

International framework for Farmers University

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A framework for the development of Farmers University

The aim of Farmers University is to build up a global network of Ecological Regenerative Agriculture (ERA) farms and learning centres, where other farmers and interested youth can learn to become ERA farmers and help converting or developing a farm to ERA. ERA means taking an ecological intensification approach and showing the way.

Farmers University answers the call to build a truly sustainable agriculture in the world, and contribute to saving biodiversity, mitigating climate change and building a good life in the countryside in all corners of the world where it is possible to farm.

Each country and each region in a country will develop its own framework program adapted to national and local conditions within this international framework. The work may however start immediately and informally with local education initiatives that prepare themselves for later formalization by communicating their activity with BERAS International and using the available support. Farmers University aims to develop a formal accreditation for the ERA learning centres as part of a global university. Where possible and relevant formal university credits will be given for each module completed beyond the introduction.

The ERA farm learning centres will – except for fulfilling the basic criteria – also have each its own special competence. This is a special field where this farm has its own research and keeps contact with global experts to be a spearhead in a specific area. It invites practitioners who work for a limited time to learn and it arranges shorter courses and seminars in its field and in ERA in general for the specific region. The global network of ERA farm learning centres thereby make it possible for a young person to find a place to learn ERA adapted to specific needs. Given the need to formalize in order to give necessary accreditations and diplomas Farmers University has a free way of working and is driven fully by the wish to improve and develop the ERA system on farms.

Connecting the generations with the ERA farm in focus

Farmers University has two target groups – active farmers who wish to improve their farm in the direction of ERA and young persons with a real interest to work with ERA farming.

In life – these two directions must meet. The basic belief behind “Farmers University” is that when farmers and youth who are both really motivated meet and work together and are supported by a

framework that supports their development of a really ecological and regenerative approach to farming and the food system – this will help changing the earth to a better place for the future.

A third direction is to be developed in order to connect: the art of hosting. Whereas the ideal is an ERA farm – it is also important to be open for how life is. The program is open for any farm that has a real interest in it. It is also open for any young person who is really motivated. But the program also challenges every participant – already organic, biodynamic or conventional from start alike – to without any prejudice take new steps to even more effectively meet up to the ecological challenges of our times.

It is essential for the program that the farms in the system show real life results in order to move further while active in the program.

ERA Guidelines

The four volumes of "Guidelines for Ecological Recycling Agriculture" (<http://beras.eu/what-we-do/era-guidelines/>) – 1) Farming Guidelines, 2) Economic Guidelines, 3) Marketing Guidelines and 4) Farm Examples – form the basis for what a farmer needs to understand to successfully convert a farm to and manage Ecological Regenerative Agriculture (ERA).

ERA requires not only theoretical knowledge and practical skills, but also an integration of these skills with sound business sense, tacit knowledge and creativity.

The aim of Farmers University as a whole is to acknowledge the very specific skill of an ERA farmer and to build up a step by step path for youth and for all farmers who have an interest to acquire this skill.

As Farmers University grows the ERA Guidelines will need to be further developed, updated, complemented with new chapters and translated to local languages and conditions where Farmers University is implemented.

To start working with Farmers University in a new country or in a new culture it is essential to from the beginning go through necessary translation, adaption to local conditions and necessary complements of the Guideline package. The farming systems of ERA must be locally adapted.

Background- key concepts

The Guidelines are based on three key concepts:

- Ecological Regenerative Agriculture (ERA)
- Sustainable Food Societies (SFS)
- Diet for a Green Planet (DGP)

These have been developed by two consecutive BSR Interreg projects; BERAS (2003-6) and BERAS Implementation (2010-13), where Universities, Research Institutes, Authorities, Agricultural Advice organizations and NGO's from 11 countries have cooperated (ref www.beras.eu). In the work with the ERA concept organic agriculture advisors from 9 countries have worked together under the leadership of Leibniz Institute in Brandenburg, Germany, and it has resulted in 4 volumes in English,

which have been – partly, fully or ongoing – translated to Estonian, Latvian, Lithuanian, Polish, German, Danish, Russian and Swedish.

Within BERAS Implementation an education package was created directed to different target groups, among them “Farmers University”, which is built up in consideration of opportunities and limitations of farmers.

“Farmers University” has until today developed two different courses:

1. a six month practice based course for youth (acknowledged with 5 ECTS by Aleksandas Stulginskis University in Kaunas, Lithuania, and as practice course for 4.th year agronomy students at Grodno State Agrarian University in Belarus)
2. a package including one or two day meetings and homework for active farmers (introduction course with Module 1 implemented once in Stockholm county, Sweden).

