IMPLICATIONS OF LEGAL AND POLICY REGULATIONS ON RURAL DEVELOPMENT: THE CHALLENGE OF SILVOARABLE AGROFORESTRY IN EUROPE

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Introduction

Silvoarable agroforestry (SAF) comprises widely spaced trees intercropped with arable crops. Most research on agroforestry systems was concentrated in the tropics until the early 90s (Van Noordwijk et al, 2003), but recent findings (Burgess et al. 2003, Dupraz, 1994, 2003, Gillespie et al. 2000, Zhu, 1991) indicate that modern temperate silvoarable production systems are very efficient in terms of resource use, and can be compatible with modern machinery. Dupraz and Newman (1997) suggested that agroforestry could be an innovative agricultural production system that will be both environment-friendly and economically profitable for Europe. Growing high quality trees in association with arable crops in European fields may improve the sustainability of farming systems, diversify farmers incomes, provide new products to the wood industry, and create novel landscapes of high value (SAFE, 2004). However, during the late twentieth century, the advantages of agroforestry systems have been overlooked. Even traditional silvoarable landscapes, whose benefits are widely recognised, have received little attention from policy makers and research organisations (Manchon et al, 2002). Across Europe the integration of trees and arable agriculture is currently unattractive to farmers, simply because the available grant or subsidy schemes are designed for forestry or agriculture, and don't permit agroforestry. In some countries, agroforestry systems can actually be declared illegal, because they are a category, which is not recognised for taxation purposes. A mixed or combined status of agroforestry plots is currently not available, neither at the European level nor at the National level preventing both forest and agricultural grant policies to be applied to agroforestry systems.

Silvoarable agroforestry in the European Union so far

In recent years, the European Union has introduced a series of measures to promote the integration of trees within existing farm businesses. The ‘Silvoarable Agroforestry for Europe’ (SAFE) project (http://www.montpellier.inra.fr/safe/) is one example. The SAFE project will provide up to date appraisals of the productivity of tree-crop mixtures, based on extant experiments and progress in modelling of tree-crop interactions at the field scale (Dupraz et al, 2004). It will develop a computer model to compare the economics of silvoarable agroforestry with arable and forestry systems, so that the financial implications of silvoarable agroforestry for European farmers can be examined (Graves et al, 2004). A major finding so far is that the productivity of such silvoarable systems, as measured by their Land Equivalent Ratio (Willey and Rao, 1983, adapted to agroforestry systems by Dupraz, 1998), is very attractive: silvoarable systems with winter cereals and deciduous tree species would be above 1.3, which mean that the overall biophysical productivity of agroforestry exceeds those of separated farm and forest systems by 30% (Dupraz et al, 2004).

The environmental aspects of silvoarable systems in Europe are only starting to be explored. Such impacts may further favour the adoption of SAF, if their financial value is recognised
through ‘shadow’ payments to farmers for environmental services. However, even if silvoarable systems are more productive than monocultures they will not be adopted by farmers if subsidy schemes distort totally the ‘level playing field’. This is the case in most European countries so far.

The French case
Agroforestry has been permitted since 2002 as a standard practice for French landowners and farmers. Grants are available for planting the trees, and the crop payments are available for intercrops, on a “cropped area basis”. The tree-planting grant is the same as for a forest plantation (a percentage of the total cost of planting and tending the trees during the first 3 years; the usual rate is 40%). Crops planted between the trees are eligible for CAP payments, but it is not possible to get these on a silvoarable plot obtained from clearing a forest, or planted on a parcel that was not eligible for CAP payments prior to tree planting. In addition, a farmer that manages an agroforestry plot may apply to a specific agri-environmental scheme (second pillar of the CAP). The reason for this scheme is to promote agroforestry by compensating additional costs compared to a standard agriculture plot. The measure is contracted on a 5-year term, and two options are available: one for creating a new agroforestry and one for tending an existing silvoarable plot. This measure was approved by the European Union. However, the current reform of the CAP will induce large changes to this regulation. Will agroforestry still be allowed to farmers after January 1st 2005?

