

50 PERCENT?!

Simulation game for vocational education and training of food producers on the topics organic farming and sustainability



EPIZ is a center for global citizenship education

We are a non-profit association and have been involved in educational work for teachers, students and extracurricular facilitators for over 30 years.

Our large pool of facilitators and extensive collection of didactic materials enable us to touch on a great variety of globalization issues. Our work contributes to making past and present global interrelations visible and helping individuals to reflect on their roles and responsibilities within this framework. We are engaged with issues of social justice, human rights and global sustainability.

www.epiz-berlin.de

Department of Education for Sustainable Nutrition and Food Science of Technische Universität Berlin

Our research is focused on sustainable consumption, consumer behavior, Corporate Social Responsibility, sustainability of food (fair trade, organic food), food waste, and cause-related marketing as well as vocational education in the field of nutrition and home economics.

www.tu.berlin

The project KORN-SCOUT

The grain and its different users – Grain competences fostering sustainability in food trade

Objective of the joint project KORN-SCOUT is the promotion of sustainability competences in vocational education for sustainable operation in everyday work life of grain-handling occupations such as miller, baker, confectioner, and brewer maltster as well as neighboring occupations.

It is especially focused on communication with regard to sustainability between every actor along the supply chain which is to lead to an increase in sustainability competence that enables to promote the transformation towards sustainability. Therefore for future "GRAIN-SCOUTS", several innovative teaching-learning materials are developed by the joint project partners in cooperation with industrial partners that can be downloaded as open educational resources.



The ERASMUS+ project DIVE

Digital Internationalisation in Vocational Education

Objective of the joint project DIVE is supporting vocational teacher students in developing and strengthening intercultural competence, English speaking skills, digital competence, and global awareness within the three overarching themes values, citizenship & democracy and sustainable development.

Within the concept of 'Internationalisation at Home', vocational teacher students collaborate in local and international colloquiums, in both physical and virtual spaces.



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PREFACE

Die Bedeutung der beruflichen Bildung für eine auf Nachhaltigkeit ausgelegte Veränderung unserer Lebens- und Arbeitsweise kann nicht hoch genug eingeschätzt werden. Zwar kann zum Beispiel ein*e Bäcker*in auch Brot herstellen, ohne sich mit Nachhaltigkeitslabels der Rohstoffe oder traditionellen Herstellungsweisen zu befassen. Für den Betrieb wird eine nachhaltige(re) Ausrichtung jedoch bei den Kund*innen besser ankommen und kann diese ebenfalls für das Thema sensibilisieren. Auch bei der Gewinnung von Fachkräften, insbesondere von Auszubildenden, kann Nachhaltigkeit heutzutage ein entscheidender Faktor sein: Studien belegen, dass nachhaltig ausgerichtete Unternehmen deutlich weniger unter dem Fachkräftemangel leiden. Doch nachhaltiges Wirtschaften muss gelernt werden. Auszubildende müssen dafür ebenso wie betriebliches Ausbildungspersonal und schulisches Lehrpersonal Kompetenzen entwickeln, um Nachhaltigkeit in seinen umweltbezogenen, wirtschaftlichen und sozialen Aspekten mit den alltäglichen Arbeitstätigkeiten zu verknüpfen.

Die Berufsbildung für nachhaltige Entwicklung (BBNE) leistet genau das. Die ab August 2021 verbindliche Standardberufsbildposition „Umweltschutz und Nachhaltigkeit“ macht das Thema fortan zum integralen Bestandteil der Ausbildungsordnung und damit auch prüfungsrelevant. Doch es braucht auch arbeitsnahe, „lebendige“ Materialien für die Aus- und Weiterbildung in konkreten Berufen. Das vorliegende Planspiel ist ein Paradebeispiel dafür. Es gibt kein allgemeines Nachhaltigkeitsmodul „on top“ und es gibt kein „Richtig oder Falsch“ vor, sondern es fördert eine offene Reflexion und den Austausch sowohl über fachliche Berufsinhalte in Korn-handhabenden Berufen sowie auch über Werte, die eigene berufliche Identität und den Sinn von Nachhaltigkeit an sich. Die Handhabung ist zudem einfach und es ist kein Vorwissen

erforderlich. Damit eignet es sich hervorragend für den Einsatz im berufsschulischen Unterricht, in überbetrieblichen Bildungsstätten sowie tatsächlich auch im Betrieb, sofern genügend „Mitspieler*innen“ zusammenkommen.

Das Planspiel ist eines der Produkte vom Modellversuch Korn-Scout, den das Bundesinstitut für Berufsbildung (BIBB) aus Mitteln des Bundesministeriums für Bildung und Forschung (BMBF) von 2018 bis 2021 im Rahmen des Programms „Berufsbildung für nachhaltige Entwicklung“ fördert. Die Stärke dieser Modellversuche ist die enge Verbindung von Forschung und Praxis, sodass alle Produkte wissenschaftlich und didaktisch fundiert, aber auch mit Auszubildenden, Ausbildungs- und Lehrpersonal gemeinsam entwickelt und erprobt wurden. Die BIBB-Modellversuche liefern damit Beiträge zu den 17 Nachhaltigkeitszielen der Vereinten Nationen sowie zum Weltaktionsprogramm „Bildung für nachhaltige Entwicklung“. Vor allem helfen Sie aber, Nachhaltigkeit für Betriebe „anfassbar“ zu machen und sie in die berufliche Bildung zu integrieren.

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INTRODUCTION AND OVERVIEW



INTRODUCTION AND OVERVIEW

INTRODUCTION

The demand for and also the supply of organic food products increase. However, for many citizens and initiatives, this is not enough. They demand companies to be legally obligated to meet environmental and social standards throughout their entire supply chain. This postulation is supported by German development minister Dr. Gerd Müller. It is discussed what this would in detail entail for the companies. The simulation game is broaching those issues and offers a foundation for a discussion on organically produced food: Should there be obligatory guidelines for the use of organically produced food for all companies? What consequences would this have for food production companies? The simulation game picks up these aspects and provides a basis to start a discussion using organically produced food as an example: Should there be a mandatory portion for the use of organic raw materials in food? What would be the consequences for food producers?

