



THE FOOD ISSUE

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EDITORIAL

Pretzel, paella, dumplings, pasta, waffle... food! Are you already hungry? Bear with us! Satisfy your hunger with this year's articles of the Ecosprinter printed edition.

Food is present in our daily lives, but it is also a political topic. The Russian war against Ukraine and its influence on global food supply chains have once again shown us the political dimension of food and agriculture. There are many other areas where the political dimension of food becomes apparent, for example when it comes to its social and environmental impact.

We have asked our writers about these issues. What is the environmental impact of food? What are the social implications of the current food production system? Is food access equal across the world?

We have received multiple answers spanning from worms' usage in agriculture to food in athletes' lives. Hopefully, you will find inspiration from reading these articles and activate yourself to counter food waste, unsustainable agriculture and worldwide hunger.

To draft this year's edition, we have asked some questions to the Greens/EFA MEP Thomas Waitz, a former farmer and pluriannual activist on agriculture-related matters and food. You can read about what he has to say in the interview within this edition.

This magazine culminates the yearly work of four young green activists: Christina, Edoardo, Gabriella and Miriam. We have spent many evenings together editing, drafting and thinking over the publications. It was a pleasure for us to come up with this publication, which aims to give voice to young writers from all across Europe. We hope you will enjoy reading it!

Editorial Board

*Christina Keßler, Edoardo De Paola,
Gabriella Waibel, Miriam Sivianes Mendia*

2022

**Test your knowledge
on the information of the articles**



THE URGENCY FOR AN AGRO-ECOLOGICAL TRANSITION IN THE GLOBAL FOOD SYSTEM

Iason Paschalidis-Gerostergiou

The cultivation of the Earth, along with forestry activities, has been vital for our survival as humankind. Unfortunately, the continuous push for the industrialization and globalization of the world's agriculture and food supply systems, on the altar of economic development and security, not only cannot provide a sustainable solution for the growing needs of the culture of over-consumerism that has been heavily promoted in the last decades, but threatens the future of humanity and the natural world. Since the end of WWII, the combination of population and economic growth along with technological and cultural shifts in production practices, have spurred a significant increase in the global food and agricultural pro-

duction, which does not come without costs.

The industrial technologies applied to the exploitation of the Earth, such as herbicides, chemical fertilizers, mutated seeds, or massive single crops for the global market, have been detrimental for Earth's ecosystems, which have been collapsing one by one in front of our very own eyes. A common sign that Earth's ecosystems are approaching tipping points is volatility and the increasingly more frequent extreme weather, with heat domes, droughts, fires, floods and cyclones happening all over the globe serves, among others, as undeniable indication, that Earth may be approaching a "tipping point" of irreversible cli-





mate change, which could bring dire consequences for our life on this planet as we know it. When the concept of “tipping points” was introduced by the Intergovernmental Panel on Climate Change (IPCC), the intergovernmental body of the United Nations responsible for advancing knowledge on

“Feeding the world in a sustainable manner, especially in the context of climate change and population growth, entails food systems that ensure adaptive capacity, minimize environmental impacts, eliminate hunger, and contribute to human health and animal welfare”

– Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

human-induced climate change, it was thought they would only occur if global warming reached 5°C. Recent IPCC assessments suggest, though,

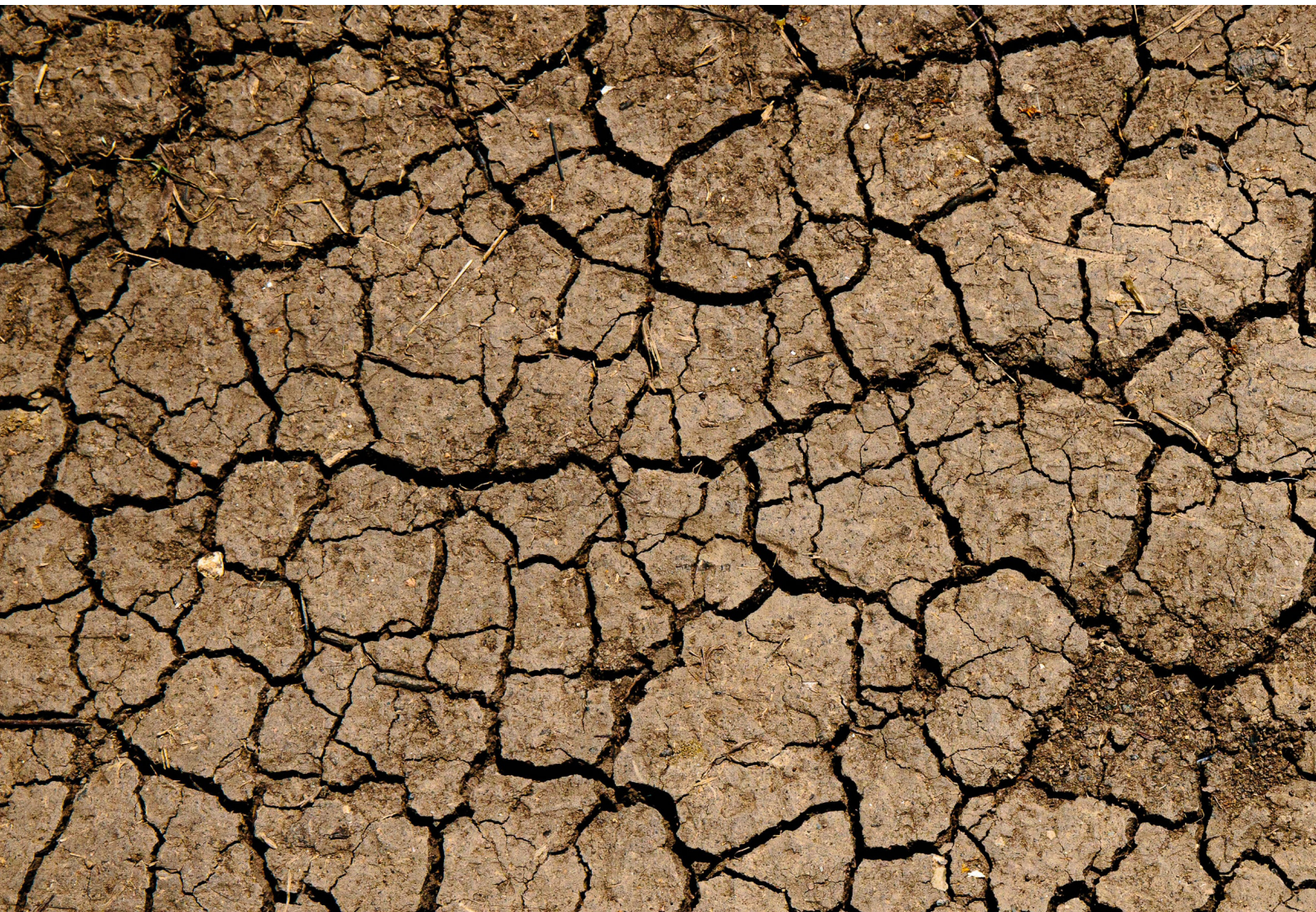
that tipping points could be reached between 1°C and 2°C of warming, noting that at the current pace, Earth is likely to reach the crucial 1.5° warming limit in the early 2030s. Unless we act now. Time is running out and we need to focus on a radical transformation of our food system, we need to move towards an agro-ecological transition that can benefit the planet, while securing a good quality of life for everyone on it.

