



The Economies of Balkan and Eastern Europe Countries in the Changed World (EBEEC 2013)

Multifunctional Agriculture: Social and Ecological impacts on the organic farms in Bulgaria

Stela Todorova^{1*} Jordanka Ikova²

¹Assoc. Prof. Dr., University of Agriculture, 4000 Plovdiv, Bulgaria

²Ch. Assistant, University of Agriculture, 4000 Plovdiv, Bulgaria

Abstract

Agriculture remains one of the dominant activities in rural areas all over the European Union, not only in respect of utilization of land but also for its impact on landscapes. Agriculture operates within complex systems and is multifunctional in its nature. The concept of multifunctional agriculture emerged in the last decade of the twentieth century in developed countries where the economic importance of agriculture was negligible, and the community was increasingly concerned with the quality of consumed food and the surrounding environment. Within multifunctional agriculture, the different functions can be categorized into five colour categories. Firstly, the white functions represent a contribution to food security and food safety. Secondly, green functions represent a contribution to nature, the environment and landscape. Water management by farmers and the harnessing of energy on farms are categorized as blue and red functions, respectively. The yellow functions, which have a more social focus. The final category is the social farming belongs to the group of yellow functions. It is one of the fields of multifunctional agriculture. Multifunctional agriculture is a relatively new concept in the CEE countries, especially in Bulgaria. Empirical findings show that the notion of multifunctionality is rarely used in Bulgaria. The government of the country does not implement the concept of multifunctionality in the National Plan for Rural development but use relative concepts such as “economic diversification”, “rural development” or “alternative activities”. The purpose of this paper is to analyze and assess the status of multifunctional agriculture and its yellow function in Bulgaria using two cases of studies and on the basis of farmers’ attitude towards the development of such activities as well as proposals or ways to establish a National Competence Center.

© 2014 The Authors. Published by Elsevier B.V. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and peer-review under responsibility of Kavala Institute of Technology, Department of Accountancy, Greece

Keywords: multifunctional agriculture; organic farms; social farming; farmers, network; National Competence Center.

1. Introduction

Agriculture in Europe is going through a process of change at the economic, social, political, environmental and cultural levels. Agriculture is forced to realign and meet the rapidly changing needs and expectations of European society (Marsden et al. 1993; Van der Ploeg et al. 2000; Van der Ploeg 2003).

Burton and Wilson (2006) capture this process with the productivist (postproductivistmultifunctionality model (the P/PP/MF-model). They show how modern agricultural regimes have moved from “productivism” to “postproductivism” and recently from “productivism” to “multifunctional agricultural regimes”. The concept of multifunctional agriculture within a process of integrated rural development (Marsden 2003) may help to provide a solution for a size able group of farmers. This process may occur along the tracks of “broadening”, “deepening” or “re-grounding”. The concept of “broadening describes the development of new non agricultural activities. Such activities widen the income flows of the farm enterprise. Agri-tourism and nature and landscape management are the most common strategies. Social farming is one type of broadening, that includes:

- health and healing services;
- education and therapy;
- rehabilitation and social fields.

Social farming contributes to the well-being and social inclusion of the disabled people through the production of agricultural products and the fostering of solidarity and mutual assistance. Engaging in these activities, people in trouble re-establish contact with both the world of work and the natural environment, which helps improve their health, facilitates learning, boosts self-esteem and mediates participation in the life of society. The umbrella term for these activities is "social farming". Organic farming offers numerous possibilities for people to participate in the daily life of farms, for example through gardening or animal husbandry. The aim of social farming is to provide a better, more inclusive quality of life.

Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. We use this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas. Researcher Robert K. Yin defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and which multiple sources of evidence are used (Yin, 1984, p. 23).

2. Organic farming as a base for development of social farming activities in Bulgaria

Modern organic farming represents a merging of a number of different streams of thinking Boeringa, 1980. In 1924 the Austrian philosopher Dr. Rudolf Steiner presented an alternative vision of agriculture arising from his spiritual science of anthroposophy (Steiner, 1924). This formed the basis of the development of bio-dynamic agriculture which is now practised in many countries around the world. After the ideas of Steiner many others have contributed to develop the concept of organic farming. The definition of organic farming incorporates the concept of sustainability. The term “sustainability” is used in a wider sense to underline not only the conservation of non renewable resources (soil, energy, minerals) but also the issue of social sustainability(Radev et al., 2012).

