Considerations on the future of agriculture in Austrian Alpine areas

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Abstract

Rural areas can no longer be equated with agricultural areas. Despite a high share of farm and forest land and the agricultural focus of Austrian rural policy, the development of rural areas is increasingly shaped by non-agricultural forces. With regard to Austrian circumstances this paper identifies types of rural areas based on criteria of location and regional economy. Agriculture will only be able to stand its ground if the farmers succeed in adapting their services to the challenges specific to the particular type of rural area.

Keywords: rural development, agriculture

Introduction

"It is difficult to predict, especially the future", Wilhelm Busch states in humorous serenity, and so it is quite probable that only the retrospect on the year 2030 will allow the judgement on whether or not the experts' opinion will be proved correct: in the course of the DIAMONT project they concluded that a further decrease in agriculture will take place in Alpine areas within the time span of one generation (In his conclusion on the Delphi survey Bender pinpoints the generally pessimistic estimation in the following sentence: "Internationally there was little dissent on the fact that agriculture is facing an ongoing decline"). Or the retrospect might show that rather the authors of this article are on the right track concerning their following elaboration on how they are counting on an increase of agriculture, i.e. an economical regaining of strength and a societal increase of importance of agriculture in near future. Yet their respective considerations only refer to Austrian Alpine areas.

Approach based upon spatial types

"The future of agriculture is closely linked to the future of rural areas", Lanner (2000) states quite concisely and thereby articulates various important insights serving as underlying assumptions for the following elaborations:

- It can be assumed that the future of rural society as well as the economy in rural areas can not be equated with the path of development of agriculture in the respective area.
- Rather it can be assumed that the future of rural areas will increasingly be dominated by non-agricultural forces.

- Agriculture needs to enter new alliances with other socio-economic groups on site in order to profit best as possible from a positive non-agricultural development – should it take place – and/or to become a driving force itself in a holistic positive regional development.

From the viewpoint of spatial sciences these arguments imply the following:

- Rural areas cannot be equated with "agricultural areas". Rather one has to approach this spatial category in a more holistic way. In order to maintain an overview within this highly complex matter, it is useful to apply the theoretical concept of the "multi-functional rural areas" according to Bauer (2002)[1].
- A holistic approach to rural areas implies that from the viewpoint of spatial sciences it does not seem justified anymore to consider rural areas as a homogenous spatial category. Based on an integrative reflection it can be stated that non-urban areas are spatial types which considerably differ from each other. Depending on the spatial category a different set of spatial functions is predominant[2].
- Only a holistic view that is based on spatial types will show the potential opportunities for agriculture in the respective spatial type more clearly.
- Certain socio-economic and agriculturally relevant developments indicate that it may be assumed that in future agriculture will orientate itself towards non-agricultural developments of the respective regional type more strongly than in past decades. So the assumption is feasible that a re-regionalisation and a regional specialisation of agriculture will take place in our latitudes, which on the whole will go hand in hand with an increase of importance of the agricultural sector in the respective region.

The reason for a stronger orientation of agriculture towards the region results from the following trends that are continuously becoming clearer:

- rising fuel prices are leading to an increase of importance of spatial vicinity and therefore to a preference for short paths;
- increasing substitution of fossil fuels by regionally-based renewable ones;
- increasing importance of climate protection is forcing traffic reduction;
- a desire for checkable factors of production in agriculture;
- increasing awareness of health and nutrition such as the wish for freshness and organic production etc.;
- security based considerations that suggest more independence from far off production sites;
- stronger orientation of agriculture towards provision of services which often calls for short paths between the provider of the service and the customers.