Food production will progressively be impacted by climate change, in particular from the increased frequency of extreme weather events and therefore it is vital to concentrate on the development of a food system that can adapt to the harsh environmental conditions, while ensuring that it is socially just. This can be achieved by empowering local food production systems. In order to provide a more concrete justification to why it is urgent to shift towards social and agro-ecological food policies that are based on local production systems, let’s look beyond the forest of climate change and extreme weather conditions and zoom in the trees of economic injustice and social prosperity. It is noted in the “Manifesto on the Future of Food” by the International Commission on the Future of Food and Agriculture, that since the first

organised societies, numerous forms of community-based local agriculture systems have been successful in providing enough food resources, while preserving the integrity of their ecosystems. However, as they are being sacrificed in favour of corporate-controlled, technology-based, monocultural, export-oriented systems, instead of achieving the promoted luxurious lifestyle for all that this era of over-consumerism so heavily desires, we are negatively impacting public health, food quality and nourishment, as well as traditional livelihoods (both agricultural and artisanal) and indigenous and local cultures. As is also stated in the "Manifesto on the Future of Food", these systems raise the risk of indebtedness among millions of farmers, while degrading the planet's life support systems. Additionally, they contribute to a planet-wide alienation from the historic, cultural and natural connection of farmers and all other people to nature and sources of food and sustenance. Therefore, we have to acknowledge that the current food systems eventually do not develop the global quality of life, but on the con-

trary, they are augmenting hunger, landlessness, and despair. These systems are not the solution for a sustainable and just future for all. This mentality poses a threat to global security and peace and establishes a context for social disintegration and inflammation of violent conflicts.

The ecological approach to sustainable agricultural production options, such as agro-ecological practices and organic agriculture, might provide a much-needed alternative solution, in order to ensure a prosperous future for all. As it has been proposed by the Greens/EFA group in the European Parliament, the current global food system, which relies on high input, industrial farming of monocultures and factory farming, must be substituted by food production systems which are locally adapted and established on maintaining high biodiversity. By committing to such policies and practices that drive towards local and agro-ecological food systems, we can safeguard the production of healthy food, the protection of the environment and the respect for animal wel-



fare, without having to compromise the financial security and sustainability of local producers. Examples of agricultural practices that apply principles of agro-ecology are organic farming, agro-forestry and polyculture (mixed crops) and successful cases can be traced all over the globe. In Luangwa Valley in Zambia, the Community Markets for Conservation (COMACO) has helped people address the challenges of food insecurity and environmental degradation while conserving wildlife and other natural resources. COMACO is one of the few programs that operate at the scale of an entire ecosystem and has contributed to increased wildlife numbers, better protected habitats, improved food security, and better incomes.

Agro-ecology has been identified as a practice that can be supported by the ecological programs of the first pillar of the EU's Common Agricultural Policy (CAP). It has also emerged as one of the agricultural practices that can help achieve the objectives of the European Green Deal and its related "Farm to Fork" strategy and biodiversity

strategies. Agro-ecology can be a fundamental tool for the EU in its efforts to promote a sustainable agricultural sector that respects the boundaries of the planet and is able to meet the changing needs of society, both in terms of sustainable and healthy eating and for environmental and climate issues related to primary production. This ecological transition though, which concerns the transition from the current way of production and consumption in a more ecological way, is not an easy task to accomplish. It is about changing the current economic and social model of over-consumption, which is deeply rooted in our societies and to do so, we need to understand the concept of degrowth and embrace what Wendell Berry meticulously described in a sentence, *"To cherish what remains of the Earth and to foster its renewal is our only legitimate hope of survival"*.



THE FUTURE OF FARMING: How a Young Farmer from Southern Germany is Disrupting the Conventional Farming Landscape through Community Supported Agriculture

Emil Schenkyr

Grassland as far as the eyes can see, dairy farming, and deeply conservative politics. If you want to paint a picture of the Allgäu, the Southern German area located in the depths of Bavaria, just in front of the Alps, this comes pretty close. Having grown up there, the cultural landscape defined by the permanent grassland due to extensive dairy farming and explicitly protected by the European Union (EU) meant home. It seemed unchangeable, even though the area used to be known as the “blue Allgäu”, because of the blue poppy for clothes production used to dominate the area. However, blue poppy became unprofitable in the 19th century thanks to much cheaper cotton from overseas, leading to the change towards grassland (and representing the mostly overlooked impact of slavery on the Allgäu). During my time in school, a number of my classmates were children of said dairy farmers. As chance wants it, one of these farms is now disrupting this conventional dairy farming landscape through Community Supported Agriculture (CSA). Reason enough to call up my old friend from school, who is now going new ways on the farm that his great-grandfather founded.

Interview with Jonas Jörg

Emil: Jonas, thank you for meeting me for this interview! You are the eldest son and are now running your family's farm together with your parents, representing the fourth generation. Did you always know you wanted to carry on the family business? In the Allgäu, you could say it's kind of your duty, as the eldest son.

Jonas: [laughs] well, I have been interested in agriculture since an early age. Growing up on a farm, you have a kind of natural connection to it. But it was never expected of me. My father always says, one thing he was always annoyed by, is that he wasn't asked. There was no discussion, that's how it was, the eldest son took over the farm. For bet-

ter or worse. He likes doing it, but he was never asked, which is why he said he wants to leave it completely open for me.

Turns out it was the right direction for me anyways. Through my studies I still have other options, like working as an auditor for ecological farming, which I'm still doing part-time now. The final decision that I'll take over the farm sooner or later fell in 2018, when we decided to stop dairy farming. That decision was made consciously, because I said I wouldn't continue dairy farming, so it kind of depended on my decision as well and we let it run out.

The Future of Food Production

Emil: For you the farm is much more than a mere one-family business and much rather functions as a platform. How do you envision food production ideally?

Jonas: This idea of the farm being a platform comes from my father, and I mostly agree with him on that. We believe in re-establishing a relationship between the people and agriculture. We do this by letting people help on the farm through the CSA. And ideal food production, that's pretty

much that, close to the consumer. Taking them back on the field, enabling this experience and connection to the final product. In our case for example, the consumers are included in every step of the production.

Emil: Do you get feedback from the people, that it changes their perspective?