Considerable growth occurred in organic farming between 2009–2010 in Bulgaria. The certified land doubled between 2009 and 2010. During this time, the number of operators (producers, processors, exporters, importers) increased substantially. The highest growth was seen for cultivated oilseeds, which increased fourfold. The area for medicinal and aromatic plants and nuts increased by more than 50 percent, and the cereal and vegetable areas doubled.

- 1993: The first organic pilot farm (10 hectares) was established on the farm at the Agrarian University of Plovdiv.

- 1996–2000: First intensive activities in the development of organic farming in Bulgaria, such as training for farmers, publication of literature, and the preparation of the national legislation. The project “Development of organic farming in the Central Balkan Region” was financed by the Swiss Agency for Development and Cooperation (SDC) and implemented by the Research Institute of Organic Agriculture (FiBL) and Bioselena.

- 2000–2004: First steps in organic farming in Bulgaria took place. The establishment of a national organic legislation (Ordinance 22 and Ordinance 35), the first national organic farming festival, the first farm certification; in 2003, Bulgaria participated for the first time at the BioFach Organic Trade Fair.

- 2005–2008: Organic products became available in Bulgarian shops. In 2005, organic foods appeared for the first time in the supermarkets of Sofia; in 2007, organic foods became available for the first time in shops outside Sofia; in 2008, the organic boom began with more than 1500 shops selling organic products; the first TV advertisement for organic food also appeared during this time.

- 2009–2010: Economic crisis and consolidation of the sector: Organic farmers began receiving payments from the government; the association of organic farmers was established; the association of traders of organic food was set up; organic agriculture in Bulgaria began developing into a real economic sector.

Table 1: Development of the number of control bodies and operators, organic agricultural land & wild collection area, and beehives in Bulgaria 2002-2010

2003	2004	2005	2006	2007	2008	2009	2010				
Control bodies				2	2	2	2	6	10	10	10
Certified operators				29	51	111	181	339	285	467	820
Certified organic land (hectares)				650	1113	2432	3061	11809	16662	12320	25648
Areas for collection of wild plants (hectares)				-	-	-	110143	397835	397835	401426	546195
Certified animals				-	-	-	1514	3101	4565	8939	9952
Certified beehives				-	-	-	708	35747	44861	41089	46429

Sources: Data for 2002-2005: Bioselena. Data for 2006-2010: Ministry of Agriculture and Food of Bulgaria

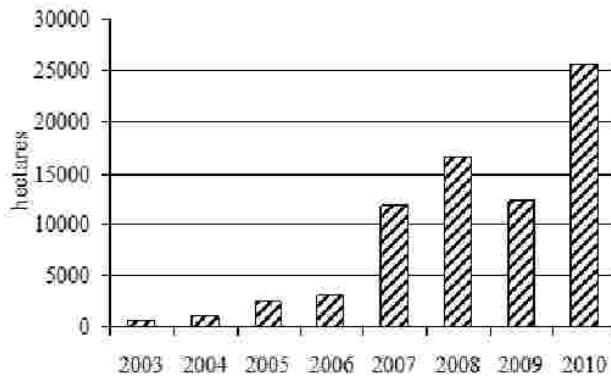


Fig. 1. Development of organic agricultural land in Bulgaria 2003-2010.

At the end of 2010, 25 648 hectares were farmed organically, constituting 0.47 percent of the total usable farmland in Bulgaria. In addition, there are large areas certified for the collection of wild fruit, herbs and mushrooms. Organic animal breeding was still underdeveloped in 2010, with only a small number of certified farms and animals. Organic agriculture had 46429 beehives under organic management at the end of 2010.

Organic farming and integrated farming represent real opportunities on several levels, contributing to rural economies. The environmental advantages of these farming systems can bring significant benefits for the economy as well as to help for social inclusion of disabled or mentally handicapped people, long-term unemployed persons, drug addicts or socially disadvantaged people, children and juveniles with behavioral and learning difficulties. In this way there are opportunities to establish farms which integrated old people, schoolchildren or nursery school children.

3. The concept of social farming

Social Farming (also known as ‘Green Care’/‘Care Farming’) is based on the recognition that working with animals, plants, soil and being in contact with nature has special value for peoples’ wellbeing. Across Europe, it is being utilised as a service option for people with mental health difficulties, people with disabilities (intellectual, physical and sensory), drug/alcohol rehabilitation services, prisoner rehabilitation services, services for older people, therapeutic activities for children etc (Aideen McGloin et al., 2013).

