Home garden beets of Turkey

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Home Gardens

Home gardens are micro-environments composed of the multi-species (annual to perennial, root crops to climbers etc), multi-storied and multi-purpose gardens situated close to the homestead,

The term “home garden” is often considered synonymous to the kitchen garden. However, they differ in terms of function, size, diversity, composition and features:
domestication of beet

• Linguistic evidence
• East Mediterranean
  – Wild beets
    • Leaf beets
      – Root beets
• Later spread to Near East by the 8th century BC and as far east by 850 AD.
• 1st century BC the domestic beet was represented in the Mediterranean basin primarily by leafy forms like chard and spinach beet.
Home Gardens in Turkey

Gardens have been made in Turkey since ancient times. Traditional Turkish houses always had a garden, no matter what the size of the house was itself.

Bahce/Bostan refers to the traditional land use system around a homestead, where several species of plants (mostly vegetables and fruit species) are grown and maintained by household members,

Important sources of food, fodder, fuel, medicines, spices, ornamentals, construction materials and income,

Important contributors to the food security and livelihoods of farming communities

Their products are primarily intended for the family consumption, for family income are sold in the local markets
Common features of home gardens

- Microenvironments within the surrounding ecosystem
- Relation with a household or a social group
- Multifunctionality
  - diverse plant composition
  - stratified architecture
  - close ecological niches
- Succession of different species
  - Perennials
  - Annuals
  - Trees
  - Shrubs
Since the home garden considered as a niche within an agroecosystem, the study sites has been selected in the agroecological zone that contain significant biological diversity.

Common sampling procedures applied to assess how much species diversity maintain at home gardens in the study sides, then study side were surveyed for in-depth study.

Local knowledge associated with this diversity, the ethnobotanical diversity based on local taxonomy of growers, socioeconomic status and local seed management systems have also recorded.

The recorded beet species and forms of local beets cultivars have also been characterized by using morphological traits.

The obtained data on beets was discussed as well as species diversity associated with beets in home gardens and the ethnobotanical diversity was investigated.
traditional farming applications
traditional farming applications
Beet in home garden

- Beets have been cultivated for centuries.
- Beets are popular in the home garden because they are relatively easy to grow and practically the whole plant can be eaten.
- Mostly grown for the roots and leaf beets
- Old varieties of fodder beets and sugar beets
- Wild beets (species of sect. Beta and Corollinae) are also grown.
Beta vulgaris ssp./var.

• Leaf beet
  – different forms
    • Spinach beets,
    • Swiss chard,

• Beetroot
  – The color range includes golden, orange, yellow, pink, white and roots with pink and white rings when sliced
    • Mostly The yellow and white forms of beetroot also provide particularly good foliage for food.
  – Vary in shape;
    • the globe forms mostly
      – Globe beets are less likely to bolt — that is, run to seed and develop tough roots.
    • long and intermediate types are better for storing through the winter.
Beta land races in Home gardens
root beets

70 samples

Root: shape, Root: length, Root: width, Root: color above ground, Leaf blade length, Leaf blade width, Time of beginning of bolting
Beta Landraces in home garden
leaf beets

Leaf blade length, Leaf blade width, Leaf blade intensity of green color, Leaf blade anthocyanin coloration, Leaf blade vein color, Petiole length, Petiole color, Time of beginning of bolting

165 samples
Beta Landraces in home gardens
USE

- Spinach beet leaves are usually eaten as a pot herb.
- Young leaves of the garden beet are sometimes used similarly.
- The midribs of Swiss chard are eaten boiled while the whole leaf blades are eaten as spinach beet.
- The leaves and stems of young plants are steamed briefly and eaten as a vegetable or adding oil and lemon eaten as salad,
- Older leaves and stems are stir-fried.
- Leaves of Swiss chards wrapped as dolma.
- The usually deep-red roots of garden beet are eaten boiled either as a cooked vegetable, or cold as a salad after cooking and adding oil and vinegar or grated mixed with yogurt eaten as salad.
- Beet soup
- Omelet with leaf beets.
- Pickled beets are a traditional food.
- Yellow colored garden beets are grown on a very small scale for home consumption. Usually pickled or used as salad.
- Beet juice.
- Bread from beet root or leaf beets.
- Pie or borek with leaf beets.
Very diverse form of leaf beets, root beets and even fodder beets were grown in the home gardens and some times associated with wild maritime beets and wild *Corollinae* species.

Traditional farming application.

Growers, especially women play a key role in managing this diversity in agroecosystems.

Such maintenance of diversity is very valuable complement to *ex-situ* and *in situ* conservation.

It is not uncommon to find more than 50 plant species in a single garden (mostly vegetables, fruits, fodder, fuel, medicines, spices, ornamentals species).
Thank you