

Which factors influence resilience in food production and food value chains?: Results of an industry survey

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The survey aimed to gain an overview of current challenges and how to deal with them in terms of resilience in food supply chains. In this context resilience is defined as the ability of food production entities or food value chains to respond to, survive and learn from disturbances and crises. It can be differentiated between Engineering Resilience (Efficiency of Function) and Ecosystem Resilience (Existence of Function).

For the survey, an online questionnaire was developed and submitted to stakeholders of different food supply chains. The survey included questions on the business field of the companies, estimation of the influence of various causes of disturbances and measures to increase resilience. To structure the causes of disturbances, the respondents were able to select factors from the following categories: i) technical factors, ii) organisational factors, iii) human factors, iv) turbulences v) economic factors and vi) environmental factors.

84 companies mainly from primary food production and food processing and packaging participated in the survey. The factors that have a significant influence on resilience are outlined. Among others, organisational factors, such as the company's production capacity or the availability of raw materials were named as particularly influential by almost all. Furthermore, the results show that most companies estimate that they are not well prepared for disruptive events. It is made clear that there is a great need for action to improve resilience. Two-thirds of the producers and more than 80% of the processors affirmed that they wanted to make investments to improve resilience. Which topics are particularly in focus is presented.

In summary, the survey reveals factors that have an influence on the resilience of primary food production and food processing and packaging and what needs arise from it. To address the demands in a targeted manner subsequently, a concept for assessing resilience is presented. It supports the identification of weak points and the comparison of different system setups in terms of resilience.