Agroforestry and the new European CAP
A crucial debate for the future of agroforestry in Europe is now on. Recent European regulations define the conditions for the Single Payment Scheme (SPS) that will be in force in the European Union as of January 1st 2005. Two possibilities are explored: either AF could be considered as a normal agricultural practice, and AF plots could be fully included in the SPS (including the tree area); or AF plots could be considered as a mixture of agriculture and forestry, and only the agricultural part would be included in the SPS. A third possibility would be that AF is not included in the SPS at all, which would mean that AF has no future in Europe for the next decades.

Regulation 1782-2003 includes a provision that areas of ‘woodland’ should be excluded from the area of the farm eligible for SPS. Depending on the definition of ‘woodlands’, this may incite farmers to remove trees from farmed landscapes, which would not only induce landscape and environmental damage, but also prevent farmers from investing in new agroforestry systems. A recent Guidance Document (AGRI/2254/2003) recommends that the threshold of ‘woodland’ is 50 stems per ha, which would classify most agroforestry plots as woodlands, and exclude them from the SPS. This would prevent any agroforestry system with scattered trees from existing in Europe. However, Article 5 of Regulation 2419/2001 indicates that: ‘a parcel that both contains trees and is used for crop production shall be considered an agricultural parcel provided that the production envisaged can be carried out in a similar way as on parcels without trees in the same area’. This is perfectly suited for agroforestry: in a carefully designed and managed agroforestry system, crop production can effectively be carried out in good conditions. Fortunately, this wording was retained in the most recent regulation (R796-2004, Article 8), which details how the SPS will be enforced.

If agroforestry is to be recognized as an accepted land use, a clear definition of an agroforestry plot should now be introduced. An informal working party of the SAFE project is currently suggesting that agroforestry systems could be defined by a tree plantation design and management scheme that allow significant crop or grass production (at least 50% of the reference yield without trees), and with a tree density of less than 200 trees/ha (only trees with a diameter at breast height above 15 cm are included). This suggestion is conflicting with the
50 trees/ha threshold of AGRI/2254/03. But the Guidance Document also states “the Commission services take the view that wood within this meaning should be interpreted as meaning areas within an agricultural parcel with tree-cover (including bushes etc.) preventing growth of vegetative under-storey suitable for grazing.” If this approach is extended to silvoarable systems, agroforestry is clearly not ‘woodland’.

Finally, agroforestry could now be recognized as a distinct land use system, and all European countries should be allowed to define a niche for agroforestry in their own taxation system. This would probably favour the mixed activity status of the plot, as land taxes paid on woodland or agricultural land are often very different. The Integrated Control System (IACS) and the Land Parcel Identification System (LPIS) should be designed to allow agroforestry systems to operate.

**Conclusion**

There is a need for a special 'agroforestry status' to be designed for the countries where tax policy and grant availability is dictated by land-use classes. Policies for agriculture and forestry grants should recognise that both silvoarable and silvopastoral systems are 'legal' forms of land-use which should be permitted and placed on a 'level playing-field' with conventional agriculture or forestry. From these elements, we can conclude that the adoption of a very new system of land use like modern agroforestry can simply be impossible if the rules for agriculture and forestry support ignore intercrops or low density tree plantations. This is true even if their productivity or environmental advantages are demonstrated and significant. In a world were subsidies may represent half the revenue of the farmer, agroforestry has no future if the crops are not included in the subsidy schemes, even if agroforestry is an excellent system for productivity and environmental benefits. On the contrary, in a world where the crops get no subsidy, agroforestry would be a very attractive system to most farmers. This is a clear example of legal and policy regulations exercising an unforeseen constraint on the implementation of innovative options for rural development and landscape enhancement.

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