OVERVIEW

Competences / goals

Recognising – The participants get an overview over characteristics of processing and handling of organic raw materials. They understand how committees of the European Parliament work.

Assessing – With the help of the simulation game, the participants reflect different motivations and options of action that result from living environments, hierarchies, power imbalances and dependencies. The participants get to know the peculiarities of handling and processing of organic raw materials and can critically assess their utilisation from technical, economic, political and social perspectives.

Acting – The participants can name possibilities how they can contribute to problem solving in school and work life as well as their private life. They recognise the importance of responsible action for a solidary and sustainable global society.

Placement in the learning fields (LF) of German vocational curricula

Vocational school curriculum	Curriculum for company-based education
<p><i>Baker (Bäcker*in)</i></p> <p>LF 1: Nutrition from an ecological point of view</p> <p>LF 2: Choice of raw materials</p> <p>LF 3: Ordering, incoming goods inspection</p>	<p>LF 2: Structure and organisation of the training company</p> <p>LF 4: Protection of the environment</p> <p>LF 7: Preparation of work flows, working in a team</p> <p>LF 8: Conduction of quality-ensuring measures</p> <p>LF 9: Customer service and sales</p>
<p><i>Pastry chef (Konditor*in)</i></p> <p>LF 1: Nutrition from an ecological point of view</p> <p>LF 2: Supply, quality, price, storage, control, utilisation of main raw materials, assessment of technological, sensory and nutritional impact of typical raw materials and their ingredients on dough and pastry</p> <p>LF 3: Nutrition trends, sales arguments</p> <p>LF 4: Fermentation of sour dough</p> <p>LF 5: Raw materials</p>	<p>LF 2: Structure and organisation of the training company</p> <p>LF 4: Protection of the environment</p> <p>LF 6: Preparation of work flows, working in a team</p> <p>LF 7: Conduction of quality-ensuring measures</p> <p>LF 16: Customer service and sales</p>
<p><i>Brewer/maltster (Brauer*in/Mälzer*in)</i></p> <p>LF 2: Grain as a raw material</p> <p>LF 13: Customer service</p> <p>LF 14: Consumer expectations, presentation and customer consulting</p>	<p>LF 2 A: Raw materials, additives and production resources</p> <p>LF 2 B: Structure and organisation of the training company</p> <p>LF 4 B: Protection of the environment</p> <p>LF 5 B: Planning of work flows, quality-ensuring measures</p> <p>LF 6 B: Information and communication</p>

Vocational school curriculum	Curriculum for company-based education
<p><i>Skilled worker in the field of food technology (Fachkraft für Lebensmitteltechnik)</i></p> <p>LF 10: Production of food rich in carbohydrates and fat: responsible handling of raw materials, conserving of raw material sources and environmental resources</p>	<p>LF 2: Structure and organisation of the training company</p> <p>LF 4: Protection of the environment</p> <p>LF 5: Operational and technical communication</p> <p>LF 7: Order taking, work scheduling and organisation</p> <p>LF 8: Provision and preparation of raw materials, additives, processings aids and semi-finished products</p> <p>LF 11: Storage of raw materials and products</p>
<p><i>Miller (Verfahrenstechnolog*in in der Mühlen- und Getreidewirtschaft)</i></p> <p>LF 1: Present vocation and company – The trainees get a general idea of the cooperation of their company with authorities and further market actors; They consider social, economic and ecologic requirements of their occupation and deduce moral concepts and values. They reflect communication and conflict situations and search for solutions.</p> <p>LF 2: Assess raw materials – The trainees get a general idea of different raw materials (origin, cultivation, growth, ingredients, properties, use) and their quality parameters.</p>	<p>LF 1 A: Conduction of quality-ensuring measures</p> <p>LF 2 A: Receipt and control of incoming raw materials</p> <p>LF 3 A: Storage of raw materials</p> <p>LF 2 C: Control and fight of pests</p> <p>LF 5 C: Receipt, storage, application and disposal of plant protection agents</p> <p>LF 2 D: Structure and organisation of the training company</p> <p>LF 4 D: Protection of the environment</p> <p>LF 5 D: Preparation of work flows working in a team</p>

OVERVIEW

Duration: approx. 4 hours

ALL-DAY ACTIVITY:

- Introduction
- Interactive start (Introduction of the topic and the simulation game method – 30 minutes)
- Execution (Assigning roles, orientation phase, group interaction phase, conference – 90 minutes)
- Evaluation (Evaluation, forming and discussing opinions, reality check, discussing possible ways to take action – 90 minutes)

DURING LESSONS:

45 min:

- Interactive start: Introduction into topic and the simulation game method
- Assigning roles
- Homework: Orientation phase

90 min:

- Group interaction
- Conference
- First reflections and de-roling

90 min:

- Evaluation, forming and discussing opinions, reality check
- Discussing possible ways to take action

EXAMPLE OF THE PROCEDURE (about 4 hours)

Phase (duration)	Teaching strategy	Social form	Media/ material
Introduction (20 min)	Introducing the topic, general information	Class discussion	Projector, loudspeakers, laptop, presentation
Introduction (15 min)	Introducing the simulation game, describing and assigning roles	Class discussion	Presentation
Orientation (20 min)	Becoming familiar with the roles and their backgrounds	Small groups	Work sheets: Background, strategic plan, description of roles
Unpacking the issues (40 min)	Communication phase	Small groups	Moderation cards, pens
Unpacking the issues (30 min)	Assembly	Plenum	
Unpacking the issues (20 min)	Reflection phase, de-rolling	Plenum	Chairs in a circle
Consolidation (40 min)	Reality check: What is true?	Class discussion	Presentation
Consolidation (20 min)	Film, barometer discussion	Plenum	Projector, loudspeakers, laptop, barometer statements
Consolidation and briefing (30 min)	Forming opinions/ evaluation	Plenum	

MATERIAL

For the simulation game:

- Tables and chairs for 7 groups
- Computer, projector, loudspeakers and powerpoint presentation
- 2 display areas for press reports (magnetic boards with magnets or pin boards with needles)
- Optional: Props for groups (hats, ties etc.)
- Name tags for the groups tables

Worksheets for all participants:

- Background (Work sheet 01)
- Strategy plan (Work sheet 02)
- Individual group descriptions (role description)
- At least 20 sheets of paper (or moderation cards) for each group



SIMULATION GAME

„50 PERCENT!?”





