

harvesting
carrots from
his sub-plot:
"I had a great
harvest this
year!"



Christian R. Vogl

Cities like Vienna (Austria) are known for great monuments and wonderful art. At first glance, urban agriculture seems to be limited to public baroque gardens, some vineyards, Schrebergärten and intensive vegetable growing. But recently, clever consultants, organic farmers and "green-minded" consumers have developed a new concept of urban organic farming that allows new ways of interaction between organic farmers and urban citizens in residential areas.

Selbsternte

A New Concept of Urban Organic Farming in Austria

On agricultural land within the urban area, organic farmers prepare arable plots (tillage, fertilisation, fencing, irrigation facilities) and sow rows with different vegetable species. Each row holds a distinct species. About 20 species can be found at each plot. In mid-May the plots are divided into subplots of between 20 and 160 m². Subplots are situated in a pattern, rectangular to the direction of the rows, so that they contain 3 – 6 m of every sown species. Then subplots are rented to consumers at a price of between US \$80 and \$ 233 for the time between May and November. The price depends on the size of the sub-plot (80 – 160 m²) and the additional management offered by the farmer (irrigation, weeding, storage during winter, additional plots for flowers and herbs, etc.). Subplots are handed over for

further management and harvest to consumers in May. Harvested produce is used by consumers for their own consumption. Some consumers give harvest surplus away for bartering or as a gift to friends, neighbours or colleagues. Commercialisation has not been observed yet.

The sequence of work as described above is called *Selbsternte*, literally: "Harvest by ourselves". But *Selbsternte* is not only the technical term for the concept; it is also a registered "picture & text trademark" for the consultancy office that provides the *Selbsternte* (trade label to farmers/plots, and supports all participating farmers and consumers with necessary technical information. Consultants of *Selbsternte*[®] advertise the concept, are engaged in the organisation of courses for consumers on organic farming, healthy cooking and several related topics. Farmers using the trademark and receiving consulting pay a licence fee to *Selbsternte*[®].

A BRIEF HISTORY OF HOW THE IDEA SPREAD

The first *Selbsternte*-plot, was established by the organic farmer Rudolf Hascha in *Rothneusidel* (10th District of Vienna) in 1987. He got immediate support for his idea from Mrs. Bruno from the Department for Environmental Advice (*Umweltberatung*) in Vienna. Due to positive experiences of the farmer and consumers, the Municipality of Vienna decided to establish one *Selbsternte*-plot at the municipal farm *Schafflerhof*, with the aim to further develop and advertise the idea. Due to intense public relations activities more plots were established in 1994 in *Frauenhofen* (Lower Austria), 1995 in *Erlaa* (Vienna) and *Alkoven* (Upper Austria), and 1996 in *Siebenhirten* (Vienna) by different organic farmers with the advice of Mrs. Bruno. To fully support the idea, Mrs. Bruno and Mr. Walter Resch - an organic farmer - founded the company *Selbsternte* (in 1998). The company itself started to manage five plots located in the cities of *Asperhofen* (Lower Austria),

We thank **Mrs. Regine Bruno** - senior consultant at *Selbsternte*[®]- for support in the compilation of necessary data on the history of *Selbsternte* and for the possibility to establish experimental sub-plots at the *Selbsternte* plot Hietzing. Christina Westermayer, Brigitte Vogl-Lukasser and Ludwig Maurer supported us with valuable comments to the manuscript for this paper.

Christian R. Vogl and Paul Axmann
Institute for Organic Farming,
University for Agricultural Sciences, Vienna,
✉ vogl@edv1.boku.ac.at

Laxenburg (Lower Austria), Mödling (Lower Austria) and two plots in Hietzing (Vienna). Starting in 2002, teachers and students of the technical school for gardening, Vienna, will support the management of these five plots. All the other plots are managed by independent farmers. Recently, the University of Kassel-Witzenhausen in Germany learned about the concept. They established plots at its experimental farm and advertised the concept. As a consequence, several farmers started to establish plots, supervised by the university. At Munich, Germany, city authorities also started the concept after they learned from Mrs. Bruno, but under a different name.

Today *Selbsternte* is practised on 17 plots in Vienna or neighbouring cities with a total area of 68,740 m² and 686 sub-plots. Twelve organic farmers, about 1,000 consumers, the technical school for gardening in Vienna and at least two University Institutes are involved in the project.