The course for farmers is proposed to be integrated in national competence development programs for farmers where such exist. The main target group for the course as a whole is the already existing ERA farms. The national program will be built up with the goal of giving examination to already skilled ERA farmers first, so that these can start functioning as real learning centres with accreditation. The program shall take into account that the students are active farmers and give a content that is immediately useful on the farm in every step. Therefore it is essential that a farm advisor is accredited to examine the farmers by on farm assessment and interview.

The program should be built up to serve national and local needs and be based on an analysis of key competence gaps to be filled in.

Farmers University should analyse existing initiatives, exchange and practice programs and education institutes for farmers carefully and in all ways work to integrate existing schools. In the world there are already schools that work very near to the ideals of Farmers University. In such cases the possibility to give a course accreditation as part of Farmers University should be considered – or in the case of lower level education – Farmers University could be seen as a way to continue studies.

Working out a national program for Farmers University

Activities in a country may start through individuals who wish to take an initiative. The work should be seen as a program for developing the farming sector of the whole country starting with building up a local competence and learning centres at farms where the ERA principles are implemented in practice. Therefore the first steps in such development will be to analyse the situation of the country and to build up a contact net with competent actors nationally, and the second step will be to build up learning centres on a number of farms representing different agricultural regions. These farms should be the first to receive the degree.

To formally include courses, farms and students with diplomas and other formal Farmers University acknowledgements using the logos and the name a close contact should be held with BERAS International and decisions on acceptance will be taken by examiners/advisors accredited by BERAS International. The country should strive to accredit its own competence, but work fully independently towards practical goals before considering formalization.

Education plan for Ecological Regenerative Agriculture – ERA – for farmers

The goal of the course is to achieve the competence that is required to successfully develop and manage an ERA farm, and to give sustainable advice to colleagues on how to convert the farm to ERA or improve it towards ERA.

The course includes an introduction course, 8 modules which can be implemented in different ways depending on regional/local needs and examined in the pace the farmers achieve the goals – and a final examination meeting for each farm that takes the exam. (The module plan should be nationally adjusted, but contains a core that is in common and comparable)

The assessment of the farmer achieving the goals for a specific module is done individually by a farm advisor/examiner who is approved by BERAS International, based on a farm visit and interview of the farmer.

The actual teaching content and methods may be developed for each region out of its specific conditions. The regional course plan and the course leader must however be approved by BERAS International.

It is suggested to carry through the course on farms that are willing to be practice examples for the specific theme of the meeting. The course could be held for a regional group of farmers who work together – for example 2-4 meetings a year during a three year period, during which the farms at the same time start conversion to ERA methods.

Each meeting shall be confirmed by a certificate or proof of participation. When a farmer has been approved for modules 1-9 and made the presentation of an exam work (module 10) at the farm the course is validated. This may correspond to Master of Science or for a more advanced exam work PhD. The pedagogic module should give accreditation to teach and manage research on the farm on a relevant level in the national education and university system. Levels will be developed.

Basic modules:

1. Introduction
2. Agriculture and the global ecology challenges – the crop rotation effects on soil fertility and humus development, water, climate gas emissions and carbon sequestration, biodiversity and nitrogen circulation (Vol 1, chapter 1 “How to save the Baltic Sea” and 2 “Soil Fertility”).
3. Crop rotation, Legumes and Manure (Vol 1, chapters 3-5)
4. Ley, roughage and pasture (Vol 1, chapters 3, 4 and 6)
5. Animal husbandry including counting Animal Units and discussion on optimum animal density of the farm (Vol 1, chapter 6)
6. Plant protection and weed management (Vol 1, chapter 7)
7. Farm cooperations and planning the farm as a whole – (Vol 1, chapter and Vol 4: Farm Examples)
8. Economy (Vol 2: Economy)
9. Marketing (Vol 3: Marketing)
10. Examination
11. A pedagogic module will be developed for the host farms of Farmers University practice course and for learning centres.

The modules can be carried out in different ways depending on the basic knowledge of the target group. The minimum requirement is that the participant is an active farmer with responsibility for a farm including the power of decision to convert to ERA – and an interest. Further minimum requirements may be decided locally, but it is recommended that all farmers are welcomed to the introduction module where possible education gaps that have to be filled in may be identified. The introduction meeting shall give an understanding for the farm as a whole and give each participating farmer understanding of the weak points that will need to be taken care of in the path towards ERA. It is recommended that the introduction course is concluded with an individual letter to each participating farm giving concrete and focused advice on both farm and competence development needed to become an ERA farm. The accredited advisor may accept farmers without the introduction directly to the higher modules.