EXERCISE 01

SIMULATION GAME

Introduction

DURATION

30 minutes

METHOD

Active input

First, the moderator (teacher or instructor) introduces the topic of the simulation game. For this, a powerpoint can be downloaded. Then, the participants are asked if they have job-related contact with foodstuff derived from organic agriculture. As an introduction, first experiences can be shared. With a statistics figure, it is afterwards shown how the demand in organic products has increased in the past few years – a good reason to look into this topic. Subsequently, the students can watch a film that explains the characteristics and principles of organic agriculture. The fundamental aspects are compiled together in class and remaining questions are clarified. Covered topics should be:

- Closed loop
- No herbicides (for weed control),
- No pesticides (against pest infestation),
- No chemical-synthetic nitrogenous fertiliser,
- No genetic engineering
- Organic certified food labels.

Now the introduction of the simulation game itself begins. After some general remarks, a short film explaining the function and tasks of committees of the European Parliament is shown. In addition, the legislative procedure of the European Union can be explained by a schematic figure (see provided ppt). Then, the background is introduced: The European Committee on environment, public health and food safety invites to an expert hearing about a legislative proposal that stipulates that in the future 50 % of all raw materials of a food product are to derive from biodynamic agriculture. In the simulation game, the trainees (or participants) perform the public hearing in their groups. All involved actors are invited and can voice their opinion. In the end, the group acting as the committee decides, if and in which form the legislative proposal is reported to the European Parliament to be forwarded to the European Council.

After clarifying the background, the groups of the simulation game are briefly introduced. The powerpoint presentation guides through the simulation game.

Procedure

DURATION

90 minutes

METHOD

Simulation game

1. Assigning roles

The roles can be assigned according to interest, by lot or as decided by the moderator. Since simulation games instigate a change of perspective, it is recommended to assign roles that the participants do not have in real life. This way, they are forced to put themselves in an unknown position. A successful setting facilitates the participants to grow into their roles - props can be helpful (e.g. press cards and cardboard cameras, different hats, blazers and ties for politicians, aprons for brewers, ...). In case a participant feels extremely unwell in his or her role, an exchange with another participant should be made possible. The groups should have the same size if possible. The role of the European Committee is the most challenging. The descriptions of the roles are designed in a way that the roles can be adapted to the required degree of difficulty: According to the proficiency level of the group, provided material can be omitted (more difficult) or provided to the group (less difficult).

2. Introduction into situation, group and rules of the game

After the roles are assigned, the groups assemble at their respective group tables. Those group tables have to be clearly assigned via labelling and differentiated from the other groups. The assembly of the groups can reflect the actual balances of power based on reality (e.g. environmental activists sit in the back corner whereas representatives of business and commerce sit in the middle or in the front.) The display areas for press reports should be highly visible for everyone. The provisioning of materials (e.g. type and number of pens, size of tables) to the groups could also be fitted to the balances of power. The closer to reality the ambiance, the higher is the identification with the role and the emotional gaming experience. Situation and starting point are briefly explained via powerpoint presentation. The names of the participating groups and the rules are introduced. Situation and rules can also be found in the powerpoint presentation.

Framing story of the simulation game (see Work sheet 01 „Background“)

The European Committee on environment, public health and food safety invites actors of the grainhandling food sector to an expert hearing about a legislative proposal that stipulates that in the future 50 % of all raw materials of a food product are to derive from organic agriculture.

Groups of the simulation game:

- ★ European Committee on environment, public health and food safety
- ★ Association „Meal-Time“
- ★ Environment protection association „Pure Nature“
- ★ Press „Eco-Nomy“
- ★ Press „Agro-Profit“
- Representatives of the milling and grain processing sector
- Representatives of the baking confectionery sector
- Representatives of the malthouses and breweries
- Representatives of the cereal food industry

Groups with a star (★) should have at least two participants; For the groups with a dot (•), it can be chosen which groups to include - also depending on the number of participants.

The background of every simulation game is a controversial setting, that is fictitious, yet based on current (political) affairs. The participants adopt roles of stakeholders and act out the negotiation and decision-making processes of the given situation.

3. Active phase of the simulation game

Orientation phase – 20 minutes

The groups have about 20 minutes to orient themselves in their groups, divide the roles, design a logo or slogan (optional) and familiarise themselves with the documents of the game. During the orientation phase, they are not allowed to contact other groups. However, the moderator can be asked questions at any time. The participants consider their goals, potential allies and enemies as well as a strategy to pursue. For this, the participants can use Work sheet 02 „Strategy plan“.

Round of introductions – 10 minutes

All groups gather and each group’s spokesperson briefly introduces their group and goals, respectively.



Tip

There is a powerpoint slide for each phase. This way, the participants always have an overview of the rules, tasks and schedule of the current phase.

Group interaction phase – 45 minutes

During the contact phase, at first, groups are only allowed to contact each other via mail, i.e. letters, that are exclusively delivered by the moderator. Later on (e.g. after 15 min) meetings can be requested. These meetings can be personal, public or informal. To schedule a meeting, the request has to be accepted in written form. When meetings in person occur, one group member should remain at the group table as a contact person, respectively (if possible).

The moderator can keep control over the mailing of messages: In order to have an overview and be able to give valuable tips to the press, the moderator is advised to read the letters. The press groups can lead interviews or observe at any time. All other groups can send press releases to the press. The press groups decide which headlines to read out loud and pin to the board (display area). They should write down headlines and announce them out loud before pinning them to the board. (This could be supported by a gong, bell or sound bowl for them to get attention.) For example: „corruption scandal in the government!“ or „demonstration against high food prices today!“ This way, a public opinion is formed during the game and it is possible to apply pressure to different groups.

If there are more than two participants in a group, it is advised to meet up every 10 minutes for updates. Usually, a group starts to divide into smaller teams and has discussions with the different parties; if they make promises or come to agreements, they need to inform the other group members in order to pursue the same strategy.

