



Frankfurt am Main, Germany

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How to convert from barn to vertical farm

New simulation game for conversion of unused shed to vertical farming – Friday, 15 November 2024, from 1 p.m. to 3 p.m. on the Inhouse Farming Expert Stage in Hall 24 – Experts to demonstrate the project steps needed to launch vertical farming

How can the switch from barn to vertical farm succeed? What decisions have to be made? Practical answers will be provided by the simulation game 'From barn to vertical farm', which will be taking place on Friday, 15 November 2024 at the Inhouse Farming – Feed & Food Show 2024 at Hanover exhibition grounds, Germany. Taking a best-practice example, specialists will discuss how to overcome the obstacles and successfully implement such a project. The discussions take place from 1 p.m. to 3 p.m. on the Expert Stage in hall 24. As a B2B platform for self-contained agricultural and food systems of the future, the new Inhouse Farming – Feed & Food Show is an ideal complement to EuroTier, the world's leading trade fair for animal farming and livestock management. Inhouse Farming will run in parallel over the four days and will present new perspectives and business models for the entire value chain.

Demand for pork in Germany has declined in recent years, not least due to changes in dietary habits and export restrictions, dropping from around 60 million animals slaughtered in 2016 to approximately 44 million animals in 2023. Increasing numbers of farms are faced with rethinking the use of unused livestock animal housing that have become economically viable. With the aim of providing farmers with implementable recommendations, experts at the Inhouse Farming – Feed & Food Show will be showing, based on a best-practice example, how an unused livestock shed can be converted into a modern vertical farm and how the indoor production of vegetables, herbs, algae or mushrooms can be ensured the whole year round. Planned coordination between the related disciplines of farming, construction, building and data technology is crucial to success.

Guidance and planability for farmers

The specific obstacles facing a farm and the decisions that need to be made arise from the individual starting position. Budgets and the financing required for conversions have to be calculated. What funding and financing options are available? Should investors be brought on board and are state subsidies an option? The required turnover is also an important factor. After all, the aim of embarking on this new agricultural endeavour is for it to pay off quickly and generate sound profits. Is it strategically advantageous to link up as a vertical farm franchisee with a bigger company that offers purchase guarantees? In the simulation game held at the Expert Stage, the expectations of farmers will be compared against the support available from potential financial backers.

Sustainable conversion requires more than meets the eye

The demands of construction work in existing buildings are always higher than those of a greenfield project. Existing buildings have to meet certain minimum requirements so that they can be usefully operated as a vertical farm. If they fail to meet these requirements, it is necessary to clarify whether the requisite demolition, extension and conversion measures are feasible within the scope of the development plan and the existing permits and standards. In this case, a specialised general contractor – an architect acting in the simulation game – can clarify which structural work is needed to prepare the building for farm use and then contract and coordinate the necessary trades. This not only includes the adaptation or provision of the connections required for gas, water and electricity. Emission and water protection measures have to be considered at this stage. However, it can be assumed that the use as a vertical farm will be subject to lower requirements than the previous livestock production activity.

High-tech in old buildings: building equipment and data usage

The greatest need for advice, which the experts aim to structure in the simulation game, arises when choosing the technical concept for the interior design. Depending on the concept and product, a series of racks form the basis of the vertical farming modules and can, if necessary, be supplemented by lighting, robotics solutions, solar systems for generating electricity and additional facilities. The budding indoor farmer has to decide what plant breeding principle is to be used, what production companies are worth considering or whether a general supplier might be the right choice. Particularly when switching from conventional agricultural methods to indoor farming, advice from specialists is essential to the success of the project. The efficient operation of a vertical farm stands and falls with the optimum harmonisation, automation and networking of the building's technical equipment

and the best possible use of the available data. This applies to highly-developed sensors for recording internal operating data such as energy and water consumption, nutrient concentrations, humidity and temperature as well as to networking with other vertical farms and databases for agricultural data in order to obtain up-to-the-minute information for optimum operation.

The simulation game 'From barn to vertical farm' will be taking place on Friday, 15 November 2024, from 1 p.m. to 3 p.m. on the Expert Stage at the Inhouse Farming – Feed and Food Show'.

For further information, visit:

Inhouse Farming – Feed & Food Show: www.inhouse-farming.com

EuroTier 2024: www.eurotier.com

EnergyDecentral: www.energy-decentral.com

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DLG. Progress and sustainability in the agricultural sector and the food industry

Founded in 1885 by the German engineer Max Eyth, DLG (Deutsche Landwirtschafts-Gesellschaft – German Agricultural Society) stands for productivity and resource protection in a sustainable and innovative agricultural and food value chain. DLG's mission is to promote progress through the transfer of knowledge, quality standards and technology. DLG has over 31,000 members, and is non-profit, politically independent and internationally networked.

As one of the leading organisations in its sector, DLG organises trade fairs and events in the fields of agriculture and food technology and tests food, agricultural machinery and farm inputs. With its Competence Centers for Agriculture and Food and the DLG-Verlag's media, DLG stands for the independent transfer of know-how. DLG additionally develops solutions to the challenges of the agricultural, agribusiness and food sectors in numerous national and international expert committees.

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