[1] In the following the categorisation of multi-functionality according to Bauer (2002) is applied, according to which rural areas regularly fulfil the following functions: production and supply, economical force, education and culture, social benefit, settlement and residence, waste disposal, leisure and recreation, ecological compensation

[2] The characterisation of rural areas is based on the following two studies: Sammer et al (2000) and Weber et al (2003)

Developments of agriculture based on spatial types

Two relevant studies the two authors were involved in in leading positions (Sammer et al. 2000 or Weber et al. 2003) lead to the result that, taking agricultural factors of production into consideration, Austrian rural areas can be categorised in three structurally strong and two structurally weak spatial types. The following categorisation is suggested:

- Periurban rural areas (structurally strong)
- Rural areas in the vicinity of supra-regional traffic arteries (structurally strong)
- Rural areas with a high importance of tourism (structurally strong)
- Peripheral rural areas within the Alps (structurally weak)
- Peripheral rural areas along the border to the former Eastern Block (structurally weak)

As shown in figure 1 the Alps have a strong influence on all spatial types except for the last regional type in the above list. For these four Alpine rural spatial types a look into the future is dared in terms of the probable development of agriculture in the respective spatial type.

Peri-urban rural areas

Peri-urban areas describe the transitional areas between the urban borders where agriculture does not play a role anymore and the adjacent municipalities that are spatially still dominated by agriculture. Examples for this type are basins at the border or within the Alps that are on the one hand influenced by the respective city pervading its surroundings and on the other hand by favourable conditions for agricultural

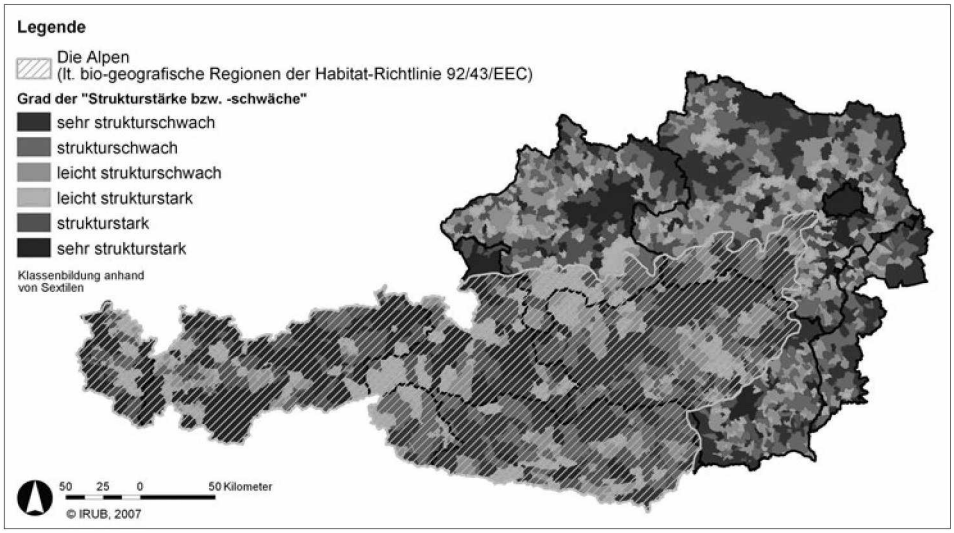

Figure 1: Spatial distribution of structurally weak and structurally strong rural (Alpine) municipalities in Austria (IRUB 2006).

production. Depending on where the urban core area is situated in the federal territory one will find the cultivation of market crop, fodder or mixed agricultural enterprises, processing farms or permanent crop are of less importance. In this spatial type farmers also fulfil the role of preserving cultural landscape as well as keeping land open for future use as building land.

Following the categorisation of functions according to Bauer (2002) the functions of settlement and residence, leisure and recreation as well as ecological compensation dominate in peri-urban rural areas. Examples for these generally structurally strong areas are the Salzburg Basin, the Graz Basin or the Lienz Basin.

The future of agriculture in the peri-urban spatial type will lie in a distinct orientation towards the provision of services. On the one hand its function will still be to preserve the cultural landscape and to protect it from competing land uses and thereby to (continue to) fulfil the ecological, aesthetic and social needs of a predominantly urban clientele. Whether this will be possible in spite of a continuously strong pressure on the land from settlement development (residential, spacious commercial and industrial development) and infrastructure development (streets, technical lines, exploitation of natural resources) will strongly depend on the assertive determination of regulative planning, public subsidies for further cultivation and the creativity of farmers in terms of opening up lucrative demand sectors. In this context it will be important to conduct economic activities in the tertiary sector. The chances for income that will open up as a result will vary to a strong degree. They will encompass direct marketing of (processed) products (e.g. catering, wine or cider restaurants), the combination of recreation, landscape conservation and fine arts (LandArt, agritainment), pedagogical projects and projects in social medicine (seniors' residences, therapeutic horseback riding), health orientated leisure activities/facilities (wellness, fitness) as well as the provision of energy.

