video 5.2 briefly mentioning the important definitions of agroforestry systems
 - o silvopastoral vs silvicultural vs food forests
 - o ecosystem services and People Planet Profit
- Download pages with different formats of the card game to be used in section 5.3: for printing and annotating and for printing and cutting out the cards so the user can group, order and shift themselves

5.3 The card game

- Video 5.3 introduction to the card game
 - o Explaining the aim of the card game: choosing goals for an agroforestry system
 - o Explaining the setup of the card game: how do the cards look, what is the distinction Between the categories
 - o Interactive pages where the various cards can be studied, including explanation of the system
- Economic goals
- Biodiversity goals
- Social goals
- Summary and an invitation to take time and review the outcome of the card game several times. Also the encouragement to seek other information and advice.

LESMODULE 31/01/2024

Agroforestry Lesmodule 5: Visievorming: doelen opstellen voor een toekomstbestendig agroforestry systeem



- Referring users to the agroforestry planner tools of Agroforestry Vlaanderen, where more details plans can be made, with specific options to choosing trees

5.4 Agroforestry in practice

- Future Farmers Film Productions video about agroforestry farmers

5.5 Further inspiration

- the link to the websites of the agroforestry networks of Agroforestry Vlaanderen and Agroforestry Netwerk Nederland.

Result page

- An overview of the results

Evaluation form

- A Microsoft Form is added to gather feedback about e-Module 3 for further improvements.

License and disclaimer

- Licenses and disclaimers of Toll-Net (Xerte), Creative Commons, media, and a disclaimer about the used learning resources.

Bibliography and sources

- A summary of used sources (with links) from Agroforestry Flanders, Agroforestry Network Netherlands, Dutch sources, English sources, and illustrations. Links to other websites and interesting reading material are added both to this page and to the information pages throughout the course.

5.2 Welke doelen wil je bereiken en welk systeem hoort daarbij?

Plan van aanpak: hoe plant ik een boom op de juiste manier?

Classificatie

Silvopastoraal	Silvicultureel	Agrosilvopastoraal	Diversen
			
<ul style="list-style-type: none"> ✓ Boom ✓ Dier 	<ul style="list-style-type: none"> ✓ Boom ✓ Gewas 	<ul style="list-style-type: none"> ✓ Boom ✓ Gewas ✓ Dier 	<ul style="list-style-type: none"> ✓ Voedselbos ✓ Meer lagen (struiken)

© Agroforestry Vlaanderen 3

e-Module 6 – Agroforestry: the design phase

6.1 Next steps to a (concept)design

- Introduction to the week
- Video 6.1 next steps towards a design: what are the steps that can be taken in designing an agroforestry plot
- Interactive pages explaining the use of a concept design (general design, without bothering -yet- about the exact places where trees and shrubs are to be planted).
- Pages with some examples of concept designs
- Interactive pages and links to where material can be found for making maps, satellite images etc.

6.2 Tree species vs goals you want to work on

- Video 6.2 short revision of how to selecting species, including information on selecting young trees
- Interactive pages to guide the user in the step from the concept design towards making real choices about species and quantity of trees and shrubs
- Link to and explanation of an existing tool that aids this selection (Betula), available at Agroforestry Vlaanderen

6.3 spatial planning

- Video 6.3 explaining a detailed set up of the trees in the field (rows, clusters, solitary etc). There is also some attention to how the field might look just after planting and after several years, when the trees start maturing
- Information on how to proceed from the concept design to the final design, including tree species etc.
- Links to several examples of agroforestry design
- Information on how to proceed after the design
 - find information with professionals
 - discuss with other stakeholders
 - find information on current legislation and subsidies³
 - finding suppliers of planting materials
- There is some information about a costs and benefits tool that already is available and about a tool with which to calculate CO₂ storage.



³ We choose not to go into great detail about legislation and subsidies as they are; a) liable to change, and b) different between Flanders and the Netherlands

6.4 Connecting with the neighbours

- Some thoughts on involving the local community

6.5 Agroforestry in practice

- Future Farmers Film Productions video about agroforestry farmers

6.6 After the design

- Thoughts and ideas on how to proceed after making the design. The importance of reflection is stressed.
- Information on how to connect to agroforestry networks in Flanders and the Netherlands
- First information about business models
- Extra thoughts and information on foodforests⁴

Result page

- An overview of the results

Evaluation form

- A Microsoft Form is added to gather feedback about e-Module 3 for further improvements.