After 45 minutes, the committee invites stakeholders and experts to a public hearing on the legislative proposal. The committee convenes the public hearing via press release or personal invitation. It is possible that both press groups briefly summarise the situation in a short report before the hearing. In the end, the committee has to decide if they will adopt or reject the legislative proposal or will propose an amended version. All groups are invited to the hearing.

4. Concluding public hearing – 20 minutes

Especially for high numbers of participants, each group should appoint a spokesperson - this way, the discussion of the hearing will be more structured. The other group members can still support their group representative in an advisory capacity. For the hearing, the chairs can be arranged in a circle for all group's spokespersons. After an initial statement of the committee (address of welcome, brief introduction of the current situation and the background of the hearing) all invitees may bring forward their standpoint and arguments. The committee can moderate the discussion or appoint an external moderator (e.g. moderator of the simulation game). Oftentimes, heated debates can occur. Here, a good moderation can make sure, that all parties get allotted time for talking, and can intervene if parties talk too long. The press documents the hearing and may ask questions as well as comment. Both the moderation and the visualisation of results can be outsourced to the moderation of the simulation game. After 20 minutes, the committee adjourns the hearing and retreats to briefly deliberate: Should the European Parliament forward the legislative proposal to the European Council as is, in an amended form or reject it? After deliberation, the committee announces its decision and the simulation game is completed. It is recommended to have a break not until after the de-rolling.



Background of the simulation game „50 Percent!?“

„Fifty percent of all raw materials used for the production of food are to be certified organic (according to EU Regulation 2018/848 on organic production and labelling of organic products).“

This legislative proposal of the European Commission is currently debated in a first reading in the Committee of environment, public health and food safety of the European Parliament. The committee invites stakeholders and experts to a public expert hearing with the objective to obtain opinions:

- Is a conversion of production to 50% organic raw materials for companies feasible?
- Where are advantages, where difficulties for companies?
- What kind of support do the different sectors need for a realisation?

There is a budget of ten billion Euro for an consumer campaign accompanying the implementation of the proposed legislation. The public expert hearing is planned for representatives of the grain-processing industry. Not only representatives of the sector but also the environment protection association „Pure Nature“ as well as the association "Meal-Time" are invited to comment the legislative proposal from their respective perspectives.

At the end of the hearing, members of the committee will decide if the European Parliament will forward the legislative proposal to the European Council as is, in an amended form or reject it.

Course of the game and rules

Orientation phase:

- Do not contact other groups.
- Carefully read the role description and further informations provided.
- Use work sheet 02 „Strategy plan“ to contemplate your goals, arguments and course of action! How willing to compromise do you want to be?

Group interaction phase:

- Contact the other groups via mail. Give your letters to the moderator who will deliver them to the groups. Who would be an appropriate cooperation partner to combine forces and to make demands with. Get to know your opponents: Can you make a first compromise? Do you have common demands?
- After about half of the allotted time, it is possible to ask other groups for a meeting via mail and speak with them if they accepted the meeting request in writing. One person should always be present at the group table in order to be contactable.
- Use the opportunity to send press releases to the press groups in order to call their attention to your events and ideas!

Public hearing:

- The committee invites to the public hearing. Have your arguments, demands, compromises and proposals for solutions ready !



Simulation game „50 Percent?!“

STRATEGY PLAN

Contemplate a strategy and jot down your ideas!

What do you want to accomplish?

What are your arguments?

Who could you ally yourselves with?

Who do you want to persuade?



Role description

COMMITTEE OF THE EUROPEAN PARLIAMENT ON ENVIRONMENT, PUBLIC HEALTH AND FOOD SAFETY



You are politicians of different parties that have been elected for the European Parliament. Together, you are part of the "Committee on the environment, public health and food safety". In the committee, you deliberate on legislative proposals concerning these topics. From the European Commission, the parliament now received a new legislative proposal that is discussed in your committee. This proposal stipulates a set amount of raw materials in food that are certified organic.

The current legislative proposal is as follows:

„Fifty percent of all raw materials used for the production of food are to be certified organic (according to EU Regulation 2018/848 on organic production and labelling of organic products).”

You hold a number of expert hearings, where different stakeholders are invited that are affected by the proposed legislation (e.g. food producers). Today is the public hearing of representatives of the grain-processing industry. Your goal is to learn from the stakeholders if they deem the legislation realisable and what kind of hurdles they see. During the hearing and afterwards, you can modify or extend the legislative proposal or recommend its rejection. You have a budget of approx. 10 billion Euros for a campaign explaining the changes due to the legislation (e.g. poster campaign) to the European consumers. You assume that the costs for the conversion of production can be covered by the companies themselves via smart management.

At the end of the contact phase, you invite all groups to a hearing and listen to their opinions, statements and suggestions.

The hearing could be structured as follows:

- ★ Adress of welcome
- ★ Brief round of introductions, where each group's "spokesperson" briefly introduces their group and goals
- ★ Discussion about the negotiated, suggested solutions
- ★ Consultation: You retreat to briefly deliberate: Should the European Parliament forward the legislative proposal to the European Council as is, in an amended form or reject it?
- ★ Announcement of the decision



Role description

ASSOCIATION MEAL-TIME



You represent the interests of consumers and food producing companies in equal measure. That is why you completely oppose the legislative proposal. From your perspective, it only entails negative implications.

For consumers:

- According to your calculations, a share of 50 % organic raw materials in food will increase food prices by 60 %. The increased costs are due to higher raw material costs, fees for certification as well as increased paperwork for the companies.
- Your studies show that organic food products are not more healthy than conventional food products.

For Companies:

- Time and effort would be immense for the companies. For example, for many companies, this would require structural measures such as construction of additional silos.
- Companies need to train their employees how to handle organic-certified raw materials. This is cost-intensive.
- High costs are expected for the certification.
- Many companies already contribute to environmental protection e.g. by saving water and energy during production processes.
- The legislation compromises the entrepreneurial freedom. The companies should be able to decide themselves.

