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AlpFUTUR – Herders, home farm size and direct payments are key factors for the future of summer farming in Switzerland

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Abstract. With inter- and trans-disciplinary approach, the research programme AlpFUTUR (www.alpfutur.ch) identified the future prospects of Swiss summer pastures for the next decades. Summer pastures are a distinctive feature of the cultural landscape in Switzerland. However, recent polarization of land use – intensification on the one hand, extensification or abandonment on the other hand – leads to the loss of agricultural land, biodiversity, tradition and identity. Although a survey of AlpFUTUR showed that summer farming is highly motivated by tradition and appreciated by the Swiss population, 24 km² of summer pastures are abandoned every year and turn into forest. At the farm level, AlpFUTUR showed that capable employees are of significant importance for successful business. Economic analyses revealed that summer pasturing is economically strongly dependent on sufficient herd size. The steadily increasing area of the home farms may become a key factor for abandonment, because sufficient fodder is available all year round at the home farm. Since 2014, the financial support of summer farming has been increased substantially and ecological direct payments have been introduced. These political measures are intended to counteract the current dynamics but have to prove their effect in the near future.

Keywords. Interdisciplinary research project – Land use change – Summer pastures.

AlpFUTUR – Bergers, taille des fermes en vallée et paiements directs sont les facteurs clés pour l'avenir des estivages en Suisse

Résumé. Le programme de recherche inter- et transdisciplinaire AlpFUTUR (www.alpfutur.ch) a identifié les perspectives d'avenir des pâturages d'estivage suisses pour les prochaines décennies. Les pâturages d'estivage de montagne sont une particularité du paysage culturel en Suisse. Cependant, la récente polarisation de l'utilisation des sols – intensification d'une part, extensification ou abandon d'autre part – conduit à la perte de terres agricoles, de biodiversité, de traditions et d'identité. Alors que la pratique de l'estivage est fortement encrée dans les traditions et apprécié par la population suisse, environ 24 km² de pâturages sont abandonnés chaque année et se transforment en forêt. A l'échelle de l'exploitation individuelle, AlpFUTUR a trouvé que le personnel qualifié est d'importance majeure pour le succès d'une saison d'alpage. L'analyse économique a montré que les fermes d'estivage dépendent fortement du nombre suffisant de bétail. Le fait que les exploitations principales en vallée sont sans cesse en train de s'agrandir est un facteur clé pour l'abandon des estivages, car de plus en plus le fourrage produit en vallée suffit pour toute l'année. Depuis 2014, le soutien financier de l'agriculture d'estivage a été augmenté sensiblement et des paiements directs écologiques ont été introduits. Ces mesures politiques sont attendues pour contrecarrer la dynamique actuelle mais doivent prouver leur efficacité dans un avenir proche.

Mots-clés. Programme de recherche interdisciplinaire – Changement d'utilisation des sols – Pâturages d'alpage.

I – Introduction

The inter- and transdisciplinary research programme AlpFUTUR started in 2007 and focused on the most relevant factors, relations and interactions for actual and future mountain summer farm-

ing in the next 10 to 40 years in Switzerland. 80 scientists from 17 institutions were directly involved in research and knowledge transfer, over 40 foundations, federal, cantonal offices and NGOs supported the project financially. Twenty-two projects conducted scientific surveys, field work and literature studies on animal production, grazing intensity, effects of climate and land use change, dynamics of biodiversity and forest area, jobs and education, history, laws and regulations, market potential of alpine products, economic efficiency, innovation, tourism, demands of society, policy, infrastructure and implementation. This paper summarizes a subset of results of AlpFUTUR. For the complete results refer to the synthesis book by Lauber *et al.* (2013), which is available in German, French and Italian (www.alpfutur.ch).

II – Importance of mountain summer pastures

One third of the agriculturally used area in Switzerland consists of summer pastures (BfS, 2012 and Fig. 1). This natural fodder source allows to increase the Swiss livestock number by 11 percent. Over 400,000 cattle, 210,000 sheep, as well as goats, horses and other ruminants spend the summer in the mountains, they stem from 48 percent of the farms owing livestock. The 7000 summer farms generate 11% of the total income of the Swiss agricultural sector (BLW, 2012). Considering that summer farming lasts only three to four months every year, this is a remarkable amount.

Most of the high nature value farming in Switzerland is related to summer pastures (Riedel *et al.*, 2012), which were shown to host highest plant species richness compared to other habitats in Switzerland (BDM, 2006). The significance of the cultural landscape in summer pasture areas for tourism, its contribution to Swiss' identity and the mitigating effects of adapted land management on natural threats also add to the high estimation for summer farming.

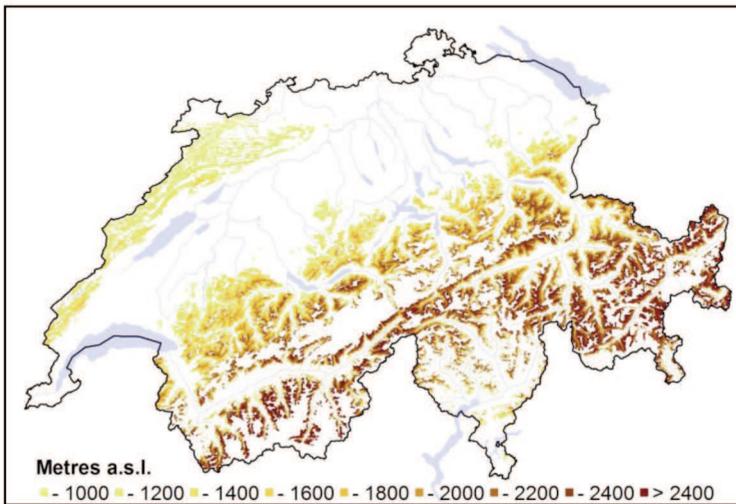


Fig. 1. Swiss summer pastures in the Jura mountains and in the Alps are diverse in elevation and topography. They extend from below 1000 to over 2400 m above sea level. (Data: Arealstatistik 1992-97 © BFS/ Geostat; Background: Vector200 © swisstopo; Map design: E. Szerencsits) Agrocope, in Lauber *et al.* (2013).

