University of Kassel

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Investigation of the drying behaviour of beef

Thesis at the Department of Agricultural Engineering

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Abstract

Meat is, related to its durability, the benefit value and the nutritions a very sensitive product. Over nourish-conditioned diseases to prevent and the physiological value to obtain it must be won therefore as hygienic as possible and conserved in the best possible way. Otherwise it comes to high losses, the food valuable in different regard. The employment of modern, conventional preservation methods becomes difficult due to several factors. On the one hand coolers are technically very complex and require high maintenance costs, on the other hand come it due to the warm climate frequently to operational disturbances. The moreover one, for example of local smoke plants, were needed large quantities wood which stressed anyway already strongly forest stands still would continue to reduce. Other conventional sources of energy, such as oil, are only difficult just like the food itself to transport and do not represent a financial load which can be mastered. Also the traditional procedures for the production of drying meat in Africa are, based on European condition kind, not optimal. Due to these facts the idea developed to produce drying meat for the African kitchen in a solar dryer. Around this possibility to plumb in a conventional attempting to dry with restraint by beef were accomplished. The results show that drying success strengthens particularly of the brought in material is dependent. Positively on the qualitative characteristics against it the temperature gradient affects itself. Importantly here above all the brief heating of the meat on for instance 75°C, in order germs injurious to health, is to kill. Afterwards the meat should be dried with 40°C, in order to avoid a rancid flavour. Around the practice fitness of the results to examine however, attempts have to be accomplished in a solar dryer locally. It, which the solar dryer is developed by the later operators, is important, in order to obtain the knowledge necessary for maintenance and to thus secure the lasting enterprise. At the same time the basis can be put in
this way for the spreading of the technology by the native population. Like battle-fresh meat in the practical conversion remains a central question for further attempts behaves, since for the attempts of this work frozen meat distorted only before became.
Also the acceptance of the population in relation to a new technology and the resulting product must be determined, for a statement for or against the enterprise of a solar dryer. A

further important point is, apart from the production, also the optimal storage of drying meat, in order to avoid camp losses and impurities.
The production of qualitative, nutrient-rich food for the improvement of the nourishing situation in Africa and other developing countries is an important component to arrange in order to reduce poverty and humans help their future in self-direction.
The production of drying meat in a solar dryer which portion of it can have must be only still it shown. It contributes at best to a more balanced and for the physical development positive nutrition and promotes the development of a regional creation of value chain.