You decide which demands to voice during the hearing. Possible demands are:

- Rejection of the legislative proposal or amendment of the proposal to an alleviated version (e.g. Companies can voluntarily increase the share of organic-certified raw materials.)
- Stable food prices for the consumers
- In case the legislation cannot be prevented: Tax reduction as compensation for the citizens as well as increase of unemployment benefits and comprehensive financial support of food producing companies.

Means

- ★ You are well-connected with the press.
- ★ It is possible to ally with representatives of the food producing sector.

Assignment

Prepare yourselves thoroughly for the public expert hearing and present your demands and arguments there.



Role description

ENVIRONMENT PROTECTION ASSOCIATION „PURE NATURE“



Finally, the European Commission proposed a legislation! Your organisation has advocated for this for a long time. Now you are a little disappointed by the legislative proposal. You demand from the committee to amend the proposal in such a way that at least 90 % of the raw materials for food production have to derive from organic-certified raw materials in the long term. Your overall goal is an exclusively biodynamic agriculture for food production in the European Union. You are convinced that this production method is the least harmful to the environment. You do not agree that organic food products are more expensive. After all, the tax payer nowadays finances the environmental costs of conventional agriculture such as groundwater restoration. Watch the video and gain background knowledge on true costs:



„Why is organic food more expensive?“
(in German only)

www.youtube.com/watch?v=djS7vtbzOYY

Information on harmful effects of conventional agriculture:

- Application of mostly chemical-synthetic plant protection agents against pest insects, fungus and weeds: The intensive application of highly effective herbicides and insecticides leads also to a depletion of the flora. Insects and birds living on or close to farmlands lose their feed resources. Especially the controversial application of three neonicotinoids (imidacloprid, clothianidin, thiamethoxam) poses a great risk for wild bees and honeybees. The EU Commission has agreed to a prohibition of insecticides on open land by now.
- Application of artificial, mineral, and readily soluble fertilizer (mostly nitrogen, phosphor or potassium) for the acceleration of plant growth: Often, too much fertiliser is applied. As a result, way too much nitrogen enters the soil - and from there also pollutes groundwater and surface water. In Germany, critical EU values for nitrate concentrations have been exceeded on a regular basis for many years.
- Conventional agriculture is mostly specialised on one plant species - the farming of monocultures is thus normally unavoidable due to this specialisation: However, monocultures can cause damage to soils since identical plants extract the same nutrients from the soil and do not offer habitats for animals. For example, bees actually need different plants with differing blooming periods.

Means

- ★ You are well-connected to the press.
- ★ You have a number of members demonstrating for environmental protection every month and attract attention with high-publicity events and activities.

Assignment

Prepare yourselves thoroughly for the public expert hearing and present your demands and arguments there.



Role description

REPRESENTATIVES OF THE MILLING AND GRAIN PROCESSING SECTOR



You represent the milling and grain processing sector.
The proposed legislation would have a massive impact on your sector:

Purchasing

- ★ Until now, you bought your grain at wholesale. Novel sources of supply would need to be opened up.
- ★ You would require more and smaller silos for incoming goods and storage. For organic certification, retraceability of organic raw material and its origin is mandatory.
- ★ You would require new types of analysis equipment, for example for the analysis of herbicide residues. This would also be labour-intensive.

Processing

- ★ Fluctuations in grain quality can be considerable for organic grain. Due to the prohibition of artificial fertilisers, the nitrogen supply to the plant is not as

custom-fit as in the conventional agriculture. Yield and protein content of the grain cannot be controlled to be as reliable as in conventionally produced grain.

- ★ Different organic qualities would have to be mixed in order to obtain a constant quality.
- ★ You would have to abstain from chemical pest control e.g. in storage buildings. Alternatives are biological agents, increased hygienic measures as well as disinfestation via pressure.

Sales

- ★ Organic grain costs - depending on the type of grain - approx. twice as much as conventional grain products.
- ★ Today, one kg of organic rye bread costs about 4.50 Euro (as of Feb. 2022).
- ★ Overall, an increase in paperwork and reporting is expected.

What is your opinion concerning this legislative proposal? On one hand, biodynamic farming is beneficial for the environment and corresponds with a food trend: The demand in organic products is continually rising. On the other hand, substantial changes in operational processes are required including building measures such as construction of additional silos.

You decide which demands to voice during the hearing. Possible demands are:

- ★ The legislative proposal should be rejected or modified (for example, the share of organic raw materials in food could be set to only 10 % or even up to 70 % or could be increased gradually with time).
- ★ Certification should be free of charge for the companies.
- ★ Required construction of buildings as well as structural alteration measures e.g. of silos should be financed or at least generously co-financed.
- ★ Training of personnel should be offered free of charge.

Means

- ★ You are well-connected to members of the committee as well as the Association "Meal-Time".
- ★ You are also well-connected to representatives of other grain-handling sectors.

Assignment

Prepare yourselves thoroughly for the public expert hearing and present your demands and arguments there.



Role description

REPRESENTATIVES OF THE BAKING / CONFECTIONERY SECTOR



You represent the baking / confectionery sector.

The proposed legislation would have a massive impact on your sector:

Purchasing

- ★ Although the number of organic bakeries increases, their percentage is still low as measured by sales volume.
- ★ Most companies would have to open up novel sources of supply or check with flour mills to what extent a supply of certified organic raw materials would be possible.

Processing

- ★ Fluctuations in grain quality can be considerable for organic grain. Due to the prohibition of artificial fertilisers, the nitrogen supply to the plant is not as custom-fit as in the conventional agriculture. Yield and protein content of the grain cannot be controlled to be as reliable as in conventionally produced grain. Many processes that are fully automated today, would have to be

controlled by skilled personnel to an increasing degree. For example, it has to be assessed whether the dough is too firm or needs more water.

- ★ Due to a lack of skilled personnel, a realisation is difficult. At the same time, you see here a potential for an upgrading of the profession.

Sales

- ★ Organic grain costs - depending on the type of grain - approx. twice as much as conventional grain, since its yield is noticeably lower on equal cultivable surface. That is why it has to be offered for a higher price. Eventually, this could lead to loss in sales, since the consumers would buy less. This would endanger thousands of jobs.
- ★ Today, one kg of organic rye bread costs about 4.50 Euro (as of Feb. 2022).
- ★ Overall, an increase in paperwork and reporting is expected.