Jonas: Lots of it! Many of our consumers, especially the ones that participate in joint planting or sowing on the fields, tell us that they started eating their food much more consciously. A nice



Community Supported Agriculture (CSA)

In its core, CSA is a close relationship between farmer and consumer. A farm provides a defined group of people in its closer proximity with food. In turn, the group provides the farm with all necessary means for the food production. The CSA of Jonas' farm revolves around vegetable production. Through a compulsory contribution of €85 a month and voluntary support through labour, the participants earn the right to a weekly box of vegetables which is calculated to provide for a household of four. In addition to this core, the CSA provides a community for many and is in a way also a statement for a more inclusive, respectful, and green way of farming.

“

I am of the opinion that these younger generations that are growing up now, they already have a changed perspective. The place where this change of perspective is still waiting to happen is much more within the agriculture community itself. So, if I could wish for one thing, I would wish for the agricultural education system to diversify its teaching, and for the farmers to be more open to alternative systems.

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example came last year, when we were planting pumpkins, right? We explained it to everyone, and then the kids, they started literally digging in the seeds, about ten centimetres deep. So, of course it took the plant a lot of energy to grow so far as to see sunlight and be able to grow. It also took the plant longer, about four weeks. In the end, this resulted in some of the plants not carrying fruits at all, and a lot of them with very small pumpkins. So, when they came back in autumn, the kids realised that it's not just digging the seeds into the ground and it'll work out, but the how makes a difference [laughs].

Emil: [laughs] I'll make sure not to make this mistake then. Now, we already talked about you not doing dairy farming anymore. What's the reason behind that, and how did you come to implement the CSA system?

Jonas: Right, we are now mainly producing vegetables. Actually, that was more by chance than planned. Based on our idea of the farm as a platform we started a cooperation with a local employer for handicapped people. And then we started looking for alternatives to dairy farming, because the workflow was too complex for people that are not professional farmers. Through an ecological farming consultant, we got the idea for vegetable farming. That was in 2016, before that, we didn't produce any vegetables, apart from a small garden for our own consumption, right?

And with the vegetable production came the implementation of the CSA system. We never did it differently. The idea for it, that's a funny story, we got from this consultant's intern. He was a farming student and knew the system from Northern Germany. And he said this might be a good fit for our farm, and he was right. Actually, it was also the easiest way to find consumers for our vegetables when we were still running the dairy farm at the same time. We didn't have to go to farmers' markets or anything, the people would just come on a weekly basis and pick up the harvest. And it gave us more security. No matter the exact size of the harvest, we would be supported through this communal system.

Going New Ways: Disrupting Agriculture in the Allgäu with CSA

Emil: You started with 20 boxes, did you find buyers right away? After all, the concept was pretty new in the Allgäu.

Jonas: It was new, but that wasn't a problem. Word spread fast and surprisingly fast we found 20 families that were happy to participate. Most of them already knew us from buying milk or eggs from our farm anyways, so we asked around if they would be interested in a CSA system. From 2018 on, when we decided to phase out dairy farming and focus on vegetables altogether, we kept on growing and will expand to over 100 boxes this year. We never needed to advertise it either, in the newspaper or otherwise. The main marketing channel was, and still is, mouth-to-mouth propaganda. And you can tell, there is a certain group of people that make up the majority of our customers. Not that we have a target audience, everyone can participate, but our typical customer is a young family with two little kids.

Emil: I can imagine them liking it, after all they have to do much less grocery shopping and also receive different products, vegetables they might not usually buy.

Jonas: Exactly, they learn to adapt their diet to our harvest. Even if that means that they have to include kale in their meals [laughs]. But on the other hand, that system is not for everyone. It takes a certain level of planning which isn't the right thing for every household. After all, the boxes are not as flexible as the vegetable counters in the supermarket. For some it widens their horizon, while it narrows down the variety for others.

Vegetables or Meat – The Question of the Right Diet

Emil: Speaking of more variety, you are also experimenting with the production of meat. Are you working towards a specific goal there?

Jonas: Experimenting is probably the best term to describe it. It pretty much made sense to try something in this direction because of the buildings and infrastructure we had from the dairy farming. My long-term goal, if you want, is to maximise the level of animal welfare. This starts with the creation of the cow, ends with its death, and includes the life it has in between. So, you can look at each part of its life individually. For life on the farm for example, I aim for a maximum of time spent outside.

Emil: So, the long-term goal isn't necessarily a strictly vegetarian diet?

Jonas: As much as I can understand the reasons behind a vegetarian diet, I couldn't do it myself. I tried for a while, but the vegetarian version isn't logical in itself anyways. If at all, we should aim for a strictly vegan diet. But my point of view is that it won't be the few perfect ones, but rather the many imperfect ones that'll save the world. Meat should be something special, it shouldn't be something we consume on a daily basis. So, it's more back to the weekly family dinner I'm advertising than a strict vegan diet.

Emil: Speaking from a land usage point of view, growing vegetables seems much more effective. Would that be a reason for a change in diet as well?

Jonas: Certainly. We are currently using one hectare land for growing vegetables and are able to cover the need for vegetables for about 120 families with that. And that in the Allgäu, where people always say the land can only be used for permanent grassland. But the land where we grow vegetables is also highly valuable in terms of biodiversity. From an ecological point of view, this brings immense benefits and increases both diversity in insects and plants. At the same time, there are also benefits to permanent grassland. When done correctly, you can capture CO₂ in the land by moving around your kettle on the grassland. We have had promising tests in the Allgäu with this as well. You can see, there are benefits to both, but it needs to be done right and a smart mixture is of

the essence. That is still lacking here.

The Role of the EU and the Agricultural Community

Emil: Moving on to a different level, the EU has recently implemented the new Common Agricultural Policy (CAP) for the next seven years. How does that impact your CSA?

Jonas: The support through the CAP is directly linked to the amount of space you use for agriculture, which is why it affects us negatively. We use less space now compared to when we did dairy farming, which means we receive less support as well. That was clear from the beginning, there is no incentive to switch to alternative forms of farming. This also shows you that conventional agriculture wouldn't work without the support from the CAP. At the same time, the CSA system we have now only works because a solidary community supports us. We calculate what we need to invest in order to produce the harvest and the consumers pay that. Including a fair wage for our labour of course.

Emil: One final question if I may. If you could wish for one thing, what would it be?

Jonas: Honestly, there is a lot of talk about the need for a change of perspective in society. I don't think that's true. I am of the opinion that these younger generations that are growing up now, they already have a changed perspective. The place where this change of perspective is still waiting to happen is much more within the agriculture community itself. So, if I could wish for one thing, I would wish for the agricultural education system to diversify its teaching, and for the farmers to be more open to alternative systems. We can tell from the consumers that they are open to alternative farming models, but the much-needed change has to find its way to the farmers and the agricultural community itself.