Social Farming is both a new and a traditional concept. It originates from the traditional rural self-help systems that were well-established in rural areas before modernization of agriculture and the rise of the public welfare system. Back in the 50s of the twentieth century in Europe a discussion began on the future of agriculture and building a community between producers and consumers. Based on the new understanding of community, the creating of a network of farms leads to:

- cooperation between farms - that allows the allocation of the production and then the production is shared between them;
- ensuring the purchase of products by consumers.

Community between producers and consumers is based on trust, support and equality. Further on quite naturally one more thing is added:

- including socio-therapy – the community of manufacturers accept people with any disabilities or mental disorders, who worked according to their abilities.

Residents of the farm are usually: 2-4 farming families who permanently live there. Each community involves between 5 and 15 disabled people (it depends on the farm capacity), and each of them has certain obligations. Meanwhile social workers assist people in their daily lives. The social workers usually do not live on the farm. They travel from the nearest village, but there are exceptions. What does social farming do? First, it shows that a person with health problems with relationship to the land could improve the conditions of his live, i.e. there is a direct healing effect. Second – it illustrates that being in a community people could contribute to that effect with their daily presence and labor. Third – it builds up a strong and cohesive community which can be self-supporting, changing the fate of everyone, regardless of their health problems. Speaking of such a community, we have in mind the consumers, as well.

How are disabled people involved in such a farm: some of them, in case the disability permits, do field work or take care of animals. Others engage themselves in house work - cleaning, cooking, growing flowers or preparing of winter supplies (jam, pickles, etc.) for the consumers of community. Nobody is forced to do something he dislikes, or something out of his capabilities. The help of social workers is of great importance, because they know very well the difficulties and strengths of each person involved.

The identification of social farming as a concept moves through a slow process of collective knowledge. This should involve different actors playing an active role in the field as project holders; health/social care operators, farmers, institutional staff and politicians. According to the local/country situation the process could immediately generate a consensus at national as well as local level of gradually enlarge the range of people involved. The process of organisation of local networks should be facilitated. A network is a place where people can convene, exchange experiences and share information and knowledge, as well as attract new actors. There are a lot of differences between the countries depending on their history, approaches and focuses. There are three approaches:

- an institutional approach, with the prevalence of public/health institutions (Germany, France, Ireland and Slovenia);
- a private approach based on therapeutic farms (Netherlands, Flanders in Belgium);
- a mixed approach based on social cooperatives and private farms (Italy).

Their positioning is also different: in Italy and France, social farming is closer to the social and healthcare sector; in the Netherlands it is closer to the health system; in Flanders it is nearer to agriculture, and in Germany, Great Britain, Ireland and Slovenia it lies somewhere between the social/health and health sectors. Financing patterns differ from country to country:

- public projects and charity based on voluntary associations (Italy and France) and social cooperatives (Italy);

- public funds (health/care/education sectors) directed to public bodies (Germany, Ireland and Slovenia), farms (Netherlands) and social cooperatives (Italy);
- rural development policies to compensate farms for social farming activities (Flanders) or to support social farm start-ups under Axis 3 in the 2007-2013 programming period (Italy);
- direct access to food markets for ethical products and direct selling (France and Italy).

There is no single definition of social farming. Social farming includes a broad range of different practices, so it is not easy to be defined. However, two common elements are always present: a) it is practised on farms; b) it is targeted at disabled people. Generally speaking, three areas of social farming can be distinguished:

- a) rehabilitation and therapeutic activities^{*}
- b) work inclusion and social integration[†]
- c) education activities[‡].

There is general consensus that activities under “a” and “b” are part of social farming, but the same is not true of the education activities under “c”. Some researchers see social farming solely in terms of rehabilitation of people in difficulty, while others consider it an element of a new well-being and regard social farming as a service provider in rural areas. The integration of handicapped people in agriculture is a combination of social work and farming which aims to make the multifunctional potential of agriculture demanded by society and politics. Both agriculture and social work can profit from cooperation (van Elsen, 2006).

We describe a study of the potential of two farms for integration of physically and mentally disabled people as well as students and school children.