What is your opinion concerning this legislative proposal? On one hand, biodynamic farming is beneficial for the environment and corresponds with a food trend: The demand in organic products is continually rising. On the other hand, substantial changes in operational processes are required including building measures for example for the separate storage of organic and non-organic raw materials.

You decide which demands to voice during the hearing. Possible demands are:

- ★ The legislative proposal should be rejected or modified (for example, the share of organic raw materials in food could be set to only 10 % or even up to 70 % or could be increased gradually with time).
- ★ Certification should be free of charge for the companies.
- ★ Required construction of buildings as well as structural alteration measures e.g. of silos should be financed or at least generously co-financed.
- ★ Training of personnel should be offered free of charge.

Means

- ★ You are well-connected to members of the committee as well as the Association "Meal-Time".
- ★ You are also well-connected to representatives of other grain-handling sectors.

Assignment

Prepare yourselves thoroughly for the public expert hearing and present your demands and arguments there.



Role description

REPRESENTATIVES OF THE MALTHOUSES AND BREWERIES



You represent the malthouses and breweries.

The proposed legislation would have a massive impact on your sector:

Purchasing

- ★ Since malt is your main raw material, you would have to buy it mainly in organic quality according to the legislative proposal.
- ★ For the different malt qualities (organic / conventional) separated storage facilities are required in order to ensure retraceability.
- ★ The demand in organic hops could already not be covered in the past years.

Processing

- ★ The organic grain has to be cleaned more thoroughly in the malthouse, since it contains more weeds. This is due to the prohibition of chemical pesticides in bio-dynamic agriculture.

- ★ Organic malt must not be sulphurised (conventional malt is sulphurised to prevent the formation of carcinogenic nitrosamines). In addition, less additives and processing aids are permitted. Otherwise, there are no differences in processing.

Sales

- ★ Organic grain costs - depending on the type of grain - approx. twice as much as conventional grain, since its yield is noticeably lower on equal cultivable surface. That is why it has to be offered for a higher price. Eventually, this could lead to loss in sales, since the consumers would buy less. This would endanger thousands of jobs.
- ★ Today, one liter of organic beer costs about 3.10 Euro (plus tax; as of Feb. 2022).
- ★ Overall, an increase in paperwork and reporting is expected.

What is your opinion concerning this legislative proposal? On one hand, biodynamic farming is beneficial for the environment and corresponds with a food trend: The demand in organic products is continually rising. On the other hand, substantial changes in operational processes are required including building measures for example for the separate storage of organic and non-organic raw materials.

You decide which demands to voice during the hearing. Possible demands are:

- ★ The legislative proposal should be rejected or modified (for example, the share of organic raw materials in food could be set to only 10 % or even up to 70 % or could be increased gradually with time).
- ★ Certification should be free of charge for the companies.
- ★ Required construction of buildings as well as structural alteration measures e.g. of silos should be financed or at least generously co-financed.
- ★ Training of personnel should be offered free of charge.

Means

- ★ You are well-connected to members of the committee as well as the Association "Meal-Time".
- ★ You are also well-connected to representatives of other grain-handling sectors.

Assignment

Prepare yourselves thoroughly for the public expert hearing and present your demands and arguments there.



Role description

REPRESENTATIVE OF THE CEREAL FOOD INDUSTRY



You represent the cereal food industry.

The proposed legislation would have a massive impact on your sector:

Purchasing

- ★ Until now, you bought your grain at wholesale. Novel sources of supply would need to be opened up.
- ★ You would require more and smaller silos for incoming goods and storage. For organic certification, retraceability of a organic raw material and its origin is mandatory.

Processing

- ★ Fluctuations in grain quality can be considerable for organic grain. Due to the prohibition of artificial fertilisers, the nitrogen supply to the plant is not as custom-fit as in the conventional agriculture. Yield and protein content of organic

grain cannot be controlled to be as reliable as in conventionally produced grain.

- ★ Different organic qualities would have to be mixed in order to obtain a constant quality. This is an additional expense.
- ★ You would have to abstain from chemical pest control e.g. in storage buildings. Alternatives are biological agents, increased hygienic measures as well as disinfestation via pressure.

Sales

- ★ Organic grain costs - depending on the type of grain - approx. twice as much as conventional grain, since its yield is noticeably lower on equal cultivable surface. That is why it has to be offered for a higher price. Eventually, this could lead to loss in sales, since the consumers would buy less. This would endanger thousands of jobs.
- ★ Overall, an increase in paperwork and reporting is expected.

What is your opinion concerning this legislative proposal? On one hand, biodynamic farming is beneficial for the environment and corresponds with a food trend: The demand in organic products is continually rising. On the other hand, substantial changes in operational processes are required including building measures for example for the separate storage of organic and non-organic raw materials.

You decide which demands to voice during the hearing. Possible demands are:

- ★ The legislative proposal should be rejected or modified (for example, the share of organic raw materials in food could be set to only 10 % or even up to 70 % or could be increased gradually with time).
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- ★ Training of personnel should be offered free of charge.

Means

- ★ You are well-connected to members of the committee as well as the Association "Meal-Time".
- ★ You are also well-connected to representatives of other grain-handling sectors.

Assignment

Prepare yourselves thoroughly for the public expert hearing and present your demands and arguments there.



Role description

PRESS „ECO-NOMY“



You are a journal that has specialised on topics concerning ecology (environment) and economy. In your articles, innovations and ideas are introduced regarding how to produce successfully in accordance with nature. With a monthly circulation of 5.000.000 copies and an extensive web presence, you are the biggest eco-journal in Europe.

In your opinion, the legislative proposal heads in the right direction but is not sufficient enough. In addition, you suspect that the representatives of the different grain-handling sectors as well as the association "Meal-Time" will use their influence to further moderate the legislative proposal.

It is up to you to uncover current information and inform the public! You report critically and like to push scandals since they increase the circulation.

Mittel

- ★ As one of the biggest journals on eco-production you have a considerable influence and can be full of confidence.
- ★ You are well-connected in politics and economy. You can interview the participants, ask for opinions in written form and much more.

