



Flowering Farmland Competitions in Europe: History, facts and potential interactions with agri-environmental measures



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ABSTRACT

Flowering Farmland Competitions (FFLCs) are becoming more and more prominent, especially in Europe. By conducting a survey among organisers and by searching the internet we are able to give a historical and spatial overview and to analyse their potential to promote sustainable farm management in combination with Agri-Environmental Measures (AEMs). The number of competitions held amounts to more than 300 in a time span of 15 years. In every case, they have been intended to raise awareness of biodiversity in agriculture and to promote co-existence or even symbiosis between good agricultural practices and nature conservation. They are usually organised by public administrative bodies and NGOs from the field of nature conservation, as well as those from the field of agriculture. The money spent on FFLCs is moderate and usually ranges between 5000 and 90,000 Euros per competition. FFLCs gain broad attention amongst the public, both with farmers and with people not involved in agriculture, and are therefore well-suited to raising awareness and supporting Agri-Environmental Measures. FFLCs are of course no substitute for AEMs since they do not offer substantial financial help to ameliorate the shortcomings of extensive agricultural practice, but they can be an effective measure for improving the acceptance of biodiversity-friendly and sustainable management.

1. Introduction

Various different agricultural competitions are regularly held around the world. Most of them highlight the quality of agricultural products, the best known examples being contests for wine – a sector where competitions are especially important (Storchmann, 2012). Awards for other products such as cheese, milk or distillates (e.g. Clark and Costello, 2009) are also common. In these cases, however, food processing is not necessarily connected with farms and the winners of these competitions may not be farmers at all. Competitions which award prizes to the farmers for their work are much less common. In alpine countries there are competitions for tractor driving, tractor ploughing and for mowing. Since hand-mowing plays a marginal role in modern-day agriculture, competitions like these may partly have social intentions – to enhance farmers' self-esteem and reputation and rather than their practical skills. Other agricultural competitions are related to the role of farmers in rural society as supporters of culture and traditions. For example, there are competitions where farmers receive prizes for the most beautiful farmsteads (pers. observation A. Hilpold). Their work as producers is of secondary interest in these cases. Competitions are also used in case of extensions, in order to promote improved

agricultural practices, e.g. to improve soil and water conservation in the South American Andes (Immerzeel and Zutter, 2005; Kessler and Graaff, 2007).

Over the last two decades in Europe an increasing number of competitions have been held with awards for farmers who maintain diverse and ecologically valuable farmland. The farmers are awarded for something traditionally seen as a by-product and not as the main aim of their work. As suggested by their names (“Wiesenmeisterschaft”, “Concours général agricole des prairies fleuries”, “hay meadow competition”, “flowering meadow competition”) these competitions are predominantly focused on grasslands – i.e. meadows that are mown or grazed to sustain large herbivores, especially cattle.

Extensively managed meadows in central Europe can easily consist of more than 40 different species of higher plants (Lüth et al., 2011; Pruchniewicz, 2017) and that number can double in calcareous grassland (Benton et al., 2003; Wilson et al., 2012). More intensively used grassland types, which are mown several times per year and are provided with larger amounts of fertilisers and/or manure do provide higher amounts of fodder for the cattle. Grasslands of that type, however, tend to be much poorer in terms of the number of species that they contain (Zechmeister et al., 2003). They have fewer flowers or much

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shorter flowering periods and provide only moderate gains for biodiversity and ecosystem quality (Plantureux et al., 2005; Plaikner et al., in prep.). In other land use forms, not related to grasslands, biodiversity is affected positively by extensive farming. In crop fields biodiversity decreases with intensification (Clough et al., 2007; Jeliakov et al., 2016), and in vineyards and other permanent fruit orchards, evidence is strong that extensive management has positive impacts on biodiversity (Nascimbene et al., 2016). Our personal observations in vineyards show extensive vineyards to be highly diverse and highly valuable habitats, with up to 40 plant species and a high proportion of red-listed plant species. In general, both intensification and abandonment lead to losses in biodiversity (Reidsma et al., 2006; Tasser and Tappeiner, 2002; Myklestad and Sætersdal, 2003; Nascimbene et al., 2014), and continuing extensive agricultural practice is crucial to maintain biodiversity.

In addition to protecting biodiversity, extensive farming methods positively affect ecosystem services, for example through potential protection against erosion, provision of clean water, climate stabilisation, and promotion of long-term soil fertility (Fontana et al., 2013; Robertson et al., 2014). Furthermore, excessively high nutrient values used in intensive agriculture (especially of nitrogen and phosphorus, see (Sutton et al., 2011); Holman et al., 2008; Velthof et al., 2015) can cause a deterioration in water and air quality (Tilman et al., 2002; Bauer et al., 2016) and increase biodiversity loss in the landscape (Krupa, 2003).