To start it is necessary that minimum Vol. 1 Farming Guidelines is translated to the national language and adapted to the national specifics and that a BERAS accredited advisor is engaged in building up the national program. In countries that do not belong to the Baltic Sea Basin, the chapter on “How to save the Baltic Sea” needs to be rewritten and focus on an environmental issue that is most relevant in the country. In other climatic regions there may be needed new chapters, for example water management, grazing techniques and agroforestry. It is also recommended to write several national farm examples and thereby modify the “Farm Example” volume to be relevant for the national public – with a balance between international and national examples.

The crop rotation tool ROTOR will need translation to national language and adaption to regional climate and soil condition. This should be done before work starts with ROTOR exercises.

In Sweden the package with 4 volumes have been distributed to the participating farmers at the introduction course.

[The examination meeting](#)

The examination meeting is organized when a farmer has reached the criteria for modules 1-9 and either already follows ERA criteria or has started a conversion with a realistic conversion plan that is confirmed by the course leader.

The exam work is connected to the specific interest of the farmer and farm and may be seen as an opportunity to show this to a target group. The event is decided between the farmer and the course leader. At the meeting a farm presentation with map and crop rotation plan and other planning documents shall be available and the invited public shall be given opportunity to ask questions.

[*Target group and criteria for acceptance to the course*](#)

The target group is farmers who are interested in converting the farm to ERA practice or to develop their ERA farm further. The key criterion is the advisors assessment of the farm as a future ERA farm and host for youth practice or Learning Centre.

The plan for the concrete meetings and pedagogic methodology will be elaborated for each region and country where the course is held. In a country where there is an ERA farm established it is recommended to build the course around this farm and considering its needs for sustainable development with economic growth.

In this paper only the criteria for fulfilment of each module is presented. The fulfilment shall be confirmed by the course leader.

Competence of the course leader

The course leader shall have competence as farm advisor for Ecological Regenerative Agriculture. BERAS International will at request/need arrange a course for farm advisors that leads to this competence.

So far the following ERA advisors are accepted:

Wijnand Koker, Järna, mobile phone +46 70 562 17 87

Hermann Leggedör, Vassmolösa mobile phone +46 70 791 23 74

Accepted course leaders/ERA advisors will be published at www.beras.eu

Pedagogic methodology

The course is based on "Reversed Study Plan" methodology – the aim is to develop the participants farms to Ecological Regenerative Agriculture. At the meetings the farmers will study subjects that are important for their farms in order of importance for the farm – and they will help each other and learn by this also. The course leader follows up carefully to focus on the weak points of each farm and to be responsible for a sound farm development. It is possible for the course leader to confirm a farmer's competence in a specific field by oral communication. If a farmer lacks certain areas of general competence, the farmer may get a recommendation to take an external course before being accepted for a module. The course leader must have visited the farm at least once in order to confirm modules 2-9.

Expected results

- Competence
 - Ability to convert the own farm to ERA and run it according to ERA principles.
 - Ability to assess the possibilities to convert to ERA for different kinds of farms.
 - Problem solving for continuous improvement of environmental effects of the farm.
 - Predict the effect of the crop rotation on the plant nutrient balance
 - Be aware of and able to use different methods to assess the nitrogen fixation level (ocular, field test, IT tool)
 - Be able to optimize the crop rotation by multifactorial analysis
 - Be able to use IT tools (ROTOR) for farm planning
 - Be able to use the ERA Guidelines and IT tools for farm planning.
- Knowledge

- Knowledge about minimizing losses of plant nutrients and greenhouse gases from the farm with the help of a balanced crop rotation and balance between animal and crop production.
- Knowledge about farming systems and developing the farm as a whole and ability to apply these knowledges on farms with different preconditions.
- Attitude
 - Deepened engagement for ecology and ecological sustainability
 - Ability to find cooperative solutions and see the possibilities of cooperating with consumers for the interest of the environment and profitability of the ERA farm.

Examination- and evaluation criteria

- Active participation at meetings in combination with course leaders assessment of achieved competence
- Course leaders assessment of oral presentation and farm visit.
- Exam work including
 - A conversion- or development plan including improvements concerning modules 2-9, presented as a whole.
 - The farm fulfills all criteria for an ERA farm, or there is a time limited and realistic plan for conversion that is confirmed by the course leader.
 - A popular and useful farm presentation including a map ("Farm description in a nutshell") including the key parts of the farming system. Target group may be farm workers, study visitors, tourists and consumers
 - The Exam work is checked by an ERA advisor.
- Carried through an open meeting at the farm, where the exam work is presented.