Especially in this spatial type diverse patterns of demand of customers concerning the quality and regional provenience of products, food safety, animal rights or "fair" conditions of production on the one hand and a stronger differentiation of life styles on the other will be of importance. This development is indicated by increasing rates of organic farms and innovative forms of marketing, such as community supported agriculture and pick-your-own operations, which combine the demand for high quality products with an added "emotional value" of one's own gardening activity (Meyer-Cech & Seher 2004).

All in all this peri-urban type of agriculture will be seen as a part of the urban economy in the future, rather than as a relict of rural agricultural land use (Lohrberg 2001).

Rural areas in the vicinity of supra-regional traffic arteries (without restrictions concerning land suitable for housing)

This spatial type can be characterised by considerable dynamics in settlement development due to continuous growth in the number of jobs, population and wealth (see also Österreichische Raumordnungskonferenz [ÖROK] 2004), a strong dissection of landscape by high-capacity traffic ways and infrastructure lines as well as –

also an important factor – a transition from a former rural to a "rurban" identity. The latter describes the coexistence of intense cultivation of land, of urban and rural residential use and internationally performing production and service enterprises including their preceding and subsequent regionally orientated enterprises and institutions. The quality of this type lies in its good accessibility and the large land reserves. For Alpine areas the conditions of agricultural production are quite favourable. According to that the rate of agriculture is still relatively high in these areas (ÖROK 2002).

In this "in-between-land" the rate of farms based on fodder production, market crop and processing as well as enterprises that combine agriculture and forestry is considerable. Agriculture still plays an important role as provider of land, but it also has an important function in terms of providing identity in its role as a representative of rural culture and values.

The functions of production and economy as well as settlement and residence predominate here. Examples for this spatial type are (parts of) the lower Inn Valley, Salzach Valley and Mur Valley.

What are the future options for agriculture in this spatial type? In these areas, of which it can be assumed that high dynamics of change will influence them in the future as well, the function of agriculture will be to provide building land also in the future. But also primary production will still play a role in the future. Aside from the production of food and fodder agriculture could make use of short distance relations to educational, research and development institutions, to high technology enterprises, to international traffic and infrastructure tracks and to large energy consumers or it could get involved in the development and production of industrial and energy plants and form "innovation clusters" (Fürst 2001) with industry and commerce. Even today the areas of use for biogenous resources are already manifold. They encompass chemical basic materials, fuels and lubricants, isolation materials, organic synthetic and fiber composite materials. Renewable resources for these areas of use are primarily produced from oil plants (rape, oil flax, sunflower), starch plants (potato, wheat, maize), sugar plants (sugar beet), fibre plants (hemp, flax) and energy plants (wood, straw, biomass) (see Kaup 2001). As one can suspect the transition from a fossil based to a biogenous economy will bring a social and economic increase of importance for agriculture as the producer of raw materials. Also there will be stronger protections for soil from exploitation for non-agricultural uses than today, as soil being an important source of renewable materials.

Rural areas with a high importance of tourism

One must remember that in rural areas with a strong influence of tourism in most cases the especially attractive cultural landscape, e.g. narrow, steep mountain valleys, a small-scale mosaic of water, woods, meadows and pastures, highlands with plenty of snow etc., imply rather undesirable conditions of production for agriculture, i.e. shorter vegetation periods, slopes that are difficult to cultivate and a small-scale structure of cultivated land.

Predominant agricultural enterprises in rural regions with a high importance of tourism are fodder, forestry and combinations of agriculture and forestry. The function of employment plays a subordinate role in this spatial type. The rates of employees in agriculture all lie below 5% in the districts of the tourist regions (see ÖROK 2002). From the perspective of economy as a whole, rural areas that are influenced by intensive winter and/or summer tourism can be described as highly dynamic economic regions that have to face global competition concerning their customers. In this spatial type the functions of leisure and recreation and economic force dominate. Examples for this rural spatial type in Austria are the side valleys of the Inn Valley and the regions Pinzgau and Pongau in the Province of Salzburg.