III – Challenges for summer farming

1. Polarization of land use: intensification and abandonment

There is a close link between the home farms in the valley and the mountain summer farms. Because of a general increase of the forage area on the valley farms, the need for additional fodder from summer pastures is decreasing. As a consequence, the numbers of animals on summer farms decreases, 24 km² of marginal summer pastures are abandoned every year and forest is expanding. Also, modern high performing cows tend to be too heavy for the alpine terrain (erosion) and too demanding with respect to fodder quality. A survey showed that almost half of the 856 farmers which were interviewed are indeed seeking to expand the forage area of the valley farm and consequently consider to give up summering livestock (Fischer *et al.*, 2012).

2. Economic aspects

The income of summer farms depends considerably on the size of the herd (Fig. 2). A decrease in production (milk, cheese, butter, meat) has a stronger impact on profitability than the decrease in working hours and salary. Therefore, securing enough animals is crucial for the profitability and therefore for the future of a summer farm.

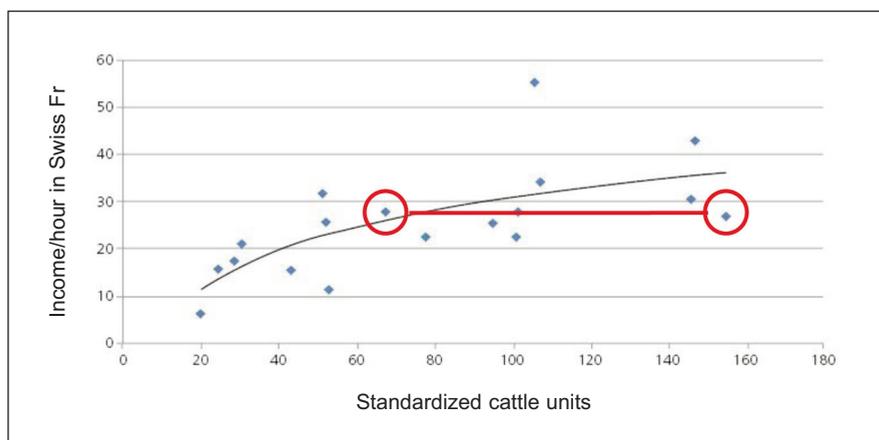


Fig. 2. The income per hour increases with the number of standardized cattle units (“Normalstösse”) ($R^2 = 0.37$). Still, some small alpine summer farms that are well organised and make good use of their capacities achieve the same income per hour as farms that are about three times bigger (thick line) (© Fig. 6.5 in Lauber *et al.*, 2013).

3. Herders and cheese makers

An AlpFUTUR survey revealed the importance of well trained, experienced and reliable personnel, especially because the number of family members involved in summer farming is decreasing. 38 percent of the summer farms depend on temporarily hired personnel. Ideally, the same team returns to the same summer farm every season, but often this is not the case. AlpFUTUR interviewed 120 employees of summer farms and identified three key factors which make a summer farm attractive: Recognition of the hard work and effort, minimum level of infrastructure and the possibility to take responsibility for at least certain domains. For employers, knowing the motivations and expectations of their herdsman is a key factor to make them come back the following year.

IV – Opportunities

1. Consumers trends

In a comprehensive survey consumers indicated their preference for regional products (76.4%), natural products (70.2%) and taste (66.9%) as main reasons to buy cheese from summer farms. These findings are in line with European food trends (Bosshart *et al.*, 2010). Especially in the urban centers, AlpFUTUR surveys showed that consumers are ready to pay up to 30 percent more for summer farm products. Another representative survey by Junge and Hunziker (2013) confirmed that the Swiss population perceives summer farming as an integral part of Swiss identity. The abandonment of summer farming would be regretted by both, the inhabitants of the mountain regions and by the Swiss population at large.

2. Support by agricultural policy

Since 1980 summer farming is supported with direct payments. As long as the stocking rate is within 75 to 110 percent of the carrying capacity of a summer farm, full contributions for alpine summer farming are paid. These contributions aim at avoiding reforestation as well as intensification of alpine summer pastures. The contributions were increased with the beginning of 2014 (Bundesrat, 2014), mainly to counteract the abandonment of marginal pastures. Additional direct payments were introduced for pastures with high biodiversity and to enhance landscape quality. These contributions aim at maintaining labour-intensive practices, such as removing fern, shrubs and trees from pasture land and are expected to counteract the undesired trends of abandonment because of missing manpower. The promotion of summer farming products is indirectly supported by official labels for cheeses from summer farms. In the near future a specific “summer farm label” should facilitate the distinction of summer farms products from alpine mountain products in general. There is, however, no centrally organized support for the temporary employment.

V – Conclusions

At the national level, policy reacted to land use polarization in summer pasture areas with increased direct payments. They should motivate farmers to continue the tradition of summer farming. However, the trend of increasing size of home farms is a strong antagonist to the new payments and future evaluations will have to prove their effectiveness. At the summer farm level, where reliable personnel was shown to be the key factor for economic success, we recommend that employers invest in the motivation of their employees and produce alpine products of high quality standards. Alpine summer farming will then persist as a living mountain tradition.

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