Contact all groups that are of interest to you. Pin headlines from your interviews and press releases to the board and read them aloud. For your web presence, you should conduct brief live-interviews and coverages.



Role description

PRESS „AGRO-PROFIT“



You are a journal that has specialised on topics concerning agriculture. In your articles, you introduce innovations and ideas regarding how to successfully produce and achieve more yield per area.

With a monthly circulation of 5.000.000 copies and an extensive web presence, you are the biggest journal on agriculture in Europe. In your opinion, the legislative proposal massively harms the economy. You believe that a number of jobs will be lost and that the provided 10 billion Euros will not be enough and should better be used for structural alteration measures of companies.

It is up to you to uncover current information and inform the public! You report critically and like to push scandals since they increase the circulation.

Mittel

- ★ As one of the biggest journals on agriculture you have a considerable influence and can be full of confidence.
- ★ You are well-connected in politics and economy. You can interview the participants, ask for opinions in written form and much more.

Contact all groups that are of interest to you. Pin headlines from your interviews and press releases to the board and read them aloud. For your web presence, you should conduct brief live-interviews and coverages.



EXERCISE 02

EVALUATION

DURATION

90 minutes

METHOD

Consolidation, discussion, film, input

1. Closure of the simulation game – personal evaluation

Reflection – 15 minutes

In a first step, the game is analysed. Each group is taking turns at commenting:

- Which goals have you pursued and what have you achieved?
- With who did you cooperate well and with who not?

Sometimes, this step is emotionally very charged. Make sure that there will be no disputes that will continue after the game. Point out that the game is finished and that every group will take a turn during the evaluation. It could also be helpful to visualise the discussion at a board / flipchart. For example, green or red arrows could illustrate similarities and clashes of interest.

De-roling – 10 minutes

In a second step, a so-called relief of roles takes place. Each participant gets the opportunity to answer the questions personally:

- How did you feel in your role?
- What went well and what did not?

Afterwards, the roles are "taken off" (this can be done symbolically by taking off an imaginary jacket or shirt), the props and group signs are taken off, too. Thereafter, it is recommended to take a short break or play a little game.

2. Analysis: reality check – 40 minutes

During the analysis, it is focused on a comparison between game and reality.

First of all, the participants should be asked:

What is your personal opinion regarding the legislative proposal?

The answers could be visualised in a table (realistic/unrealistic). It could also be helpful to guide the participants by asking questions concerning particular stakeholders or giving hints or proposals for solutions. Afterwards, the moderator gives fact-based input via the provided powerpoint presentation where background information is included.

Public hearing

These expert hearings actually take place when legislative proposals are discussed. The scenario itself is not unrealistic, although the context is constructed to impar expertise.

Prices of organic food

A common argument against the use of organic raw materials is the higher costs. With the help of the slide, it can be shown how the price of a food product is composed. Here, it becomes clear that the costs for raw materials are just one part of many. A doubling of the raw material costs does not necessarily lead to much higher final prices.

How much do people on average spend on food with regard to their income? The figure shows that in developed countries people on average spend comparably low amounts for food (approx. 10 % of their income). In countries like Vietnam or Nigeria, people spend around half of their income on food. Here, it could also be discussed if food and their production is valued too little in our society.

Facts on organic food

The provided figures show that at the moment not enough organic grain is cultivated in the EU to immediately implement the legislation.

Is "organic" healthier or better for the environment?

To date, scientific studies have not proven that organic food is healthier. However, studies have shown less pesticide residues in organic foods. And it was shown that organic agriculture is more environmentally friendly than conventional agriculture.

Impact of the legislative proposal

On this slide, it is stated on the role cards ("role description") that the mentioned impacts on companies due to restructuring towards organic production are accurate.

Current examples of regulations

Berlin: In January 2020, The Berlin Department for Education announced in a press release that as of August 2020 in school cantines, noodles, potatoes and rice will be offered in organic quality only. Rice, bananas and pineapples will derive from fair trade. And as of 2021, fruits, milk and milk products should be of organic quality as well. The share of organic food will increase in summer 2020 to 30 % and in the following school year to 50 %. It is also required to focus on seasonal products. A Chip-System is to support a customised planning.

Copenhagen: The city of Copenhagen was the inspiration for these changes in Berlin.

3. Forming and discussing opinions – 20 minutes

The participants read the interview with Mustafa Topal, who has an organic bakery (work sheet 12). Alternatively, they read the statements derived from interviews of representatives of different vocations below. In the interviews, the interviewees explain why "organic" is important to them, respectively. Afterwards, a barometer discussion could be appropriate to further discuss these statements. The participants position themselves on an imaginary line according to their degree of consent concerning the following statements:

Interview with baker master Mustafa Topal

- We exclusively work with organic certified raw materials. We buy those out of conviction.
- We do not use additives, baking aids or ready-mixes.
- Organic does not have to be more expensive.
- I am proud that I do not only think from an economic point of view but also from a human point of view.

Interview with baker master Thomas Lang

- The most important thing for me in my line of work is that I can make the world a little bit better through my work.
- I want to bake with organic raw materials.
- A work environment with a lot of humanity is important to me.
- The society does not value the bakery trade enough.

Interview with brewer Thorsten Schoppe

- Who wants to brew with the best raw materials, brews with organic raw materials.
- I prefer organic raw materials. But if they are not available, I also use conventional raw materials. (for example hops).
- At work, I also want to remain true to myself and stand for my beliefs and values.

Interview with pastry chef Yasmin Säuberlich

- I want to bake with natural ingredients (for example no to little use of ready-mixes).
- Many customers are not willing to pay more for organic products.
- I want to practice my profession sustainably.
- At work, I also want to remain true to myself and stand for my beliefs and values.

Interview with starch producer Götz Kröner

- It is important to me to operate economically with global resources.
- At work, you have to remain true to your own convictions.
- It is important to know the farmers well.
- Nowadays, we have to live and economise sustainably at all costs.

Interview with miller Isabell Hildermann

- Organic food is normal to me, other food is not.
- The next generation can only live well, if we cultivate organically.
- Profit maximisation and economic growth should not be the most important goal of a company, but protection of the environment, sustainability and health.
- It is important to get to know the farmers well.
- Long-term supply contracts and stable partnerships are important.