RECIPE #1

KARTOFFELSALAT

INGREDIENTS

3 large red potatoes
1/2 sweet onion
6 vegan sausages
1 golden apple
6 pickles
65 grams of capers
6 tablespoons vegan mayo
1 teaspoon of Dijon mustard
1 unsweetened soy yoghurt
Dill
Unrefined sea salt

PREPARATION OF THE SAUCE

In a small bowl, mix the 6 tablespoons of vegan mayo with a teaspoon of Dijon mustard, the yoghurt, the dill and some salt. Mix well so that all the ingredients are well integrated and set aside in the refrigerator.

INSTRUCTIONS FOR THE DISH

Peel and cut the potatoes into cubes and boil them until they are done. Once the potatoes are cooked, let them cool. Fry half finely chopped onion using a spoon of extra virgin olive oil once the onion is transparent, then we add the vegan sausages. Brown the sausages and add the pickles and capers, then cook for a couple of minutes. After that, let all the ingredients cool (ideally overnight). Peel and dice the apple and mix with the rest of the ingredients and the sauce. Transfer everything to a big bowl or serve the salad directly with a ladle.



HOW CAN HYBRID WORMS SAVE OUR PLANET?

Dusan Ljumovic

Over the last 10,000 years of agriculture the degradation of soils has been one of the leading causes of climate change. It's actually, as of right now, a larger cause of climate change than burning fossil fuels. Chemically fertilised hard compaction poor-structured soil isn't effective in agriculture. This form of agriculture kills the whole soil ecosystem, because plants can't get through it and water can't get in there.

We should use plants to pull carbon from the atmosphere and store it in our soil. Plants use carbon dioxide and energy from the sun to create simple sugars, which the plants use to grow. The rest is pumped into the soil through the roots. These sugars feed the soil microbes, which interact with the plant and the carbon dioxide taken from the atmosphere and sequestered into the soil as carbon. Our constant ploughing of the soil has released billions of tonnes of this substance.

Soil is almost an unknown universe, there's 6 billion microorganisms of a huge diversity in a small spoonful of healthy soil, which is truly amazing. Healthy soil has worms. We must regenerate the land using a lot less chemicals and inputs than what is traditionally used.

The best worms for this purpose are the Californian red worms, or popularly called "Red hybrid"

(*Eisenia Foetida* and *Eisenia Andrei*). They are created with a long selection by American scientists. Even though they are small in size, from 6 to 8 cm, and almost weigh 1 gram, they are exceptionally fast at breeding, which creates a big amount of protein – meat – and also a production of casting which is not nearly able to provide any different kind of worms. Worms dig tunnels by eating up the soil in front of them. The soil is then excreted with mucus to form burrow walls. Castings, which are excreted wastes and dirt clumps, show up on the surface of the ground. They look like tiny bunches of grapes. Worms make soil and are natural soil tillers. They can eat their weight in dirt each day. One acre of soil may contain up to one million worms. Those worms can produce around 700 pounds of castings each day.

The worms are fed with any kind of waste of organic origin, which is able to boil through the influence of natural factors (water, air, and bacteria) and decompose further into its constituent elements. Some examples of organic waste are: livestock manure, waste grain, fruit and vegetable waste, organic waste from urban trash, leaves of deciduous trees, sewage sludge and more. Livestock manure is both a natural habitat and food for the worms, and therefore remains the most important production of the worm casting.



Bio humus is fully organic live fertiliser obtained in the process of raising California red worms. It does not contain harmful substances, pathogenic organisms or weed seeds. It is rich in beneficial microorganisms, enzymes, vitamins, amino acids and is applicable in all areas of plant growing – for soil fertilisation, production of seedlings, before and during sowing, for re-cultivation of land.

Bio humus is a manure obtained by processing by California earthworm. It is considered one of the highest quality types of organic garbage. The manure used to feed these earthworms must be environmentally friendly and healthy, because the use of any preparations kills earthworms. After the fermentation is over, this fertiliser can be spread by hand without the fear of getting dirty because it's got a fine structure. In terms of nutritional val-

ue, bio humus is at least 10 times better than other types of manure and does not contain weeds, so its use eliminates the risk of weeds entering the field. Another advantage of bio humus is the possibility of using them for the so-called folate fertilisation of plants, i.e., feeding through leaves.

Bio humus increases yields by 30% to 70% depending on the grown crops, and its effect is intensified in proportion to the duration of its application.

Using bio fertiliser improves the quality of products, as it increases the vitamin content in fruits and vegetables by up to 45% and reduces nitrate content up to 55 times.

COVID-19 LEAVES GREEKS HUNGRY

Angela Timmermans

Evi* (*prefers not to disclose her name*) usually works as a tour guide on the island of Crete, in Southern Greece. But with the country's economy relying heavily on tourism, the numerous Covid-19 lockdowns across the EU have left her with little money. The 56-year-old even happens to skip meals to make ends meet.

Greece isn't only a place with pink-sanded beaches and paradise-looking resorts. The country is still struggling to get out of a never-ending economic crisis, and many are unable to cover basic expenses. With the pandemic, the situation worsened even further and left some food-insecure: they don't have access to sufficient or quality food.

Evi explains her financial situation has been very challenging since the first Covid-19 lockdown. "I live on my own. I have a little bit of money, but sometimes I run out. If I have only €20 in my pocket, it means I ran out," she says.

"Everything is expensive," says Evi. Indeed, Greece ranks the lowest in the European Union when comparing purchasing power scores. In addition, many items have become increasingly costly recently, such as the dramatic rise in energy prices. While the latter has affected all EU countries, it had a much greater impact on a country where

many earn less than €500 per month.

"In wintertime, there is no work at all," she explains. Evi is waiting for March, when the first foreign tourists usually arrive. She already has a few bookings scheduled. The tour guide is hoping there won't be any more Covid-19 restrictions and lockdowns by then, and that she will be able to save for next winter. But she remains concerned. "Our health and professional life are destroyed," she regrets.

This crisis has had an intergenerational impact. The country has long had one of the highest unemployment rates in the EU and it now ranks second after Spain at 12.9%.

A number of those who would usually support their adult children financially can't do so any longer. The most vulnerable, such as students and single mothers, are left with little to get by.

In addition, Evi explains that the elderly are "easy targets" and have had their pensions cut down many times since the beginning of the economic crisis.

"There can't be a government worse than the one we have. They should get the hell out of here," Evi

says. Many are sharing this opinion, feeling the ones in power have abandoned them a long time ago.

In fact, despite her struggle, Evi doesn't believe she will receive much help from the state. "It's a government full of liars," she says. "In 2020, they gave me €1,864 as compensation for the crisis. €1,864 to cover the whole year," she adds.

Across the EU, welfare has become increasingly sparse and selective. State-sponsored assistance is often difficult to access or too slow in being granted. The Greek government is currently offering a few hundred euros per month as a means of support to those at risk of extreme poverty, but many are deterred from applying by the many conditions they need to meet. And the number of those at risk keeps on rising.

Food banks stepped in and tried desperately to support the most vulnerable by treating the symptoms of a much deeper problem: they can't make up for years of austerity, unfair wages, unpaid internships, the unequal distribution of wealth, ex-

orbitant rent prices, and so much more.