3.1. Case One: Wild Farm

Wild Farm is situated in the village of Gorno Pole, Madzarovo municipality in the Eastern Rhodope mountains. Wild Farm has been the first and the only organic certified farm by now for breeding rare breeds of cattle – Bulgarian Gray Cattle and Rhodopean Shorthorn Cattle. This farm is the largest in Bulgaria for breeding the Rhodope shorthorn cattle. The local breeds for meat are mostly suited to organic breeding. The Rhodope Mountains is the home of the first farm certified for organic meat.

630 cattle, 50 beehives, 30 Karakachan sheep, 10 Karakachan dogs as well as 4 horses for riding have been bred in Wild Farm so far. There is a Guest house with six guest rooms as well. The farm has an organic farming certification for veal, honey and vegetables produced from 0,6 ha own garden as well as pastures where the animals could graze. The farm produces organic beef meat, domestic fruits and vegetables, butter, milk, cheese, lamb, chickens, different local delicacies.

The Bulgarian meat market is quite specific. It is almost impossible to find authentic veal on it. There is plenty of beef for sale but veal is almost unavailable. Dairy cattle breeding was the legacy of communism by 1989. It allowed the country to export celebrated yogurt and white feta cheese that used to bring good revenues. Meat cattle breeding was neglected.

Table 2: Main activities, incomes and costs of the “Wild Farm”

Main activities	Number	Incomes per	Costs per	Payments by
year	in EUR	year	year	year

* Therapy/rehabilitation includes therapeutic activities for people with physical disabilities or psychiatric problems conducted on a farm as horticultural therapy, pet therapy, horse therapy, donkey therapy and so on. Other rehabilitation activities – such as housing and social integration for the elderly, drug/alcohol addicts, victims of trauma (children, abused individuals etc.), ex-prisoners and people recovering from illness – are also included if they take place on a farm.

† Work inclusion comprises activities for work placement and training, especially: inclusion in the job market of physically and mentally disabled people who participate in agricultural cycles according to their abilities; farming activities in prisons as an opportunity for prisoners to work and train in new job skills; new farms managed by disabled people (e.g. social cooperatives).

‡ Education and recreation comprises activities for students with learning difficulties or social adaptation problems; learning activities (educational farms), hands-on learning for students about rural livelihoods and agricultural cycles.

in EUR				
Cattle breeding	630	-		126 000
Cows	380	-		
Calves	250	57 050		
Beehives with bees	50	4 898		
Karakachansheeps	30	10 714		
Karakachan dogs	10	-		
Horses for riding	4	-		
Vegetable gardening	0,6 ha	1 531		
Organic pasture	500 ha	-		55 000
Ecotourism	6 quest rooms	7 755		
Social activities	-	-		
Total	-	81 948	57364	181 000

*Measure 214 relates to agro-environment payments.

Sub-measures: Organic pasture and Traditional livestock breeding scheme.

Source: interview with farmer and own calculations

Wild Farm sells about 250 calves per year with average weight of 140 kg. The price per 1 kg live weight is 3,20 BGN or 1,63 EUR. The main incomes come from Measure 214 and sub-measures for Organic pastures and Traditional livestock breeding scheme (rare breeds). Some of the incomes farmers invest in purchase of land. For the first time they received payments under this measure in 2012 for a two year period (2011-2012). Blagovesta (Betty) and Nikolay Vassilevs have been owners of the only farm certified for organic meat in Bulgaria so far. "We can rightfully be recognized as guardians of this local breed. It is threatened with extinction resulting from wrongful policies of the past. By laying the emphasis on the Bulgarian Black Pied Cattle for dairy production in the first place, we have neglected some traditional breeds and they have now become scarce. The new black pied cattle live no longer than 3 to 4 years. To obtain a litre of milk around 450 L of blood should be pumped through the heart of the cattle. You can imagine what that means. That is why they have so short lives. By contrast, the shorthorn cattle we rear live up to 28 years, believe it or not!", Betty specifies.

Local traditional breeds are the fittest for economic organic farming. For feeding animals they use not concentrated fodder. These breeds need no antibiotics as they boast strong immunity. In Wild Farm cattle are bred by grazing freely throughout the year – just like in ancient times. These cattle are very clever. They gather their offspring in small groups and three or four cows take care of them throughout the day – just like in nursery school. In this way they take turns. In case of wolf attacks, cows and bulls form a line of resistance and make sure they protect the calves. For protection of cattle from wolf attacks, the Vassilevs rear a dozen dogs from the local breed of Karakachan. For centuries Karakachan dogs have tackled wolf attacks in the best possible way.

