



POLITECNICO
DI TORINO

Honors thesis

Master of Science in Sustainable Architecture

Abstract

**A production model in rural mountain areas in times of
crisis.**

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The pandemic has highlighted the great criticality of the globalization of production and its relocation. Almost miraculously, the trade and distribution of food and other basic necessities have survived the shock of the crisis, highlighting the great importance of the presence of small and medium-sized structures in mountain areas.

In these areas, in previous years, there had been the gradual disappearance of small shops in favour of shopping centres. Even food production, first coming from an autarchic economy integrated in the concept of housing, has known the abandonment of cultivated areas and livestock farming in favour of a globalization of supply and a change in lifestyle that has reflected on the way of building and thinking about the territory.

To define the outline of the thesis it was important, as a first step, to carry out a research on the situation or reinterpretation of the buildings destined to agriculture in the Alpine area, trying to understand what contribution architecture, in terms of technology but also functionality and architecture, has given so far to that sector.

The design choice to create a greenhouse model was a particular choice of field, animated by the desire to introduce a reflection on the theme rather than a finished project.

The proposal starts from the historical period that we are living: how to propose a system of self-handling from the family scale to that of community, to be ready to face a real food supply crisis. How to integrate the project into the current social, urban and architectural organization of the mountain territory?

The thesis is divided into three important sections:

1. Research and analysis of case studies of buildings for agricultural production in the Alpine area.
2. Historical analysis of the evolution of the design of greenhouses.
3. Design of a greenhouse for family or community use in the Alpine area.

The design proposal is a starting point not of arrival, a proposal that wants to be provocative and intends to turn the spotlight on the possible development models of the idea, a scalable and adaptable model.

However, since it is an architectural thesis, a project proposal was developed that started from some assumptions:

- The identification of a site that could be suitable for the implementation of the project.
- The choice of the form based on precise technical requirements that guaranteed the best energy input from local conditions.
- The choice of materials available on the market. • Verification of physical properties of stratigraphies.

- The inclusion of the project in the context as a characteristic element of the landscape identifying its specific function.



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