Charities, student initiatives, and phone apps combating food waste do help, but they are only bringing quick temporary fixes. Given the extent of the issue and the sharp increase in poverty levels, they can neither cope with the needs nor replace much-needed jobs.

Evi can count on her neighbours, sometimes. "The ones I'm very close to, we share," she says. "When I work, I help others. We give each other food. It's solidarity that helps me, not the state," she explains. However, she would prefer to keep her distress to herself. "I don't want to burden people around me more," she whispers.

Despite everything, Evi remains hopeful. "I can do anything, any job," she says. "I'm going to survive somehow," she smiles.

RECIPE #2

BRUSCHETTA

INGREDIENTS

12 slices of bread, lightly toasted
3 large tomatoes, chopped
1 tablespoon olive oil
3 tablespoons chopped fresh basil
1/4 teaspoon sea salt or kosher salt
Pinch of freshly ground pepper

INSTRUCTIONS FOR THE DISH

Chop the tomatoes. You may want to remove excess seeds and pulp.
Chop the fresh basil.
Combine tomatoes, oil, basil and salt in a covered container and marinate for at least 4 hours. Do not refrigerate as the tomatoes will lose their flavour in the refrigerator.
Immediately before serving, lightly toast the bread slices.
Coat the bread with the tomato-basil mixture.
Sprinkle fresh paprika on top. Serve immediately.



EXPLORING THE CONNECTION BETWEEN GENDER AND MEAT CONSUMPTION

Melissa Muhr

It is well studied that diets with low-to-zero consumption of meat, such as vegetarianism and veganism, are two of the most sustainable and environmentally friendly diets and can reduce our carbon footprint. Therefore, promoting a meat-reduced diet and convincing people to cut their meat consumption is a crucial step towards a more sustainable world. Scientific literature reveals that not all people are open to reducing their meat consumption and we see that most of the people who call themselves vegetarians or vegans identify as women. Furthermore, in most western societies there is a strong link between masculinity and meat consumption. The article wants to explore the connections between gender and eating behaviours as well as its implication for sustainable development.

Scholars of gender studies such as Hilary M. Lips argue that gender as we perceive it is mostly socially constructed, because it is much more than what biological differences could explain. From the day of our birth, we are taught what it means to be a man or a woman. Gender roles and stereotypes express cultural values and power structures. Lips and others highlight that it is very important to note that the gender binary is a social construct and that there are many more genders than just man and woman e.g. intersex and non-binary. In addition, studies have shown that gender can be fluid and perceived as a continuum. Unfortunately, gender diversity is rarely acknowledged in academia outside of the gender and queer studies community. As a result, most of the studies presented in this article only provide information about people who identify as either

male or female.

An overview study conducted by D. L. Rosenfeld from the year 2018 gives an outline of the connections between masculinity and meat consumption. In today's western societies, eating meat is a strategy to affirm a masculine gender identity. Men eat meat more often and in larger amounts than women, and they are less likely to be vegetarians. Most men associate meat with health benefits and within society, meat is widely recognized as a masculine food product. Situations where masculinity is very prominent, such as in military contexts, can pose additional barriers to reducing meat consumption. In these contexts, meat consumption can be used as a strategy to appear more masculine to other people. Besides, men are more likely to have negative opinions about vegetarians and have a more negative perception of vegetarian men than women would do. All of this shows that vegetarianism poses a threat to the idea of masculinity and challenges existing gender norms.

The connection between masculinity and meat consumption is an obstacle on the way to reach environmental protection goals. M.B. Ruby states that meat is seen as a symbol of masculine domination over nature and Rosenfeld highlights that men are less likely to recognize the environmental impacts of meat production. Moreover, Sanchez-Sabate and Sabaté conclude that today, people who reduce their meat consumption for environmental reasons are mostly young European women who are generally more aware of the negative impacts of meat consumption on the



environment. To overcome this disparity of meat perception and to set new norms around meat consumption are two of the main tasks to complete in order to make vegetarianism more popular. Since vegetarianism challenges entrenched gender norms and destabilizes the link between masculinity and meat, Rosenfeld emphasizes that making vegetarianism more popular can help to reduce hegemonic masculinity.

So, what can we do to convince more men to reduce their meat consumption? Stoll-Kleemann and Schmidt give some ideas in their article published in 2017. Firstly, they suggest that we need to create new cultural norms of masculinity in all social contexts to reduce the connection between meat and masculinity. Putting vegetarianism and veganism on the social agenda and speaking about your own meat-reduced consumption, especially if you identify as a man, is crucial to make meat reduction more popular, mainly because one of the strongest predictors of men being vegetarian is the number of their friends who are vegetarians. Secondly, a communication strategy that has been proven to be successful to promote meat reduction among men is to highlight the health benefits of a meat-reduced diet. These research findings are a call to action for all communicators, whether it be journalists, policymakers, or simply friends talking to each other, to consider the gender implications of calling for a meat-reduced, sustainable diet.

In summary, we can learn from science that the demand for a change in the food system and diet is always linked to gender implications. Meat consumption is strongly associated with masculinity, and calling for a reduction in meat consumption can pose a threat to people's identities. Therefore, it is important to create new norms and understandings of masculinity to promote a more sustainable diet. Furthermore, the call for meat reduction also has implications for power relations. Knowing that men are less committed to reducing meat consumption while gender equality has not yet been achieved in most of Europe's national parliaments and in the European Parliament poses a threat to shaping our food system towards sustainability. This, among many other factors, is another indication of the fact that environmental justice issues are intertwined with social justice issues such as gender equality.

This article should also be a call for all scholars to consider gender outside of the gender binary when collecting and analysing research data. In addition, we need more information on how gender intersects with other social and political identities that create various forms of discrimination and privilege in the field of vegetarianism and veganism.

References of the cited studies are available from the author upon request.

THE DILEMMA OF PERFORMANCE AND SUSTAINABILITY IN SPORTS NUTRITION

Nessa Molina Cano

Even though food has been a central aspect for sustainability and the preservation of the ecosystem, significantly present at most governmental and international organisations' policies, the fact is that acquiring sustainable nutrition habits is one of the greatest challenges today. The industrial food market is one of the major contributors to environmental degradation and climate crisis. Land degradation, water pollution or large transnational supply chains can be clear examples, but what concerns scientists and ecologists the most is the vast greenhouse gases (GHG) emissions – not only CO₂ but also methane and nitrous oxide – that the industry produces, especially in meat production. Food industry is responsible for 26% of global emissions. Dairy, meat and eggs account for 83% of GHG of the average EU diet, while only 17% results from plant-based foods according to recent studies. Therefore, there is a pressing need to transition from the production, manufacturing, and consuming model of the prevailing system to one more respectful and sustainable with our environment. According to a recent study, ovo-lacto-vegetarian and vegan diets represent a clear environmental advantage with respect to the omnivorous in carbon, water, and ecological footprint, so public green policies should encourage these new habits for citizens.