In most European countries, land use development tends towards a polarisation: an intensification in agriculturally favourable areas – and, with similar detrimental impacts (Losvik, 2008; Tasser and Tappeiner, 2002), towards abandonment in unfavourable areas (Benayas et al., 2007). The fact that extensively managed farmland is prone to disappear is clearly depicted by the red list of European habitats (Janssen et al., 2016), where, for example, most extensively used meadows (i.e. extensive hay meadows and pastures) range between near threatened (NT) to critically endangered (CR). These farmland types are therefore subject to nature conservation measures, and these concerns are mirrored by the concepts of High Nature Value (HNV) farming (IEEP, 2007) and the Fauna-Flora-Habitat directive of the EU. The concept of HNV farming was born in the early 1990s, wherein manmade habitats with high value for biodiversity were listed and defined (IEEP, 2007; Beaufoy and Cooper, 2009). The Habitats Directive, on the other hand, aims at conserving valuable habitats in order to preserve biodiversity. Among these habitats, there is a certain proportion of manmade habitats that depend heavily on an extensive form of land use.

Furthermore, the EU Common Agricultural Policy (CAP) provides additional stimulus for environmentally sustainable production. Introduced in 1962 it has undergone a number of reforms, the last for the period 2014–2020. Generally, the CAP has gradually moved away from supporting product prices to supporting producer incomes and rural development. From the 1980s onwards, the CAP increasingly paid compensation to farmers who adopted environmentally sensitive forms of farming (Henle et al., 2008; Stolze et al., 2015; Plaikner et al., in prep.). These payments were designed to support farmers to adapt their land management or maintain extensive land management, where these practices would be unprofitable to the farmers, but produce positive externalities desired by society (Engel et al., 2008). These payments are termed Agri-Environmental Measures (AEMs). AEMs may be paid for certain activities, for example for mowing in a particular period of the year (i.e. an action-oriented AEM; Matzdorf and Lorenz, 2010) or, alternatively, in order to achieve a certain goal (e.g. a certain biodiversity or number of species), without the requirement to undertake any particular defined kind of work (result-oriented AEM; Gerowitt et al., 2003). For the European continent, an area that comprises approximately 45% farmland (Eurostat, 2016), these AEMs are important for the preservation of biodiversity (e.g., Bengtsson et al., 2005; Kleijn et al., 2006; Caro et al., 2016). Member states have a high degree of freedom concerning the design and implementation of these measures,

taking into account the diversity of their landscapes, farm structures and agronomic situations. Thus, aims and geographical coverage vary widely between and within countries.

In this context, Flowering Farmland Competitions may have similar aims as some of the AEMs, but are organised mostly independently from them.

The authors of this paper were among the organisers of two Flowering Farmland Competitions in South Tyrol (Italy). Whilst the various AEMs have been at the centre of many scientific works, this was not the case with farmland competitions. Only a few detailed scientific publications have been released (Grabher and Loacker, 2006; Keenleyside and Oppermann, 2009; Plantureux et al., 2011; Oppermann et al., 2012; Oppermann and Liesen, 2015; Magda et al., 2015; Oppermann et al., 2017), and none of those that do mention farmland competitions describe them in a wider context. For these reasons in this article we aim: (1) to give a historical and geographical overview of flowering farmland and flowering meadow competitions in Europe; (2) to analyse such competitions regarding categories, participation, evaluation criteria, costs, organisation, motivation, medial response and side effects; and finally, (3) to highlight the differences between Flowering Farmland competitions and Agri-Environmental Measures and their potential in combination with Agri-Environmental Schemes.

2. Definitions

In the sparse literature on grassland competitions the term Flowering Meadow Competition has been used (Fleury et al., 2015; Magda et al., 2015). We also found the term Best-Meadow-Competition (Matzdorf and Lorenz, 2010). All of these competitions are focused largely on biodiversity. Although the flowering aspect is only one criterion for these kinds of competitions, flowering plants act as a flagship. Therefore, we propose to distinguish between Flowering Meadow Competitions (FMC), Flowering Farmland Competitions (FFLC) and Flowering Farm Competitions (FFC). The term Flowering Meadow Competition is only suitable for hay meadows, pastures and combined grass dominated habitats, whilst the term Flowering Farmland Competition can be used for every kind of land use. Finally, we propose the use of the term Flowering Farm Competition, if the entire farm is the focus of the competition, including the farmstead and/or economical aspects of the entire farm. It is, in contrast to the first two categories, not reduced to a single area of a particular habitat. In this paper, we will henceforward use the proposed terminology.

3. Methods

3.1. General information

Our investigations can be broadly split into two main themes. First of all, we wanted to get insights into the organisation of Flowering Farmland Competitions. The second theme examines motivations for organising FFLCs and their effects. To this end, we conducted an internet search and a survey among FFLC organisers. The internet search concentrated on the first theme, while the survey provided information for both themes. Since the target areas and the size of the individual competitions are very heterogeneous the evaluation of these factors remained rather descriptive, without the use of statistical approaches. Hence, in the results section we provide only a qualitative explanation of the variance in the single fields of interest and do not present a profound statistical analysis.

3.2. Internet search

Our search was similar to that applied in (Scheper et al., 2013) and started on “ISI Web of Science”, checking to see if there were any detailed scientific descriptions of FFLCs. In a second step, we trawled the

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