It is interesting to find out why Wild Farm is the only farm in Bulgaria certified for production of organic meat. The problems are many and easily slip into a vicious circle. In the first place, as a result of the controversial agrarian reform in post-communist Bulgaria, most cattle farmers do not own land and they could not create bio certified pastures. To certify a pasture they should have either property or land leased by them for at least five years. Now the government has been trying to encourage local authority to lease out mostly uncultivated lands to farmers. Another problem is the lack of slaughterhouses for certified organic meat. "So far there have been no certified farms for organic meat, so slaughterhouses have not been keen to invest in certificates as well as building special facilities for organic raw materials", Nikolay Vasilev, Blagovesta's husband explains. Thirdly, there is no consistent central government policy to encourage organic animal farming. "Cattle breeders get nothing from the European financing earmarked for agriculture", Betty comments. This might be taken into consideration in the next EU program, notably 2014-2020. In the meantime, Wild Farm has option to export its animals abroad, in countries that have slaughterhouses for organic meat. The best market is Italy where fresh organic meat is mainly delivered to kindergartens and schools. The same is true for Albania.

The basic activities, which find application in the farm, include animal interaction (mainly with horses, cows and sheep) for children, youngsters and adults with different health problems, as well as participation in agricultural

activities of adults, having problems with social behavior and adaptation. Demonstration 1st : breeding animals (feeding, cleaning, milking, caring lambs); 2nd demonstration: vegetables gardening (sowing, cultivating, harvesting).

The farm is visited by students for their practical training. The owners of the farm contribute to the professional growth of students. Wild Farm offers opportunities for people to participate in the varied rhythms of the day and the year, either in growing vegetables or keeping animals. Prevention of illness, social inclusion, better quality of life are features of social agriculture.

3.2. Case Two: Demonstration on the organic farm at the Agrarian University in Plovdiv (AU).

The Demonstrational organic farm is situated on area of 10 ha in the suburbs of Plovdiv and it is managed by the Agroecological center – a part of the structure of the AU-Plovdiv. This is the first functional agricultural – stock-breeding farm in the country, established in 1995 by the methods of organic agriculture. On 8,5 ha cultivated land were organized organic vegetable-growing with 6 separate fields for crop-rotation; forage production (wheat, corn, legume mixtures, lucerne, growing different fruit varieties (peaches, prunes, cherries, etc.) and vines. A necessary organic balance has been achieved which allows to use only organic methods for plant protection against pests. The Demonstrational farm was certified for organic production in 2007 from “Balkan Biocert” Ltd, in accordance with EU requirements and Regulation 22 of the Ministry of Agriculture and Food. The farm is the main basis for practical training of farmers and specialists – consultants, local administrators from municipalities and state authorities, students studying « Agroecology » and « Plant protection » at AU – Plovdiv and developing graduation works and dissertations.

The farm is in a comparatively good condition, but it needs additional support, some investments and certain independency. Because of the small size the farm cannot provide its maintenance only by selling organic vegetables and in the same time to function as a training base. The farm is envisaged for demonstrational activities for children.

An initial idea for organizing trainings, visits and practical experiences for children, farmers and students was very ambitious and it required different type approaches, different pedagogical skills and different educational materials. Together with the partners from the Metropolitan center for work with children they decided to direct their efforts only to one target group – the children. The reasons for this decision were:

First - the experience of the partners from the Metropolitan center for work with children;

Second - an innovation part – this would be the first Bulgarian farm to offer trainings for children;

Active vegetation in the farm continues 7 months – from 1st of April to 31st of October. There are opportunities to implement demonstrations on the field – starting with trimming fruit-trees, soil preparation, sowing vegetables, harvesting grain crops, hay, vegetables, fruits and grapes. During this period all children groups visit farm fields, some of them participate with suitable equipment in main agricultural activities – planting, hoeing and crop harvesting. Some groups will also have an opportunity to plant crops in their next visit to analyze how their crops are growing. Field work and visits are supplement with suitable materials – colored books with pictures of different vegetables, interesting facts about vegetables, etc.

In the period November – March, when there is no vegetation, demonstrational activities are directed to animals breeding and processing products in the farm. Demonstrations depend on the season.