However, finding a greener sustainable diet model for athletes is slightly more difficult, as their nutritional demands and performance habits can differ from the standard of most of the population, especially in the calorie and protein intakes. Furthermore, athletes tend to follow healthier habits and focus their lifestyle on performance. While, for example, the European Food Safety Association (EFSA) and the World Health Organisation (WHO) set the Safe Level of Protein (SLP) intake at 0.83 g per kilogram per day (Wildman, 2019), protein recommendations for athletes rise to a range from 1.2–2 g/kg body weight (BW)/day, especially if the goal is muscle gain. In global terms, from a female non-athlete to a hypocaloric athlete the intake of proteins can differ from 48 g to 150 g per day – which, according to statistics, implies an increase of daily consumption of cooked meat from 92 g to 288 g. As we are seeing, the problem lies in the practice and belief that a higher demand of proteins also requires a high demand of meat and dairy products.

Hence, what can be done to preserve a healthy, high performance and quality calories and protein intake while being sustainable and reducing our footprint? From the entire food production, only 6% of food emissions come from transport, while a 24% correspond to land use, 27% to crop

Food: greenhouse gas emissions across the supply chain

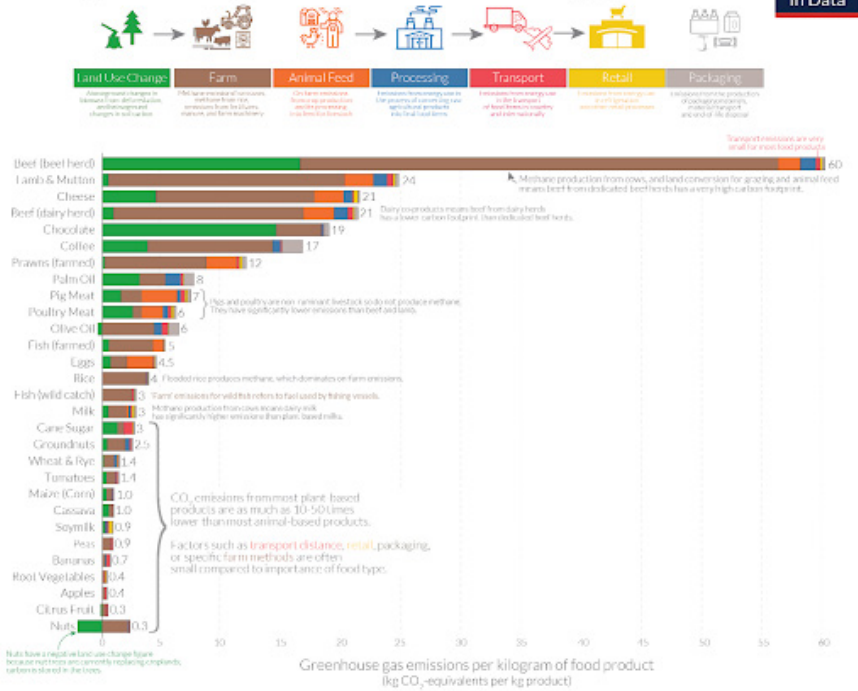


Figure 1. Food: greenhouse gas emissions across the supply chain

production – a 6% of this come from animal feed –, and 31% from livestock and fisheries (Ritchie & Roser, 2020).

Figure 1 represents the amount of greenhouse emissions both in absolute and relative terms, of different kinds of food, and the percentage of emissions across each supply chain. As we saw previously, land use, farming and animal use have far greater weight than processing, transport, retail, and packaging in most of the products shown. According to these data, it seems logical to focus

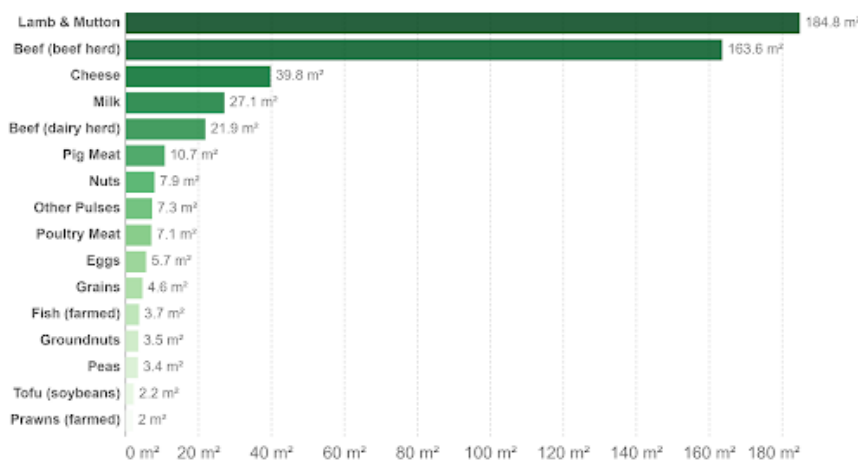
on reducing what we eat according to, for example, land use, rather than where it comes from.

The previous graphic shows how land use is distributed according to their protein impact. As we can observe (Figure 2), high protein animal-based food also requires vast lands to be produced, so their final GHG emissions are likely higher.

The following graphic (Figure 3), which displays the total greenhouse emissions per 100 g of protein, confirms the previous statement: meat and

Land use per 100 grams of protein

Land use is measured in meters squared (m²) per 100 grams of protein across various food products.



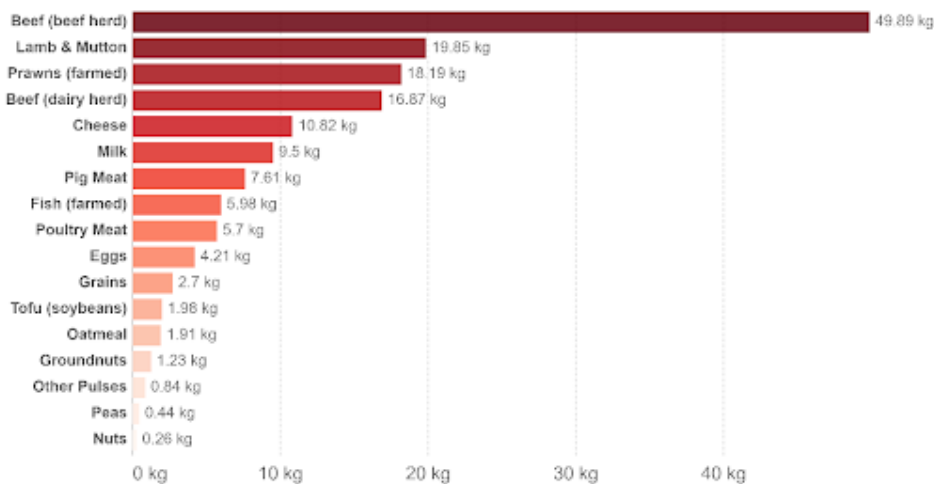
Source: Poore, J., & Nemecek, T. (2018). Additional calculations by Our World in Data. Note: Data represents the global average land use of food products based on a large meta-analysis of food production covering 38,700 commercially viable farms in 119 countries. OurWorldInData.org/environmental-impacts-of-food • CC BY

Figure 2. Land use per 100 g of protein

Greenhouse gas emissions per 100 grams of protein



Greenhouse gas emissions are measured in kilograms of carbon dioxide equivalents (kgCO₂e) per 100 grams of protein. This means non-CO₂ greenhouse gases are included and weighted by their relative warming impact.