The future of agriculture in this spatial type lies in a distinct orientation towards the provision of services. It is very probable that society will furthermore expect the service of preserving the cultural landscape, in order to keep competing uses that would destroy the landscape, i.e. further increase of woodland and sprawl, low and to enable the contribution to regional identity and natural risk prevention.

If these expectations should be fulfilled it is necessary to find ways to enable farmers to participate in the tourist value added. That way they could improve their economic base and further abandonment of farm enterprises could be avoided. Compensatory payments will be necessary, especially taking climate change into consideration: agriculture will further gain importance in terms of a careful cultivation of high altitude areas, i.e. the origin of avalanches and floods.

By helping to provide a wide spectrum of offers for tourists, farmers will help winter sports destinations in middle altitudes that are endangered especially strong by climate change in terms of a lack of reliable snow conditions to stay attractive destinations. This includes various possibilities for combinations of income such as special wellness programs, horseback riding, carriage rides and senior residences with on-site care. Enforced cooperation between agriculture, commerce and tourism industry, such as tourist theme trails (Cheese Trail Bregenzerwald, Wine Trails in Styria) seem to be successful as well. Relevant holistic strategies must be based on uniqueness and checkable criteria for quality, which for example "label regions" (e.g. "bio regions" or biosphere parks) call for (see Dörr & Kals 2003). In this way farmers, too, will be able to obtain an improved market position.

Peripheral rural areas within the Alps

Peripheral rural regions within the Alps demonstrate especially well how tightly agriculture is linked to the socio-economic development of rural regions. In these areas difficult non-agricultural conditions, such as bad accessibility, a lack of jobs, a declining equipment with infrastructure, a partly not well educated, declining and overaged population, coincide with undesirable conditions for agricultural production, such as steep slopes, rough climate and a small-scale farming structure due to topography. This leads to a self-enforcing development, that eventually (also) endangers the existence of the authentic, diverse cultural landscape on a regional scale.

In this rural spatial type the entrepreneurial structure of agriculture and forestry is dominated by fodder production, additionally combinations of agriculture and

forestry as well as forestry are important. Due to a lack of income alternatives agriculture's function of employment still has a certain importance.

In these areas the function of ecological compensation dominates. Examples for this spatial type are Eastern Tyrol, the Alpine region Niedere Tauern in Styria, the Möll Valley and parts of the Alpine region Hohe Tauern in Carinthia.

All in all there is the danger of a "no-future-atmosphere" taking hold of this spatial type and therefore one has to work towards effectively strengthening the function of economic force, i.e. creating jobs and possibilities of income. As described above this goal is supported by the fact that even today already one can discern developments that will lead to an increase of importance of agriculture and forestry. Due to the rising prices for fossil fuels and other raw materials, their emerging lack of availability, the increasing importance of climate protection, reasons of environmental protection, but also in order to maintain value added and employment effects from energy and raw material supply within the country our economy that is currently mainly based on fossil raw materials to a large extent will step by step be transformed into a biogenous one. Taking this into consideration agriculture in the regional type currently being discussed will find good opportunities in the production of building materials (e.g. building with wood), energy carriers, industrial raw materials and especially basic materials for medicinal products such as for biogenous pharmaceuticals and red biotechnology. It can be hoped that opportunities will present themselves to stabilise the number of agricultural enterprises on the one hand and to create non-agricultural jobs in the region on the other. Whether the latter will actually come true will considerably depend on how well the sites for the processing of the raw materials produced by agriculture can be embedded in the currently discussed spatial area type.

All in all an increase of importance of agricultural soil as source of raw materials can be expected by the biogenous shift, which today already has lead to a reactivating of dormant potentials for production concerning agricultural land even in relatively undesirable locations.

Conclusion

The above elaborations on possible future chances for agriculture in Austrian Alpine areas should also demonstrate that a thematically broadened viewpoint, which at the same time differentiates spatial types more strongly, will lead to more precise future scenarios for agriculture than the usual viewpoint, which thematically focuses on agriculture in a sector-oriented way, but which thinks, writes and talks about rural areas as a homogenous category.

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