

# GROW - Global Restoration of Wheat

'Eat it to Save it'



## What is GROW?

GROW is a network of organic and traditional farmers, researchers and bakers working together. We are dedicated to:

1. Restoring almost-extinct biodiversity of landrace grains and the stories they tell,
2. Restoring the ecological farming and culinary arts of traditional peoples, and
3. 'Eat it to save it' market strategies for genetic conservation.

Our goal is to conserve and revitalize the traditional arts of on-farm seed-saving, community seed systems and landrace cuisine. GROW received four years of support from NESARE, with field support from the Maine Organic Farming and Gardening Association <[mofga.org](http://mofga.org)> and [AnsonMills.com](http://AnsonMills.com). European partners include the Georgian Organic Farming Association <[elkana.org.ge](http://elkana.org.ge)>, Dr. Anders Borgen <[agrocologia.de](http://agrocologia.de)> and Jean Francois Berthelot <[semencespaysannes.org](http://semencespaysannes.org)>, and the traditional farmers' association in Wadi Fukin, Palestine <[growseed.org/wadifukin.html](http://growseed.org/wadifukin.html)>. Klass Maartens and Mary Howel are restoring ancient grains in the US.

For further information contact: [growseed@yahoo.com](mailto:growseed@yahoo.com)



## **Why GROW?**

Biodiversity is at the heart of community seed systems and healthy, nutritious cuisine. However modern wheat<sup>1</sup>, bred in agrochemical-soaked fields for uniformity and high gluten, has replaced the rich biodiversity of landrace wheats world-wide. Organic consumers seek the richer flavor and more digestible, less toxic gluten of landraces. Organic farmers seek organic-adapted landraces that thrive in our fields, with hard-working root systems for nutrient-uptake in organic soils, tall height to compete with weeds without lodging, greater photosynthesis for richer flavor, artisan baking quality, and high nutrition without the gluten allergic responses plaguing us today. As we face unprecedented weather extremes, burgeoning gluten allergies and patented wheats that farmers cannot save, almost-lost ancient and heritage wheats offer an important resource for organic farmers and gardeners. However our landrace wheats are threatened, many on the *verge of extinction*.

## **How to GROW**

The first step is to attend a GROW workshop, and become part of a working group to share seeds and practical skills with local partners. Participants will receive elite landrace populations from the Heritage Grain Conservancy, the outcome of four years of on-farm organic trials funded by SARE. People who agree to return a portion of their best harvest will receive seeds for free. We provide one seed packet of each variety to a person, due to the limited supply. Your job is to multiply the seed using organic fertility management, nutrient-dense mineral amendments and cover crop rotations. Each seed is to be planted at 5 lbs per acre (one seed per square foot). Save the largest healthy seedheads for multiplications. For field production, the seeding rate is 15 lbs per acre (one seed per eight inches). Undersow with clover to suppress weeds. All our seed is public domain. If you commercialize the seed, we request that you credit SARE and the Heritage Grain Conservancy for their contribution.

## **Who GROWs?**

GROW is for everyone. Backyard gardeners and seed-savers have a key role in the program. We offer a free Seed-Saving curriculum for educators on: <[fedcoseeds.com/forms/seedschool.pdf](http://fedcoseeds.com/forms/seedschool.pdf)>, and provide individualized workshops. See: [growseed.org/education.html](http://growseed.org/education.html)

## **GROW Living Seedbanks**

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Biodiversity is the foundation of food security, agroecological health and nutritious cuisine. Prior to the Green Revolution breeding for agrochemical-based systems, almost every farmer was a seed-saver. Community seed systems fostered the dynamic evolutionary processes of natural mutation, natural and human selection and adaptability. Maintenance of landrace wheat in genebanks is essential for long-term preservation, a key link in a long change of actors needed preserve threatened crops. However today, the vast collections of landrace seeds stored in world genebanks are available in tiny amounts of 1 gram to 5 grams of seeds, and then only if you know how to navigate the complex system designed for researchers and plant breeders.

### **GROW - Key Role of Farmers and Gardeners in on-Farm Conservation**

In order to maintain a food crops' vitality, the role of small-scale farmers and gardeners in landrace wheat's evolution is essential. Just as wild crop vitality cannot be maintained in cold storage, the agro-ecological dynamics of natural adaptation to the environment and climate change, co-evolution with plants-pest-pathogen complexes and farmer selection for durable resistances and culinary quality are integral components of a landrace crop's total evolutionary system.

In response, the **GROW** initiative has been established. Our goal is to cooperate with genebanks to preserve and enhance agrobiodiversity in the hands of farmers - in the low-input fields where landraces evolved. Planting Guidelines: [growseed.org/brochure1.pdf](http://growseed.org/brochure1.pdf)

Seed List: [growseed.org/catalogue1.pdf](http://growseed.org/catalogue1.pdf)



*Gluten-safe Einkorn bread baked by Eli Rogosa  
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# Seed-Saving Tips

*'Seed-saving and adaptive selection has been the right and responsibility of farmers since the emergence of agriculture. As practitioners of a traditional art, let us reclaim our power to forge crops for our land, our markets and our imagination.'* Frank Morton

Organic farmers today can enhance yield and quality of crops by selective seed-saving to improve traits, as generations of farmers have done before us, using the following guidelines:

- \* **Decide what variety has potential for improvement.** Select traits to improve based on the variations of the plants in your field and your market needs, such as winter hardiness in cold climate, resistance to disease or rich flavor.
- \* **Grow as large a population as possible for a diverse pool of traits.** Trial and compare the same variety from many different sources. **Plant thin** so you can evaluate each plant. We recommend one seed per each square foot, and undersow with clover to suppress weeds. Use your intuition. Allow **wild native habitats** to grow in your fields to attract beneficial pollinators and predators of insect pests.
- \* **Rogue** out weaker plants. Don't baby the crop. **Keep the whole plant in mind** as you select to unwittingly select out valuable but less visible traits. Save the best plants for seed.
- \* **Harvest** the now-improved line. Remove smaller, lower quality seed. **Repeat** your selection process year-by-year.