Module 1: Introduction course

Criteria: The participant has received the Guidelines, made him/herself familiar with the background, have a basic understanding of the BERAS background and developing the farm as a whole and is able to use the BERAS web page and connect to the BERAS network. It is recommended to take not less than one whole day.

Module 2: The ecological environment issues of the farm

Criteria: The farmer understands the connection between farming system and the three main global environmental issues (biological diversity, plant nutrient circulation and climate change) and can analyse the own farm and other farms from this point of view.

Module 3: Crop rotation, legumes and manure

Criteria: The farmer understands the multifunctional role of a balanced crop rotation and the balance between being a motor for nitrogen manuring without multiplying the plant diseases of leguminous plants, and has tools to modify the crop rotation on the own farm from practical experience and sketch crop rotations for other farms.

Module 4: Ley

Criteria: The farmer has the necessary tools to improve the roughage and grazing production and can use the Simulator for Legume estimation, and also understands and is able to use the most important methods to estimate the percentage of legumes in ley and pasture. The farmer has basic knowledge about different species in the ley and which properties they have in terms of building up the soil, plant diseases, weed, properties as fodder etc. and has the tools needed to learn more through the work on the farm. The farmer also knows and is able to implement the basic techniques to establish the ley and to develop an existing ley by planning of the grazing and cutting in the right times.

Module 5: Animal husbandry

Criteria: The farmer can count the animal density and optimize for self sufficiency with fodder and manure. The farmer also has received tools and motivation to adapt animal husbandry to the natural conditions on the farm. The farmer can also sketch an animal husbandry plan for other farms with cattle, sheep, pigs and poultry. The farmer has basic knowledge about each of the most important farm animal species, their specific ecological role and natural behaviour.

Module 6: Plant protection and weeds

Criteria: The farmer understands the principles for ecological plant protection and weed strategy, can apply it on his/her own farm and also value the situation on another farm. The farmer also needs understanding of different types of weeds, as perennial, one year, place bound, creeping etc. and the ecological techniques that exist to control them. The farmer shall also be able to assess the risk level of a pest infection and be able to suggest direct or indirect methods, and know how to discover a risk in time.

Module 7: Farm cooperations and develop the farm as a whole

Criteria: The farmer can discuss the own farm as a whole or as a part of a larger whole and evaluate investment options out of this perspective. The farmer knows about different types of farm cooperations and has a basic understanding for a negotiation process to reach a win-win situation with ecological sustainability as common goal.

Module 8: Economy

Criteria: The farmer can analyse his/her farm as an ERA farm considering the potential to take out salary for necessary work on the farm. The farmer can also analyse preconditions for conversion and knows about and can use different tools to minimize economic risks in conversion, for example spreading the risks by avoiding too high degree of dependency on development of prices on the global market for a single product.

Module 9: Marketing

Criteria: The farmer has a toolbox for a closer cooperation with the consumers and costumers of the farm and has an ability to motivate and take out the price needed for the (quality) products in order to run the farm according to ERA principles.

Module 10; Exam work including presentation

Any time of the year - 120 hours own work. Coaching in connection with the meetings and personal support by the ERA advisor/Course leader.

The exam work includes a conversion- or development plan for the farm, based on improvements according to module 2-9 and a farm presentation, which as a minimum includes a map with the crop rotation illustrated and a farm description in a nutshell. The conversion plan also includes a ERA agreement and may include and integrate plans made by organic agriculture advisors. As a whole it is the farms' own plan. The plan is assessed by the Course Leader / ERA advisor. It should be realistic (actually be implemented) and fulfil the minimum criteria for ERA.

The exam work also includes a presentation of a farm speciality. The presentation is openly invited to, and there is room for asking questions.

Criteria: The farmers demonstrates an ability to realize a vision of a successful ERA farm.

Module 11; Pedagogics - The treasure within learning

To be developed: Criteria – the farmer is a good host for practicants and farm workers. The farm work is integrated with ongoing learning and skills development and working at the farm is a learning experience.

Litterature

Stein-Bachinger, K., Reckling, M., Hufnagel, J. and Granstedt, A. (eds) Guidelines for Ecological Recycling Agriculture Vol I – IV, första edition (2013) or latest edition on national language.

Granstedt, A. Farming for tomorrow.

Reference litterature

Granstedt, A. and Seuri, P. Conversion to Ecological Recycling Agriculture and Society

Fuchs, S. and Stein-Bachinger, K. Nature Conservation in Organic Agriculture

Södertälje kommun, Kostenheten "Östersjövänlig mat I praktiken"

The Ecological Council and Frugtformidlingen "We share a Sea" – www.weshareasea.dk

Fuchs, S. and Stein-Bachinger, K. Nature Conservation in Organic Agriculture

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