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The effect of Agenda 2000 on building in rural areas

In Agenda 2000 the most different targets have been presented for agriculture and the countryside. Thus world-wide competitiveness in agriculture is to be strengthened. At the same time, the environment, animal welfare, the income development in agricultural enterprises, as well as in the countryside, should be encouraged. Building supports these sorts of targets in that economically-competitive agricultural buildings can be erected which are simultaneously environmentally-friendly and suitable for animal welfare demands. Suitable work has also been done toward the re-use of redundant agricultural buildings through appropriate planning alternatives and decision aids.

Agenda 2000 aims for a strengthening of competitiveness for EU agriculture on the world market and a reduction in support prices over a period of seven years in order to be in a position to meet the future challenges. To help here, support sums totalling around 4,300 million Euro per year is to made available for rural development support. The support measures taken up until now will be to a large extent reduced. With this, the necessity rises be all the more careful over investment in buildings; this applies also to investments in re-use of buildings. This is because it is only after closer inspection that one sees possibilities and their results within the Agenda 2000 for agricultural building – building in rural areas [1]. "Through the decision of the Agricultural Council the basis for a future-oriented, integrated support of rural areas has been created which presents a multi-functional role for agriculture and forestry as the middle point of rural development but also includes certain non-agricultural activities."

Agricultural building

Within the target of making agricultural more competitive it is more important than ever to offer cost-effective buildings for optimised production conditions. Farm buildings for livestock require on average building costs (building annual costs) of between 5 and 20%. Orientation values in such cases are: dairy cows 20%; breeding sows 12%; feeding pigs 8% and laying hens 5%. The amount of annual building costs is strongly influenced by the extent of the first instalment investment – the building costs – in that depreciation and interest from this make up about 75%. For this reason it is necessary to reduce buildings costs to only the absolutely necessary. This makes it possible to realise as low as possible building costs on an individual farm level for buildings under production-technological, animal welfare and environmental criteria. Individual actions through the part-area of construction whereby building can be achieved more cost-effectively than normal, are usually not enough. The strategy for decreases in building costs must thus begin with the planning process, the tendering, and the cost comparisons – and go over into an overall optimised building procedure. Rational building systems such as in industry and domestic housing can be applied, and rationalisation effects passed on to the farmers.

Importance of re-using redundant farm buildings and the solutions required

Many farms in Germany are going out of production. According to [2] in the former federal republic from 1989 to 1999 the number of farms reduced by 29.4%. At the same time this means that farm workers are loosing their jobs and these often leave the rural area. Between 1980 and 1999 this led to land worker numbers being reduced by 36.9%. This release of resources can forcibly lead to a sustainable alteration in village structure and/or also lead to a retreat from the land where no alternative jobs are on hand. Thus, included in Agenda 2000 as envisaged support for the adjustment and de-

Fig. 1: Pension-horse-keeping could be one solution for a uncomplicated further use of former typical farm buildings

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Fig. 2: Reconstructed former farm buildings to use as residential purposes

velopment of rural areas are, in addition to classical measures, also the support of tourism and handwork. This is meant to offer a substantial service toward helping during the change in agricultural infrastructure – help aimed at improving the attractivity of the countryside as a living and working area, as well as the creation of new alternative job possibilities. This will encourage, through renovation, practical and financial-attractive utilisation of redundant farm buildings.

The use of old buildings in the context of resource-saving, and the associated use of already-installed infrastructure such as streets, sewage systems, water supply and electricity are important points for sustainable operation. This aspect can offer a very interesting opportunity for farms that are partly stopping agricultural operations, or gradually stepping out of agricultural production completely. The new utilisation should help, with regard to the change in structure of the villages and agriculture, especially when these buildings are foreseen for livestock housing, lead to a high acceptance in a neighbourhood which is not (or no longer) characterised by classical agriculture. In some cases the keeping of horses on a pension basis could be a example of this (*fig. 1*). Re-utilisation as a domestic building is often a variant of further usage but this is linked with high investment. Additionally, such an alteration in use requires a very careful and specialised-based judgement of the building substance, including a thorough planning and cost investigation. When, however, the framework conditions are right (e.g. a good road connection to places of work, schools, shops) the attractivity of living in villages which have grown over the years can be hard to beat (*fig. 2*).

In order to utilise the chances that are offered for the rural areas in Agenda 2000, required from the building planning point of view for negotiation over the re-utilisation of redundant farm buildings is the following necessary information: knowledge over the number of redundant buildings and their condition, research into alternative uses from a constructional-technological aspect, investigation of costs for different re-utilisation variants, estimation of associated job places created.

Solutions for rural building

Building sites are already planned on the peripheries of many villages and this can lead to possible building permission problems in the establishment of farm buildings in such areas. Such a move incurs many rules and regulations and/or the building permission process lasts longer. This last factor is often presented as a disadvantage when establishing agricultural buildings in Germany compared with neighbouring countries. However, in many cases there may be other demands made on farmer/builders, as well as the passing-on of rationalisation systems in building techniques, which are main reasons for lower absolute building costs in a few neighbouring countries. Therefore it is all the more important to ensure accurate statements over the expected building costs. The values investigated at the Institute for Farm Technology and Building Research normally concern average values for a good standard. These data represent normal production costs in Germany (e.g. without extras such as foundation problems, increased snow loadings). Regional and business variations of from 10 to 20% are not rare.

In layer buildings, e.g., the building costs for a new house run to between 50 and 162 DM per bird place [3]. According to own investigations, battery housing, depending in unit size, is more than 20% cheaper than aviary and on-floor systems with outside roofed scratching area and almost 40% cheaper than on-floor systems with manure belt dung removal. From this it can be deduced that help is needed with a legal basis EU-wide for establishing buildings for the latter systems.

As far as feeding pigs, the Danish and Dutch enterprises have been more competitive in this sector than their German opposite numbers over the previous years through larger individual herds. Between ridged buildings for 480 feeding pigs with 120 head compartments and pens for 10 animals as well as units for 1000 pigs in larger compartments and pens with 40 head, the cost difference is more than 30%. According to recent investigations [4] the investment requirement per feeding place with closed buildings, fully-slatted flooring and dry feeding is between 750 DM (2,000 feeding pig places) and 830 DM (1,000 feeding pig places). This refers to massive-construction buildings with interior wall facings of large-scale lime-sandstone panel elements, insulation, and exterior cladding of profile sheeting with plastic lining. Savings are possible here when compared with conventional building design and two-layer walls with tile facings.

Summary

Offered within Agenda 2000 there is in total the chance of a sustainable development of agriculture and rural areas as well as an equality of opportunity. This involves high demands for planning new farm buildings as well as for existing buildings that are to be re-utilised. If one tries in these cases to at least use well the already-available information on how to proceed and on information sources, the required target can be reached in a step-by-step process. With regard to the realisation of livestock and food controls as well as the realisation of improved hygiene requirements, modern procedural techniques even now offer possibilities for the farmer to comply with these. And at the same time, such chances for the realisation of low-emission farm buildings and the re-utilisation of former farm buildings for specific purposes allow rural areas to be made more attractive.

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