Agricultural buildings: from blending into the landscape to enhancing the landscape

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It was some forty years ago that concerns about the landscape first became a factor in the design of agricultural buildings. In the years since, production facilities have increased significantly in size, while at the same time urbanization has spread into rural areas. A number of experimental initiatives have once again brought this issue to the fore in recent years. New tools have been developed to foster dialogue among stakeholders and improve the architecture of agricultural buildings. These tools go beyond mere integration into the landscape by offering a variety of ways to respond to the greater concentration of farm operations and the expectations of surrounding residents in terms of quality of life.

Our image of contemporary agriculture is influenced by the thousands of farm buildings constructed each year. These facilities are all the more notable for being among the few buildings to be situated outside urbanized areas. Whether erected on a flat plain, deep in a valley, on a mountainside or in the shadow of a forest, they dot the landscape with their presence. For more than half a century now, they have followed a standard architectural path, of which the archetypal example is the hangar with double-slope roof: a structure built on posts and clad in weatherboarding of varying levels of sophistication.

New challenges

The architectural concepts used in France to develop these buildings arose out of discussions and experiments conducted between 1975 and 1985. As the first oil crisis was marking an end to thirty years of consumer prosperity in France, the impact on the landscape of these new facilities prompted the Fondation de France, with support from the central government, to fund the BAP (“agricultural buildings and landscapes”) network. At the same time, numerous regional and departmental directorates within the Agriculture Ministry enlisted the services of consultant architects. Based on the work that was produced, developed and disseminated by the Conseils d'Architecture, d'Urbanisme et d'Environnement (CAUEs), as well as the agriculture bureaus, new building design came to be guided by two major options. One was to “prevent the worst” by attempting to offset the lack of an architectural plan through the use of practices designed to help integrate the building into the landscape (colour of the exterior, support for the landscape, greater efforts to take the building site into account). The other, more difficult option was to encourage an architectural approach.

The gradual consolidation of production facilities since the 1990s has generated an increase in the size of new construction. A cosmetic approach intended to hide the buildings from view has proven ineffective, especially since, for regulatory reasons, new construction is often sited a considerable distance away from traditional built areas (small towns and villages). The size of the related facilities along with sustainable development concerns are now prompting designers to rethink certain assumptions, while the diversification of agriculture and changing community demands, notably in terms of quality lifestyles and food supplies, are renewing interest among consumers in farm architecture. Experimental programmes and approaches.
This finding is shared by numerous experts in Europe, where several experimental approaches and programmes in recent years have once again addressed the topic of landscapes and production facility architecture. This research is targeted to designers but also to farmers and construction manufacturers, who still play a dominant role in a sector where architects are often notable for their absence. Several of these studies draw on the options made available by new technology for aiding the design process, in order to simulate construction sites, test building sizes or attract media coverage for the finished work.

In Europe

A study conducted in Finland, Farmstead planning as a functional and landscape challenge, on “defining a scale of construction that is compatible with the small scale of previous production facilities and the rural habitat” addresses the larger size of production facilities by comparing expanding farms to small hamlets. One new practice is the use of urban planning methods. Long-term development plans are established based on projected future farm production and strategies. From the outset, environmental and landscape concerns play just as critical a role as functional considerations. An array of modelling methods can be used to present a clear vision of the farm, showing the orientation of the future buildings and production equipment, and to indicate how the farm infrastructure will be developed, how the microclimate will be taken into consideration and how the building façades will be blended into the landscape, both at close perspective and from far away.

The Interreg-IIIa interregional project known as BAULA (Rural construction and landscape) is addressing similar questions. The BAULA study, conducted in Switzerland, Germany and Austria, has systematically examined the various architectonic configurations and components that can help resolve the constraints posed by the increase in agricultural programmes. The study mobilizes the entire formal language of architecture. A full range of dimensions is used to find an intelligent match between projects and their sites. With regard to structures, the study addresses curved roofs, flat roofs, single-slope coverings, building frameworks, offset roof ridges, shed systems, etc. This approach emphasizes the need to consider the landscape before deciding on a building’s site, volume and materials. The procedure to be followed is illustrated with notably successful buildings constructed in a variety of sites and landscapes. It includes virtual modelling to evaluate a building’s impact on its environment and refine its siting.

In France

In France, the APPORT - Agriculture and Landscape project, which is being carried out by the country’s technical institutes, is addressing the issue by highlighting the links between production facilities and the land. The impact of farm operations on the landscape is being defined in detail using an interactive computer tool that is currently still in development. Modelled on a role-playing approach, www.batiment-et-paysage-elevage.fr will enhance the dialogue between farmers and designers as each building project is being developed. This will

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facilitate collaboration among the various stakeholders and encourage the use of multidisciplinary teams. The impact in terms of equipment, buildings and production on plots will be measured as a preliminary step before the development of projects relating to cattle, goat, sheep, poultry and pig farming. Pages on “observing, analysing, planning and designing” will provide access to resources and tools that will help users establish genuine architectural projects. This approach—still an unusual one—is expected to result in projects that are more in tune with their surroundings, heralding a landscape initiative in which architecture is not defined in advance and then incorporated into the landscape, but instead—similar to policies adopted in other areas of the construction industry—formally defined from the standpoint of landscape in conjunction with technical and functional expectations.

The examples presented at the site www.architecturesagricultures.fr are consistent with this approach. Launched in 2007 with support from France’s Ministry of Agriculture and Fisheries and the Ministry of Culture and Communication, this programme brings together every stakeholder in the field of agriculture. Its aim is to foster expertise among those who work with the built environment in the architectural design of today’s agricultural buildings, by pooling a range of contributions regarding the future development of these buildings. Intended for owners (farmers, local governments, associations, etc.), designers and builders, www.architecturesagricultures.fr is intended to highlight, encourage and raise awareness of quality architecture and landscapes within the field of agricultural construction. The site draws on surveys, a tracking service for documents on related topics and bibliographical and technical research. Model initiatives carried out in France or Europe by regional governments, individual owners and universities can be found at the site. Completed buildings that incorporated an architectural focus are included in a reference database of notably successful projects.

A diversified expression of agriculture

These various approaches all have one objective: to provide ways of incorporating increasingly imposing agricultural buildings into the landscape. They demonstrate that a genuine commitment to architectural design can address this challenge beyond simply integrating and concealing buildings within their surroundings. Thanks to research into sites, shapes, proportions and materials, a diverse expression of agriculture is now possible. It will be interesting to see how future agricultural buildings contribute to the rural landscape and thereby raise the profile of each region and its farmers.
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