

ABOUT GROW BIOINTENSIVE® TERMINOLOGY

For the purposes of the educational materials and presentations on the Curriculum Resources and Self-Teaching Tools pages of Ecology Action's website www.growbiointensive.org, it is useful to have alternative terms to use when discussing biologically intensive practices that may differ from the officially certified GROW BIOINTENSIVE processes developed by Ecology Action.

For this reason, we have designated the following terms to describe the inclusion of different techniques and practices within the context of biologically intensive farming and gardening:

- The term “**biointensive**” (not capitalized) should be used in non-EA situations.
- The term “**Biointensive**” (capitalized) may be used to describe “Group 1: Biointensive Mini-Farmer/Farm” and “Group 2: Transitional Biointensive Sustainable Mini-Farmer/Farm” activities.
- And the term “**GROW BIOINTENSIVE**” or “**GB**” is used **only** when referencing “Group 3: Full GROW BIOINTENSIVE Sustainable Mini-Farmer/Farm” activities.

Complete descriptions of these designations and what they entail can be found below.

Using the Name GROW BIOINTENSIVE

In order to distinguish Ecology Action's biologically intensive sustainable mini-farming processes, developed over more than four decades, from the practices of other organizations using the term (Bio-Intensive Integrated Pest Management, for example), Ecology Action has decided to use the name GROW BIOINTENSIVE. In effect, GROW BIOINTENSIVE is the "brand name" of Ecology Action's publications and educational services and is also used for the certifying of seeds and produce complying with GROW BIOINTENSIVE guidelines. This term, **always in capital letters**, can be used for the system as a whole, the component parts of the system (e.g. GROW BIOINTENSIVE composting), publications and classes describing and teaching the system, and gardens/mini-farms using the system.

The ® mark indicates GROW BIOINTENSIVE is registered with the U.S. Trademark Office. (On a Mac, use Option r and format as superscript.) In Mexico, CULTIVE BIOINTENSIVAMENTE^{MR} has been similarly registered.

GROW BIOINTENSIVE[®], CULTIVE BIOINTENSIVAMENTE^{MR} and the following may be used only with the written authorization of Ecology Action:

GROW BIOINTENSIVE[®] or GROW BIOINTENSIVETM — A **trademark** for Ecology Action **publications** and those authorized by Ecology Action. ® or TM is used where GROW BIOINTENSIVE is **in front of** the word 'publication', e.g., a GROW BIOINTENSIVE[®] publication or a GROW BIOINTENSIVETM publication.

GROW BIOINTENSIVE[®] or GROW BIOINTENSIVESM — A **service mark** for **workshops, trainings, and classes** taught by Ecology Action staff and **certified** GROW BIOINTENSIVE teachers. ® or SM is used if GROW BIOINTENSIVE is **in front of** the word

'workshop', e.g., a Three-Day GROW BIOINTENSIVESM Workshop or a Three-Day GROW BIOINTENSIVE[®] Workshop.

GROW BIOINTENSIVE APPROVED^{CM} — A *certification mark* for **produce and seeds** grown according to methods established by Ecology Action. This mark is still in the process of full registration; upon full registration, [®] or ^{CM} may be used.

SPECIAL NOTES:

If any of the GROW BIOINTENSIVE terms is used in a title or other situation where the surrounding text is also in capital letters, the words GROW BIOINTENSIVE should be typeset at least 2 points larger than the surrounding text, e.g. A GROW BIOINTENSIVESM WORKSHOP. (See also the title of this document.)

Note that in an article the [®] needs to be used after GROW BIOINTENSIVE *only the first time* GROW BIOINTENSIVE is used, unless the [®] is needed elsewhere for special emphasis.

In Mexico, CULTIVE BIOINTENSIVAMENTE^{MR} is used in place of TM, SM or [®].

What defines a GROW BIOINTENSIVE Sustainable Mini-Farm?

GROW BIOINTENSIVE Sustainable Mini-Farming is not just an organic farming technique, but a *system* that combines nutrition-based food production with closed-system soil fertility management, emphasizing reduced space.

The elements of GROW BIOINTENSIVE Sustainable Mini-Farming include:

- Deep soil preparation
- Compost
- Close plant spacing
- Companion planting
- Carbon-farming (the growing of mature compost crops to produce sufficient compost for the maintenance of sustainable soil fertility on a closed-system basis as well as a significant amount of calories)
- Calorie-farming (the growing of crops for calories on a small-scale basis with an emphasis on special root crops which produce a large amount of calories per unit of area)
- Open-pollinated seeds (using and saving), and
- Treating all of the elements as parts of a *whole system* with a focus on long-term, 'closed-system' sustainable soil fertility.

In order to ensure closed-system sustainable soil fertility, the GROW BIOINTENSIVE mini-farm allocates approximately 60% of its growing space to carbon/calorie crops, approximately 30% to special root crops for efficient calorie production, and approximately 10% to vegetable crops and possible income crops.

GROW BIOINTENSIVE allows each of its practitioners to acquire the skills and dedication to take responsibility to grow sufficient food with a fraction of the water, energy and purchased nutrients in the form of organic fertilizer required, compared to chemical mechanized agriculture. GROW BIOINTENSIVE provides the tools needed to grow food in a way that is truly sustainable: requiring

no nonrenewable resources and capable of maintaining and improving soil fertility within a closed system.

What are the different levels of achievement a Biointensive or GROW BIOINTENSIVE Farmer or Farm can attain?