License and disclaimer

- Licenses and disclaimers of Toll-Net (Xerte), Creative Commons, media, and a disclaimer about the used learning resources.

Bibliography and sources

- A summary of used sources (with links) from Agroforestry Flanders, Agroforestry Network Netherlands, Dutch sources, English sources, and illustrations. Links to other websites and interesting reading material are added both to this page and to the information pages throughout the course.

⁴ Foodforests initiatives often face a different set of challenges that agroforestry systems on farms

2 Hoe werkt de Boomkeuze Matrix in BETULA?

Indien je de BETULA tool nog niet hebben geopend, klik op de volgende link om naar de BETULA tool te gaan: [Agroforestry Planner | Agroforestry Vlaanderen](#)

Daarnaast kun je ook terug naar de lesmodule en lees de stappen **rechts** op deze pagina aandachtig, zodat je begrijpt hoe de Boomkeuze Matrix werkt.

Tips over de Boomkeuze Matrix

De Boomkeuze Matrix is een nuttige tool waarin veel boomsoorten worden toegevoegd aan verschillende criteria, zoals groeiplaatsgeschiktheid, klimaat, oorsprong en wild, herkomst, doelstellingenanalyse en haalbaarheidsanalyse, voor de Vlaamse context.

- 1) Scroll naar beneden om alle boomsoorten te zien (het is een lange lijst)
- 2) Lees de legende en leeswijzer aandachtig.
- 3) Het is belangrijk dat je boomsoorten selecteert vooraleer je naar de volgende stap (groene knop "verder gaan") klikt.
- 4) We werken aan een gebruiksvriendelijke boomsoortenkeuze tool (DENTRO) die in de loop van 2024 verschijnt. Houd de Agroforestry Planner dus goed in de gaten!
- 5) De tool is slechts een richtlijn en kan je ondersteuning bieden, maar het dient niet om advies van professionals te vervangen.

The screenshot shows the Agroforestry Planner website interface. At the top, there is a navigation bar with steps from 1 to 10. Step 1 is highlighted. Below the navigation bar, the main content area is titled 'WELKOM BIJ DE AGROFORESTRY PLANNER!' and 'VERBREED JE KENNIS VIA HET KENNISLOKET EN DE E-ACADEMY'. There is a sub-header 'GA ZELF AAN DE SLAG MET 5 INTERACTIEVE TOOLS' followed by a grid of five tool cards: DENTRO, BETULA, INTACT, CARAT, and MIMOSA. Each card has a small image and a brief description of the tool's function.

References

Biggs, J. B., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). Open University Press.

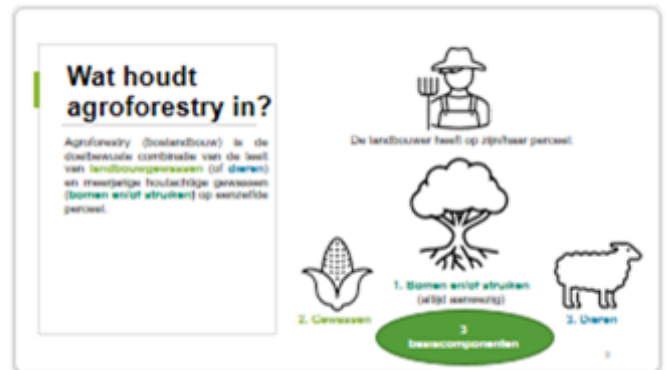
Surma, Tim. , Kristel Vanhoywegehen, Dominique Sluijsmans, Gino Camp, Daniel Muijs and Paul A. Kirschner (2019) *Wijze lessen – Twaalf bouwstenen voor effectieve didactiek*. Ten Brink Uitgevers

Annex video setting

Figure 1 – General background image for speakers in the instructional videos



Figure 2 – Format for presentations in the instructional videos



Classificatie



© Vlaamse Landbouwers

9

Samenvatting



**Bedankt voor
het kijken!**

Deze video werd ontwikkeld door:

ILVO
Instituut voor
Landbouwkundig Onderzoek

Farmlife
Vlaamse Landbouwers

**van hall
larenstein**
universiteit hogere opbouw



Figure 3 – Screenshot from the VSDC-editor, with an enlargement of the settings used in the editing