CHALLENGES FOR SELBSTERNTE

During the last years there have been fluctuations in the number of farmers and consumers joining the project. Although the above description gives the impression that *Selbsternte* embodies a simple and easy concept, it faces all of the major challenges of urban agriculture – such as disturbances by neighbours, contamination of soil and/or plants by emission, bad accessibility of plots for technical equipment necessary for soil preparation. In addition, the relationship between the parties involved and technical questions are major challenges for a successful development of the idea. Only some challenges will be discussed here.

Relations to consumers

To manage a *Selbsternte* plot, the farmers involved in the project have to establish close communication with consumers, which not only helps to attract them as clients (marketing), but also provides precise and unmistakable information on necessary technical and social details (e.g. regulations on “to do” and “not to do”). Crucial is information that:

- ❖ helps to avoid unachievable expectations;
- ❖ secures appropriate social relations between consumers; and
- ❖ reassures that inputs not allowed in organic farming are not used at all.

Consumers who rent sub-plots are a very heterogeneous group of people, each of them with different ideas, wishes, levels of gardening knowledge and a different perception of problems. During the course of the vegetation period, many questions that arise are addressed directly to the farmers. In many cases these questions do not only cover technical topics matching the knowledge of farmers (time of harvest of certain species, techniques for pest management, etc.), but relate to topics such as processing, storage and cooking. In addition, farmers are confronted with problems due to the social dynamics in the plot (e.g., anger on the behaviour of neighbouring consumers).

Most farmers have only limited experience and training in the handling of these communication processes. In addition, the huge amount of time necessary for consumer relations is in competition with other activities on the farm. A successful management of *Selbsternte*-plots therefore needs a concept of communication, care and education of consumers that reduces the working load for farmers but ensures good relations with consumers.

Technical skills of farmers

The concept of *Selbsternte* needs not only proper social skills but also special technical training of farmers prior to the start of the project. Farmers, who are not horticulturists, but growers of arable crops or field vegetables are used to thinking in larger scales of agriculture, than consumers, gardeners or horticulturists do.

On an arable plot of one or more hectares, failure in sowing or germination which only has an impact on a few centimetres of a row, might have no real impact on the farmer, if it is remarked at all. At a *Selbsternte* sub-plot, missing a species or some plant individuals due to technical failures effect adverse social dynamics, difficult to handle for the farmer. Therefore an adaptation of thought, management and technical equipment to small-scale horticulture is necessary and must be included in training programmes.

Some species make it necessary to establish a plant nursery in a green house. The selection of the appropriate species/variety, time of sowing, irrigation, pest management and manipulation of the microclimate in the greenhouse turns out to be a

sophisticated task for inexperienced farmers, with possible economic losses. Most farmers therefore choose to outsource the cultivation of seedlings. In these cases, contracts that specify explicitly technical details, like variety, quantity, quality and time of delivery of the seedlings – are needed.

Appointments with consumers to hand over the prearranged sub-plots must be made and all the necessary preparation has to take place within a tight time schedule. Unexpected patterns of temperature or precipitation, together with possible failures in the plans for the plot might cause adverse social dynamics. To avoid this, training and exchange of know-how with experienced farmers are necessary.

Neighbours & Friends

Neighbouring residents compose an often-neglected group. Neighbours might have interests which are contrary to the establishment or the continuous management of *Selbsternte* plots. Especially in the first phase of the establishment of plots, neighbours are concerned. They fear the construction of new urban infrastructure on the farmers' land or restricted use of public recreation areas.



A *Selbsternte* sub-plot of 80m² clearly divided by path from other sub-plots

Moreover, people who occasionally accompany authorised consumers (friends, children) are not involved in the communication process. They might be a risk if they do not follow the established regulations. Children, for example, are not careful about sub-plot borders, which are fenced by flowers, cords or small stones only. They interpret the plot as a playground. If their parents do not instruct

them well, losses of produce are possible. Friends of consumers pose another challenge. During vacations some consumers ask their friends to irrigate and harvest the sub-plot. If border rules have not been explained carefully, it might happen that these friends work or harvest at the wrong sub-plots. These are situations, which can influence relations between neighbours.

Selbsternte consultants

The training needs of farmers, exchange of experiences between farmers, accompanying education of consumers and advertising are easier to handle at a common or outsourced level rather than at an individual level. The consultancy enterprise *Selbsternte* has been founded to address these issues. Experiences show that this is not easy an easy task to meet. The consultancy of both farmers and consumers is a full-time job, day and night. Consumer demand is high on weekends and in the evening when they return from work and manage their sub-plots. Labour costs are high in Austria, especially in and around big cities. It has still not been possible to establish a fully financed consultancy service of contracted experts. Work is carried out by a few idealistic volunteers. To secure proper advice when needed, higher fees for sub-plots, higher license fees and public subsidies will be necessary. If this cannot be realised, honorary advisors that are nominated based on experience ("senior" consumers) might be a valuable solution.