To be a **Biointensive** or **GROW BIOINTENSIVE Sustainable Mini-Farmer or Mini-Farm**, the garden, mini-farm or farm of an individual, project, program or organization must be using the following practices. These practices are grouped in three levels of increasing involvement:

1. **“BIOINTENSIVE MINI-FARMER”**
2. **“TRANSITIONAL BIOINTENSIVE SUSTAINABLE MINI-FARMER”**, and
3. **“FULL GROW BIOINTENSIVE SUSTAINABLE MINI-FARMER”**.

GROUP 1: CRITERIA FOR “BIOINTENSIVE MINI-FARMER”

SOIL PREPARATION

- Manual double-digging (24 inches/60 cm deep), to establish or reestablish good soil structure.
- Surface cultivation (2 inches/5 cm deep) once good soil structure is established, to maximize preservation of soil structure.
- Permanent growing beds a minimum of three feet (1 meter) wide, to ensure an optimal mini-climate.

COMPOST

- Regular use of cured compost in the Biointensive growing area, to maximize soil water retention, soil structure building, and microbial diversity for soil health.
- Non-use of green-manuring practices, to avoid depletion of a significant amount of soil humus.
- Minimal use of composted animal manure (less than one-sixth by volume of organic matter inputs), to avoid salt build-up and to minimize carbon lost through animal metabolism and the curing process.

FERTILIZER

- Use of only organic fertilizers (on a one-time-only basis whenever possible).

PLANT PROPAGATION AND SPACING

- Close Biointensive off-set spacing, to protect soil with a “living mulch” of plants.
- Use of flats or nursery beds for raising of seedlings and transplanting of seedlings into beds for most crops, to minimize “in-bed” time, and water and seed used for each crop.

PLANTING COMBINATIONS

- Crop rotations, to minimize “singular” nutrient depletion.
- Companion planting, to encourage dynamic beneficial insect life.

SEEDS

- Use of open-pollinated seeds, to preserve plant genetic diversity and mini-farm sustainability.

- Non-use of hybrid, green-revolution and/or genetically engineered seeds, because of their general incapacity to reproduce true to type and for their narrowing of the global agricultural germplasm base.

WHOLE SYSTEM

- Growing of compost crops, for closed-system sustainability.
- Growing of calorie crops (i.e., root and grain crops).

GROUP 2: CRITERIA FOR “TRANSITIONAL BIOINTENSIVE SUSTAINABLE MINI-FARMER”

(Prerequisites: “Biointensive Mini-Farmer” Criteria)

SUSTAINABLE SOIL FERTILITY AND DIET CALORIES (30%-65% of the GROW BIOINTENSIVE area)

- Growing 30%-65% of the Biointensive area in *carbon crops* high in carbonaceous material to be used for composting (e.g. wheat, maize/corn, oats, barley, amaranth, cereal rye, quinoa, sorghum or local equivalents). These crops should also produce significant amounts of calories for the human diet.

ENSURING A COMPLETE DIET IN A SMALL AREA (15%-50% of the GROW BIOINTENSIVE area)

- Growing 15%-50% of the Biointensive area in *special root calorie crops* for the production of large amounts of calories for the human diet (e.g. potatoes, sweet potatoes, garlic and parsnips or local equivalents). A small proportion of this area can be in crops with a medium level of caloric “area efficiency,” such as onions, turnips and leeks.

VEGETABLES AND/OR INCOME

- Growing not more than 20% of the Biointensive area in *vegetable crops* normally used in salads, salsas and sauces (e.g. tomatoes, carrots, cucumbers and lettuce), for balancing dietary vitamins and minerals, and/or *income crops* to minimize export of soil nutrients.

GROUP 3: CRITERIA FOR “FULL GROW BIOINTENSIVE SUSTAINABLE MINI-FARMER”

(Prerequisites: “Biointensive Mini-Farmer” plus
“Transitional Biointensive Sustainable Mini-Farmer” Criteria)

SUSTAINABLE SOIL FERTILITY AND DIET CALORIES (Approx. 60% of the GROW BIOINTENSIVE area)

- Growing 50%-70% of the GROW BIOINTENSIVE area in *carbon crops* high in carbonaceous material to be used for composting (e.g. wheat, maize/corn, oats, barley, amaranth, cereal rye, quinoa, sorghum or local equivalents). These crops should also produce significant amounts of calories for the human diet.

ENSURING A COMPLETE DIET IN A SMALL AREA (Approx. 30% of the GROW BIOINTENSIVE area)

- Growing 20%-40% of the GROW BIOINTENSIVE area in *special root calorie crops* for the production of large amounts of calories for the human diet (e.g. potatoes, sweet potatoes, garlic and parsnips or local equivalents). A small proportion of this area can be

in crops with a medium level of caloric “area efficiency,” such as onions, turnips and leeks.

VEGETABLES AND/OR INCOME (Not more than 10% of the GROW BIOINTENSIVE area)

- Growing not more than 10% of the GROW BIOINTENSIVE area in *vegetable crops* normally used in salads, salsas and sauces (e.g. tomatoes, carrots, cucumbers and lettuce), for balancing out dietary vitamins and minerals, and/or *income crops* to minimize export of soil nutrients.

OVERALL NATURAL SYSTEM SUSTAINABILITY

- Leaving 50-75% of the farm property wild (protected, if necessary), to ensure ecosystem plant and animal diversity and water replenishment.

If you are interested in becoming a certified GROW BIOINTENSIVE practitioner or teacher, please see our Booklet 31: *GROW BIOINTENSIVE Sustainable Mini-Farming Certification Program for Teachers and Soil Test Stations* which is available as a free download online at http://growbiointensive.org/publications_main.html.