Source: Poore, J., & Nemecek, T. (2018). Additional calculations by Our World in Data.
 Note: Data represents the global average greenhouse gas emissions of food products based on a large meta-analysis of food production covering 38,700 commercially viable farms in 119 countries.
 OurWorldInData.org/environmental-impacts-of-food • CC BY

Figure 3. Greenhouse gas emissions per 100 g of protein

dairy products play a main role in the emissions of industrial and, specifically, agriculture industry, while plant-based sources of protein are environmentally friendlier.

Applying the previous tables without considering other macronutrients would be a reductionist approach to the issue, as calorie intake, food quality, feeling of fullness, timing and a good balance between discipline and freedom are other important pillars in an athlete lifestyle. This table, made by

Tilman & Clark, for instance, reflects how some plant and animal-based foods can fit into calorie intake, feeling of fullness – expressed in the amount of food required to reach 20 g of protein – and quality, so there is a need to balance other issues than protein intake and the carbon footprint of every meal.

Be that as it may, from the evidence and scientific and academic reports assessed, we can extract some tips or guidelines for athletes to transition

Table 5. Cooked amounts of plant and animal-based foods delivering 20 g of protein.

Food	Grams	Ounces	Cups	T	Calories	Limiting Amino Acids	Leucine (g)
Anasazi Beans	322	11.4	1.4	23	426	Sulfur containing AA	1.2
Black Beans	295	10.4	1.3	21	295	Sulfur containing AA	1.3
Chickpeas	284	10	1.3	20	336	Sulfur containing AA	1
Soybeans	204	7.2	1	14	268	Complete plant protein	2.3
Lentils	250	8.8	1.1	18	253	Sulfur containing AA	1.3
Tofu	284	10	1.3	20	189	Complete plant protein	1.3
Tempeh	306	10.8	1.4	22	265	Complete plant protein	2.4
Edamame	318	11.2	1.4	22	265	Complete plant protein	1.2
Seitan	408	14.4	1.8	29	270	Complete plant protein	no data
Buckwheat	755	26.6	3.3	53	516	Complete plant protein	0.4
Quinoa	567	20	2.5	40	555	Complete plant protein	0.5
Millet	748	26.4	3.3	53	683	Lysine, threonine	0.8
Amaranth	500	17.6	2.2	35	552	Complete plant protein	no data
Einkorn	145	5.1	0.6	10	218	no data	no data
Emmer	227	8	1	16	200	Lysine	0.3
Spelt	411	14.5	1.8	29	445	No data	no data
Kamut	411	14.5	1.8	29	454	Lysine	0.8
Almonds	227	8	1	16	575	Methionine, Cysteine	2.1
Peanut butter	68	2.4	0.3	5	470	Methionine, Cysteine	3.9
Hemp seeds	57	2	0.3	4	160	Lysine	0.7
Pumpkin seeds	132	4.6	0.6	9	433	Complete plant protein	3
Beef 15% fat	73	2.4	0.3	5	157	Complete protein	1.7
Chicken	91	3.2	0.4	6	100	Complete protein	3.3
Pork	73	2.4	0.3	5	152	Complete protein	1.9
Milk 2% fat	567	20.0	2.5	40	284	Complete protein	0.8
Eggs	188	6.4	0.8	13	291	Complete protein	2
Fish (tuna)	141	4.8	0.6	10	179	Complete protein	3.2

T: tablespoon. Combining protein-rich, plant-based foods will be the best strategy in obtaining all amino acids if partially or fully replacing animal-based foods.

Figure 4. Cooked amounts of plant and animal-based foods delivering 20 g of protein



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Think global, buy local. Although we have previously established that only 6% of GHG emissions on average come from transport and supply chains, Mylena Ferreira, Co-responsible for the Circular Economy Observatory of Catalonia, points out that accelerating change towards a circular economy is essential to rebuilding economies in a greener way and achieving climate neutrality strategies.

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into a sustainable model, more respectful with the ecosystem and, at the same time, keep in balance other important aspects such as economic capacities, mental, emotional and physical health.

Reduce meat-based sources of food and replace it with plant-based. Meat and dairy products are the main contributors to the degradation of the worldwide ecosystem. There are plant-based substitutes which can apportion the necessary macronutrients to reach goals such as beans, lentils, tofu, quinoa, grains, or seitan, which contain neat sources of protein. Concerning fats, we can find omega-6 fatty acids in germ oil, thistle oil and hemp oil and omega-3 fatty acids in seeds or walnuts. Iron, for example, can be found in oatmeal and hummus; zinc in oats, beans, nuts, and seeds; calcium in broccoli, sesame, soy milk or almonds; and iodine in seaweed, potatoes or white beans.

There is no need to go vegan if you cannot do it. Even though going vegan has never been easier as there are plenty of tasty options in local markets and supermarkets, adding a new "restriction" to athlete's habits can be tough, especially in the initial stages when adopting this lifestyle. As we have seen, poultry meat and eggs are more sustainable than lamb or beef, therefore athletes can choose these options instead of abusing of T-bone beef steaks. Furthermore, Vitamin B12 can only be found in meat and dairy products), so you may keep eating eggs if you don't want to take supplements.

Whey protein powder supplements, a way to save the planet and your diet. Whey is often a waste product, the leftover after curdling milk. Dumping this leftover is extremely contaminating, so the sport nutrition industry has found a really smart solution. Filtering, concentrating, and drying leftover whey to turn it into new products, including 'whey protein' powders and supplements we

know today, which are one of the easiest solutions to reach the daily protein intake goals. Some studies suggest that the environmental costs and advantages of whey protein are even less than their plant-based alternatives, as most of its costs are allocated in the milk and cheese production.

Change commercial coffee as your fuel. The coffee industry, precisely sun-grown-coffee, demands large amounts of land, water, fertilisers, and pesticides. It also degrades ecosystems, soil quality and biodiversity as well as boosts precarious living and capitalist relations of oppression in indigenous communities. Changing to other kinds of coffee, such as shade-grown ecological coffee which respects fair trade is an option. Other options are avoiding caffeine as the main source of quick energy and consuming fast digesting carbs with high-fibre content apples. All of this can also be applied to chocolate.