Interview

Organic does not have to be more expensive

An interview with the factory manager and master baker Mustafa Topal, Bakery ufaBäckerei – Emelys Garden GmbH, Berlin, Germany



Please tell us a little about your career and how you ended up being the factory manager of the bakery ufaBäckerei today.

I am a learned master baker and pastry chef, because I love working with my hands. I completed my apprenticeship in a conventional whole sale bakery. Afterwards, I worked in a large organic bakery and completed my master baker and a number of pedagogical and economic further educations along the way. For a time, I also worked in the bakery of a large renowned department store in Berlin, where I eventually became department manager. When I started there, I was surprised how many ready-mixes¹ and additives were used. I was unsatisfied with that and introduced a number of changes. But that did not go far enough for me. I wanted to work much more manually.

Here in the bakery ufaBäckerei, we jointly strive on a daily basis to get back to the roots. I am responsible for the personnel, the purchasing of raw materials, sales as well as the operative and strategic factory management.

What is important to you when purchasing raw materials?

We exclusively work with organic certified raw materials (EU organic label). But whenever it is possible to purchase raw materials with a higher quality grade for a slightly higher price, we buy those. At least half of our raw materials are certified by Bioland or Demeter² although we would not have to use those [for the EU organic label]. We buy those products out of conviction. Additionally, we buy regional products if possible. For example, our oat is grown in Saxony and is wholly processed in a local mill in the Spreewald region. Our rye stems from an area close to Mellensee here in our region. We produce 100 % organically.

¹ Ready-made mixture of (dry) raw materials

² Bioland and Demeter are two German certification organizations for biodynamic agriculture that are stricter than the EU organic label.

What differences have you determined when processing organic raw materials?

Apart from the kneaders, everything is produced by handwork. Sure, there would be machines for a number of processing steps, but the bakery products should have character. And of course, earning money is also a part of it, but it has to stay human, craftsmanship-like. We do not use additives, baking aids or ready-mixes. We even do not use acerola³. That is vitamin C, why do I need vitamin C in bread. It does not belong in bread.

Of particular importance concerning „organic“ are the extreme quality deviations [of the raw materials]. We need to counter this with a lot of sensory and technical know-how on a daily basis. We rely on the harvest as is. When the grain is inferior due to draughts, the big conventional mills buy their grain from other regions, countries or from the year before and mix the qualities until the grain mixture has adequate baking properties. Of course, we also have to make sure to meet certain standards. What cannot be processed, will be used as feed. And between high quality grain and feed grain is a huge spectrum of qualities. The deviations are highest for grain. But there are also organic dairy products with quality deviations. Especially curd and cream cheese are sometimes more liquid and sometimes firmer. But it is easier to counter because I see the quality right away when I open the bucket and have a look. For grain, it is possible to see slight differences before baking but I do not know for sure before after baking. But that is natural. Thousand years ago, no one analysed the grain for its falling number⁴ or its protein content. Then, the people baked with what they had available.

Do you ever reject a delivery?

Our current suppliers have been active in the organic sector for decades and have a lot of experience. That is why this has never happened. There are quality deviations, but they are within tolerable limits. That is what we also try to communicate to our customers: Organic products do not always look the same and do not always taste the same. This is part of handicraft and organic products. It is natural. Sometimes the bread is two cm higher or lower, sometimes there is a water film visible, and sometimes the bread crumbles slightly when cut. It is still just as digestible and palatable. Some customers mind this, some do not even notice.

Why is „organic“ more expensive?

Organic does not have to be more expensive. Comparing our prices with those of other bakeries, we ascertained that our breads cost about the same. The other day, our pastry „Berliner“⁵ was for once even cheaper than at a discount bakery around the corner. However, our profit does not amount to maybe 70 % but only to around 30 %. This is only profitable for us due to reliable buyers and long-standing partners, but also due to the bulk, because we supply all LPG-organic super markets (we are their in-house bakery) as well as a number of other buyers such as resellers, schools and preschools.

The organic raw materials do not cost as much anymore as they did ten to twenty years ago. Today, there is a large supply of organic raw materials and we buy in bulk and have long-term delivery contracts. This way, the farmers can plan ahead differently and stable partnerships with stable prices develop. Of course, the prices are a little higher than in the conventional sector. They are around ten to twenty percent higher.

³ Acerola – an extract from the acerola cherry that is rich in vitamin C which improves the properties of the gluten in dough.

⁴ Falling number – amylase activity index that is used to determine the sprout (or pre-harvest germination) damage of grain

⁵ Berliner – a sort of round doughnut, regional German pastry

Do you also get involved with the environment?

We partly use energy, that is directly produced as solar energy on our compound. The remaining energy is from regenerative⁶ sources. We also pay attention to packaging and deliver our bread in reusable baskets. Our paper bags are neither bleached nor chlorinated. Sometimes we use 400 baking sheets a day. Since this costs a lot of resources and produces waste, we reuse the baking sheets as often as possible. Since last year, we also use reusable baking sheets made from a recyclable material. These can be reused up to several hundred times.

What is your greatest professional success?

I am proud that I do not only think from an economic point of view but also from a human point of view. I don't set value on hierarchies and do not act like the boss all the time. I also do not consider myself too good for [manual] work and sometimes like to get my hands dirty.

Thank you for this interview!



⁶ Regenerative – renewable; relating to something growing or being grown again.

LITERATURE

- EPIZ (2021): KORN-Zeitschrift – Insider-Tipps und Tricks der Bio-Profis.
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Further links

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IMPRESSUM

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50 PERCENT?!

Simulation game for vocational education and training of food producers on the topics organic farming and sustainability

What is "organic"? What advantages does organic food have? Why should we possibly decide for it? And what does that mean for the trade: purchasing, storage, processing? These are topics of this brochure. The trainees learn about these topics with the method "simulation game": They play roles such as stakeholders of the food industry, members of an environmental protection association and press, and discuss if an obligatory share of organic raw materials is reasonable for all food products. At the same time, they playfully learn more about production, processing and storage of organic food.