Demonstrational activities outdoors:

- 1st demonstration: grains (wheat, rye, barley) – sowing, cultivating, fertilizing, harvesting, crop storing
- 2nd demonstration: vegetables (sowing, cultivating, harvesting)
- 3rd demonstration: fruits – fruit-trees and vines (planting, cultivating, fertilizing, crops harvesting)
- 4th demonstration: breeding animals (feeding, cleaning, milking, caring lambs)

Food processing in the farm is the most attractive part of the training. They have opportunities to see cheese, bread production and milking. For demonstrational activities a training hall with special place for food processing is established. This place is equipped for processing the following products:

1st demonstration: grain crops (wheat, rye) – milling flour; kneading and baking bread in the wood oven;

2nd demonstration: fruits – producing jams and nectars;

3rd demonstration: milk – pasteurization; production of cheese, cream and butter;

Demonstrations of different food processing take turns so the children have opportunities to watch the whole process as well as to process some food themselves. For example: to produce butter from cream, to knead small bread, to produce jam, etc.

All these demonstrations and practical trainings are new in Bulgaria. For this purpose they rely their Norwegian partner who helps them with training animators, a farm's manager and training programs and materials.

Conclusion: Opportunities for farm work with disabled people and children (social farm activities) are available.

Advantages: the farms provide plenty of practical tasks; by including disabled people, students and children farm are less dependent on production; work on the farm, including disabled people and children, promotes development of social farming; children are the future consumers of organic products and investment in their training is more perspective.

Disadvantages: financial issues; shortage of good experience; shortage of professional staff; capabilities of disabled people.

The investigation of these two cases show that there is great potential for inclusion of children and disabled people in the work on farms and the first steps have been achieved. In fact, this potential in Bulgaria is limited by multiple factors; the most important factor is that the concept of social farming is not well-known in the country and there is no common, purposeful and consistent policy to popularize and develop this type of activities. The examples existing in the practice are realized as a private initiative on a free principle and with financial support by European projects without any assistance and coordination from the government.

The presented information warrants a general conclusion that the development of social farming in Bulgaria is in an initial phase. The main problems before its development have their roots in the lack of proper informal and formal institutional environment. On one hand the society is not sufficiently acquainted with the ideas and practices of social farming, on the other hand – the state, in all its governing organs, does not create any appropriate conditions for stimulating and popularizing of these types of activities.

4. Conclusion

The stage of organic farming in Bulgaria offers numerous possibilities for people to participate in the daily routine on a farm. A potential for development of social farming in the country exists due to the suitable natural-climatic conditions and the existing traditions in the agricultural output. Social farming helps people with specific needs solve their problems and start developing this kind of activities. The realization of this potential requires coordinated and purposeful work from the representatives of the state authority, scientists and specialists, who have to popularize the idea, reveal its perspectives and turn the public interest to the desired direction.

We can conclude that there is a base for development of social farming in Bulgaria because a network between organic farmers exists. Many associations and organizations for organic farming are established, which provide a base for social farm activities. In our network we include the agricultural, social and educational sectors. Finally, our idea is to establish a National Competence Centre for training in multifunctional agriculture. Through therapy, work and social inclusion or education, social farming provides high-value public services and contributes to sustainable development. Moreover, social farming, on the base of diversification of activities it generates can have a sizeable impact on local development.

However, there is no regulatory framework for it, either at EU level or national. Only certain countries (France, Italy and the Netherlands) have put sector regulations in place, both at national or regional level. The development of social farming across Europe requires a conducive environment and fruitful cooperation between different policy areas and administrations (health/social/farming/labor) at European, national, regional and local levels.