EXAMPLES OF BENEFITS OF SELBSTERNTE

The proponents of *Selbsternte* are convinced that this concept leads to ecological, economic and social benefits, which will help to design a sustainable alimentation system for small, medium and large cities. The lack of scientific data on *Selbsternte* (the analysis of our data was

not yet completed at the time of this paper's submission) only allows for a hypothesis on this topic:

Ecological benefits

- ❖ Reduction of individual shopping traffic and related ecological problems: consumers who rent sub-plots live close to the *Selbsternte* plot. This leads to reduced trips (duration, frequency) to shopping malls by car.
- ❖ The concept of *Selbsternte* leads to higher agro-biodiversity in the urban area, where this concept is practised. Consumers actively enrich the sub-plot by planting additional species. Rare species, exotic species and old varieties can be found in *Selbsternte* plots.

Economic benefits

- ❖ The monetary value of the vegetables harvested is higher than the money invested by the plot owner. *Selbsternte* plots help to reduce costs for organic nutrition, compared to consumer purchases at organic shops. The first results of the authors' project confirm parts of this hypothesis. In 2001, consumers at the plot *Hietzing* invested between US \$182 and \$228 for the rental fee and additional inputs (except for the cost of their own labour). The value of the harvested produce (calculated: yield fresh x price for the produce at organic shops) ranges between US \$410 and \$645.
- ❖ Local organic gardeners, retailers of tools and other providers of necessary and permitted inputs benefit from the demand of consumers, who have rented *Selbsternte* plots.

Social benefits

- ❖ *Selbsternte* initiates new networks of communication and collaboration between inhabitants of residential areas, who have not yet met.
- ❖ *Selbsternte* plots serve as a meeting

point for people to exchange opinions, information and knowledge (including about organic gardening).

- ❖ Passers-by get involved in the idea of organic farming, urban farming and *Selbsternte* due to people showing pride in their work at the plot and speaking to passers-by.
- ❖ Work at sub-plots helps people relax, meditate and rest after everyday business.
- ❖ Parents consciously use the work at their sub-plot to educate their children about horticulture, plant species and related topics.
- ❖ Consumers get involved in primary agricultural production. They therefore understand better the risks, challenges and pleasure that farmers face.

SCIENTIFIC CHALLENGES

Until now, only a few descriptive questions regarding *Selbsternte* have been addressed by students. More quantitative data on the organic, economic and social impacts of *Selbsternte* are needed. *Selbsternte* sub-plots can be understood as small experimental stations where consumers merge traditional horticultural techniques with urban ideas on permaculture, sustainable land use and participatory farming. Outcomes of this participatory process of innovations have to be assessed for their potential value for the improvement of urban agriculture, but also for the development of organic farming in general.

PERSPECTIVES FOR VIENNA

Urban organic farming is at the top of Vienna's agenda. The city government, a coalition of the socio-democratic and the environmentalist (green) party will convert 600 ha of its 2,000 ha city farms to organic agriculture. As soon as possible, 30 % of all produce bought by city enterprises, like hospitals or kindergartens has to be organically grown.

Further steps are planned: The percentage of organic food in municipal kitchens should rise by up to 60 %. To rent municipal land should be possible only, if the user plans to manage it organically. The administration will also discuss the conversion to organic farming with the conventional growers of grapes and vegetables. In this context, *Selbsternte* should develop successfully and Vienna might become a hot spot for urban organic farming.

The data presented here are based on a research project at the Institute for Organic Farming, University for Agricultural Sciences (Vienna, Austria) realised in 2001. During the course of the vegetation period, two sub-plots at Roter-Berg had been managed differently – "extensively" and "intensively", reflecting that some consumers are on average "lazy" and others "engaged" – to survey inputs (cash, labour, irrigation water, etc.) and outputs (fresh weight and value of produce). In addition, structured interviews were held with all the consumers at the Roter Berg sub-plots, and with a random sample of 50 % of the consumers at the *Selbsternte* plot, St.-Gabriel. Structured interviews with farmers and *Selbsternte* consultants were finished in December 2001, but analysis of the data is not finished yet. Final results can eventually be requested from the authors.