

GROW

OBSERVATORY

Citizen Science: Living Soils, Growing Food

Learn about approaches to food growing that can help regenerate soil and solve environmental issues.

GROW Observatory MOOC on FutureLearn

Link: <https://www.futurelearn.com/courses/grow-soil-to-food>

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Course Description

How to use regenerative growing practices in your own garden

Learn about the challenges facing our food and farming systems and solutions to overcome them. Explore key approaches to food growing that can regenerate soils and ecosystems. You'll discover sustainable practices and will be guided through the steps to design your own growing experiments to assess how effective these are in your own space. This year the course also covers how to move from data to action and will introduce you to participatory governance. We will offer practical information on how to create positive change in your garden, local area and beyond using citizen-generated data.

What topics will you cover?

- Challenges and opportunities facing global food systems
- Citizen Science and Fieldwork
- The GROW Observatory
- Regenerative practices for food growers - exploring the effectiveness of approaches like mulching, no dig, cover crops, creating wildlife friendly areas and more
- Identifying the steps to design your own robust research experiments to investigate the effectiveness of regenerative practices in your growing site

Learning on this course

On every step of the course you can meet other learners, share your ideas and join in with active discussions in the comments.

What will you achieve?

By the end of the course, you'll be able to...

- Debate the challenges facing global food and farming systems and potential solutions
- Identify regenerative practices that you could implement in your growing site, and learn how to evaluate them to improve your growing
- Describe key research principles and their importance in designing robust growing experiments for your garden and your community
- Become familiar with different types of soil nutrients and how to balance them in your soil
- Reflect on how to move from data to positive action and take part in participatory governance opportunities
- Explore key approaches to food growing that can ameliorate soil degradation and regenerate soils and ecosystems

Who is the course for?

This course has been designed for anyone interested in the environment. You don't need any special experience, but it might be of interest to small farmers, community and urban growers, gardeners, land managers, allotment growers, and teachers in environment-related subjects.



Course Outline

WEEK 1: Challenges and solutions in food growing

Welcome to GROW

1.1 The GROW Observatory

Article

1.2 GROW's final online course

Article

1.3 Welcome to Week 1

Video

1.4 GROW Glossary

Article

Global food production: can we enhance both food security and the environment?

1.5 Challenges in food production

Article

1.6 Enhancing food production and nutrition

Article

1.7 Balancing production with nature and promoting sustainable diets

Article

1.8 Land sparing or land sharing?

Poll

1.9 Positive solutions, regenerative approaches

Article

1.10 Your food growing

Discussion

Regenerative food growing practices to protect soils and ecosystems

1.11 Solutions to build healthy soils and diverse ecosystems

Article

1.12 Key practices for growing soils

Article

1.13 Key practices for growing ecosystems

Article

1.14 Key practices for growing polycultures

Article

1.15 How does your garden grow?

Discussion

Experimenting with growing practices at the small scale

1.16 Big gaps in small-scale growing

Article



1.17 Finding information, sharing knowledge

Discussion

1.18 Test your knowledge

Quiz

1.19 Week 1 summary

Video

WEEK 2: Setting up your own food growing experiments

Welcome to Week 2

2.1 Welcome to Week 2

Video

2.2 What are your sources of information on food growing techniques?

Poll

2.3 Knowing what we don't know

Video

2.4 Introducing the GROW Observatory app

Video

2.5 GROW's Edible Plant Database

Article

2.6 Contributing to GROW's crowdsourced harvesting and planting advice calendar

Discussion

Asking new questions - What do you want to find out?

2.7 What do you want to know?

Video

2.8 Refining questions

Article

2.9 Examples of refined questions

Article

2.10 What makes a good question?

Poll

2.11 What's your question?

Discussion

Approaches to answering questions

2.12 What do you need to measure?

Article

2.13 Expectation, control and replication

Article

2.14 Spot the control

Poll

2.15 Additional influencing factors

Article

2.16 What's your plan?

Discussion



Identifying a suitable site for your experiments

2.17 Study sites

Article

2.18 Choosing a site for your experiment

Poll

2.19 Shade: How to select a suitable site for growing and experimenting with annual vegetables

Video

2.20 Checking soil suitability in your experiment site

Video

Deciding what and how to measure

2.21 Laying out plots

Article

2.22 Taking measurements

Article

2.23 Your likely layout

Poll

2.24 What's your design?

Discussion

Week 2 summary

2.25 Test your understanding

Quiz

2.26 Week 2 summary

Video

WEEK 3: Analysing your data and moving from data to action

Getting good results from your experiments

3.1 Welcome to Week 3: Selecting a good site and method for your experiments

Article

3.2 Pilot studies

Article

3.3 Can we unconsciously affect experiment results?

Discussion

3.4 Sample experiment: Polycultures versus monocultures

Article

Setting up your experiments

3.5 Describing your site

Article



3.6 Slope position

Article

3.7 Canopy cover

Video

3.8 Experiment measurements

Article

Recording your findings and analysing the data

3.9 Recording and analysing your experiment data

Article

3.10 Preparing your experiment data

Article

3.11 Using a dataset: Part 1

Video

3.12 Using a dataset: Part 2

Video

3.13 Predicting patterns and results

Article

3.14 Analysing results: the GROW's Great Living Soils Experiment case study

Article

3.15 Exploring variation in the GROW Great Experiment results

Article

Understanding soil nutrients and pH

3.16 The importance of nutrients in soil and in food

Article

3.17 Macro nutrients

Article

3.18 Micro nutrients

Article

3.19 Influence of soil pH on nutrient availability to plants

Article

3.20 How to increase nutrients in your soil

Article

Participatory governance: Creating positive change at the global level

3.21 New insights and new questions!

Article

3.22 Defining what positive change you wish to create

Discussion

3.23 Introduction to participatory governance

Article

3.24 Participatory governance in the European context

Article

3.25 Participatory Governance e-channels in Europe

Article



3.26 Participatory Governance: inform policy that matters to you

Video

3.27 Creating impact at the global level: How GROW is contributing to the Sustainable Development Goals

Article

Your GROW future

3.28 The GROW quiz

Quiz

3.29 Congratulations! Keep in touch and be inspired!

Discussion