References

- Boeringa, R., 1980. Alternative methods of agriculture. Agriculture and Environment special issue 5, Elsevier, Amsterdam.
- Burton, R. and G. Wilson, 2006. Injecting social psychology theory into conceptualization of agricultural agency: Towards a post-productivist farmer self-identity? *Journal of Rural Studies*, 22(1), pp. 95-115
- Marsden, T. 2003. The condition of rural sustainability? Assen, Royal van Corcum, Netherlands.
- McGloin, A. et al. 2013. Social Farming in Ireland-policy networks as a tool for multi-disciplinary collaboration, University College Dublin, www.conference.campusengage.ie/papers/.../159
- Radev, T., P. Borisov and D. Nikolov, 2012. Policy intervention effects on landscape management in Bulgaria. 132nd Seminar of the EAAE (European Association of Agricultural Economists), "Is transition in European agriculture really over?", Skopje.
- Steiner, R., 1924. Agriculture: a course of eight lectures, Rudolf Steiner Press, BioDynamic Agricultural Association, London.
- Van der Ploeg J. D. et al, 2003. The virtual farmers. Assen, Royal van Corcum, Netherlands.
- Van der Ploeg J. D. et al, 2000. Rural development: from practices and policies towards theory. *Sociologia Ruralis*, 40(4), pp. 391-408.
- vanElsen, T., 2006. Social Farming – Structures of social integration in Germany, *FiBL e.V.*, 4./5., Brussels.
- Yin, R. K., 1984. Case study research: Design and methods. Newbury Park, CA: Sage.

Instructions to Authors for Word template

1. Locking of Copyright:

The copyright line is locked in the Procedia templates. The author may not edit the same and making it editable only PSMs. If there are any copyright changes required, you are requested to contact Journal Manager through Guest Editors. For editable the below mentioned steps must be followed:

Steps:

- Click on copyright statement
- Click on Properties in Developer tab
- Remove the checks from Content control cannot be deleted and Contents cannot be edited under Locking and then Press ok

2. Docm format:

We have added macros in the Word templates for the below mentioned features. And since macros are not supported in doc and docx format we created the templates of all Procedia titles in .docm format.

- Removal of all highlights
- Accept track change
- Locking of Rules

If .docm format needs to convert in docx format then the following steps must be performed:

Steps:

- Press Alt F11
- Click on Project (JID_Template)
- Enter "thomson" in Project Password
- Click on Microsoft Word Objects
- Click on ThisDocument under Microsoft Word Objects
- Delete all macros under General
- After deletion close the Code and Project (JID_Template) windows
- From File menu click on save as type .docx option

3. Comments added in the margin in Word master templates:

There are instances where author raising queries on what to do with key information lines such as “volume, page numbers”, “Conference title per issue” and “Copyright entity, year, copyright company Elsevier Ltd./B.V./Inc. and Organizer Name” in the copyright statement and for these concerns the comments have been inserted in the Word template to guide Author/JM about the information to be inserted by them in these fields.

Comments removal from Print: In Word 2007 and 2010 the comments present in a document get printed by default. If the authors do not want to get the comments appearing in print, the authors must remove the comments from the Word template before printing by changing the Print markup setting of word using the following steps:

Steps:

- Click the File tab
- Click Print
- Under Settings, click the arrow next to Print All Pages
- Click Print Markup to clear the check mark

Instructions to Authors pages to be excluded from Print:

- Click the File tab
- Click Print
- Under Setting, Type page numbers and/or page ranges separated by commas counting from the start of the document or the section. For example, type 1, 3, 1-5

4. PDF creation from Word master template:

While creating PDF from Word template the below given step should be followed to avoid difference in trim size and margin of the Word template and the PDF created.

Steps in Word 2007 and 2010:

- Click the File tab
- Click Save As
- Under Save as type, click the arrow next to PDF (*.pdf)
- Click Save

In Word 2003 the PDF can be created by using “Convert to Adobe PDF” symbol in tool bar or the required paper size can be adjusted in the Adobe PDF settings given in the Properties tab on the Print option.

5. Reference styles used in Procedia master templates:

Title	Reference style
AASPRO	2 Harvard
AASRI Procedia	3 Vancouver Numbered
APCBEE Procedia	3 Vancouver Numbered
EGYPRO	3 Vancouver Numbered
FINE	2 Harvard
IERI Procedia	3 Vancouver Numbered
MSPRO	2 Harvard
PHPRO	2 Harvard
PIUTAM	3a Embellished Vancouver
Procedia CIRP	3 Vancouver Numbered
PROCHE	3a Embellished Vancouver
PROCS	3a Embellished Vancouver
PROENG	1 Numbered
PROENV	3a Embellished Vancouver
PROEPS	3a Embellished Vancouver
PROFOO	3a Embellished Vancouver
PROTCY	3 Vancouver Numbered
PROVAC	3a Embellished Vancouver
SBSPRO	5 APA
SEPRO	3a Embellished Vancouver
AQPRO	2 Harvard
UMKPRO	5 APA