Think global, buy local. Although we have previously established that only 6% of GHG emissions on average come from transport and supply chains, Mylena Ferreira, Co-responsible for the Circular Economy Observatory of Catalonia, points out that accelerating change towards a circular economy is essential to rebuilding economies in a greener way and achieving climate neutrality strategies. Sustainable options are closer than you may think!

In conclusion, the rise of healthy and sustainable lifestyles makes athletes' food requirements a challenge for our society. Performance and sustainability are no longer a dilemma nowadays, as research concludes that there is a wide range of foods in local markets and supermarkets which can contribute to good, cheap, and environmentally friendly nutrition habits.

RECIPE #3

SALMOREJO



INGREDIENTS

1 clove garlic (peeled)
1 kg tomatoes (peeled and chopped)
150 g bread
150 ml extra virgin olive oil (2/3 cup)
1 tablespoon vinegar
1 teaspoon salt
Some tofu or other vegetables as a topping

INSTRUCTIONS FOR THE DISH

Place all ingredients in a food processor and blend until fully integrated.
Chill in the refrigerator for at least 2 hours.
Serve immediately. You can top it with vegetables or vegan tofu.
Store leftovers in the fridge for about 3-4 days.

INTERVIEW WITH MEP THOMAS WAITZ

You have a background as a farmer. What has motivated you to go into politics?

The first coalition between the conservative party ÖVP and the far right extremists FPÖ motivated me to reach out to the Green Party. I was a young farmer in the South of Styria and wanted to fight back the right-wing shift in Austria. Since then I was a green activist for years and later on the board of the Green Education Foundation in Styria and chairman of the Green Farmers' Association.

How do you envision the future of agriculture?

We should already lie the foundations for green and sustainable agriculture today: Promotion of small-scale, sustainable and organic agriculture and strengthening of regional value chains and circular economy.

This should be in harmony with climate and biodiversity. We should treat our resources such as soil, water and natural areas with respect, by for example no longer using synthetic pesticides and fertilisers, leaving areas fallow to prevent leaching of the soil, stopping clear cuts and drainage of wetland, etc. Animal husbandry should be completely reoriented and the needs of the animals should be the main focus. We should keep fewer animals in Europe, feed them only with home-

grown animal feed, and slaughter and sell them only regionally so that we do not have to transport them thousands of kilometers across Europe. This would actually also decrease food in security by producing reliable and sustainable value chains.

The Green project is based on social justice. How can we provide equal opportunities and democracy all around Europe and beyond avoiding a paternalistic gaze?

Agricultural politics are actually a perfect example of the change in attitude that we need to see in Europe. Under the guise of "fighting world hunger", Europe is heavily exporting agricultural products in developing countries, thus destroying local supply chains because small farmers cannot compete with global market prices. Once the local food production system is destroyed, these communities are heavily dependent on imports, making them vulnerable to global supply chain problems as we can see now in the wake of the Russian aggression. In order for these countries to gain food sovereignty, Europe has to agree to negotiate on eye level without gagging contracts that only aggravate dependencies.

You have participated actively in the defence of forests, such as Romania's primaeval forest, how can we combine the preservation of our natural heritage with a more respectful use of the resources we have?

First we have to differentiate between primeval forests that need to be protected at all costs and forests for commercial forestry. We can easily combine lucrative harvesting and the preservation of natural resources by practicing close-to-nature-forestry. While heavy machinery harvesting seems, at first glance, a more lucrative way of managing forests, studies and experience show that the opposite is true. Clear cuts need far more resources for re-planting while regeneration in close to nature forests takes place naturally, and the trees best adapted to the site prevail. Furthermore, close-to-nature-forestry will help us to reach our emission-targets by providing additional sinks and habitats for biodiversity.

Considering your experience as a beekeeper, could you explain what the Greens and the European Union is doing to counterbalance the ongoing pollinator loss trend?

Industrial agriculture (intensive land use, excessive use of fertilisers, pesticides) with its focus on monoculture leads to the 'desertification' of whole swathes of land and destroys insect and animal habitats. Support for farmers is the most effective way to prevent this catastrophe and achieve a sustainable transition for the benefit of agriculture and biodiversity. The Farm to Fork-Strategy, if implemented well, will reduce the use of pesticides immensely. In the next years we will have to make sure that the Commission and the Member States do not lower the ambition.

What do you think are going to be the long term consequences of the invasion of Ukraine and its impact on the European food system and market?

The debates about a re-militarization have already started in different EU Member States. I fear that the threat of war in Europe will remain and with it the debates about a higher military budget. We as Greens, who also stem to a large extent from the peace movement, must bring a balance into politics here. In my view it would be much more important to pool and share the resources we have in Europe than to further increase spending.



All EU Member States combined are already the second largest military spender in the world. We should use the resources we have instead of wasting more money through inefficiency. In addition it is important, now more than ever, to strive for EU enlargement in the Western Balkans.

Concerning the European food system we can already see attempts of the agro-industry lobby to weaken the Green Deal as well as the Farm-to-Fork Strategy. Stories about alleged supply shortages are used by conservatives and the agro-industry in order to get rid of "annoying" greening



efforts. The Commission has already announced to release fallow land for wheat cultivation, but there is enough wheat in Europe. The problem is that instead of feeding people with it, the grains are used as fodder and for fuel. This is where the change needs to happen. Short sighted take-back of ecological measures will not strengthen the food supply in Europe. On the contrary: Without an agricultural turnaround we are running into a real supply crisis in the long term: the most recent IPCC report shows that by 2100, one third of the world's land will no longer be available for agriculture and thus for food production.

What should young ecological activists do to evolve the current economical paradigm?

Engage with your local community, stay humble, take care of your energy and don't give up. Politics is a marathon, not a sprint. It takes time and sometimes frustration runs high but change is happening!

Meet the Ecosprinter Editorial Board



Gabriella Waibel

Gabriella (she/her) is a mediation and sustainable development graduate, currently working on environmental policies in the EU institutions. To log off, Gabriella likes small dance parties of one and big reading sessions.



Edoardo De Paola

Not an excellent writer in school, he started to write for newspaper journals in university to improve his writing. He liked it so much that he ended up publishing this magazine with the other co-editors. He loves the earth and the food it provides to prepare Italian dishes.



Miriam Sivianes Mendia

With a background as an education professional she thinks that the world changes by doing, sharing and learning. Following those terms Ecosprinter is a channel for new perspectives to move forward on the transition needed. As the oldest co-editor she has learnt a lot from Edo, Gabriella and Christina.



Christina Keßler

Christina (she/her) is originally from Germany, but currently lives in Brussels. She likes the earth and living on it, which has led her to become active in Green youth politics. In her free time, she tries to learn Mandarin Chinese - with mixed results.

Thomas Waitz



Thomas Waitz

Thomas Waitz is a member of the European Parliament for the Austrian Greens and co-chair of the European Green Party. In his political work, he focuses on sustainable agriculture and healthy food, in particular the Common Agricultural Policy of the EU, the reform of the Animal Transport Directive, as well as a strong foreign and peace policy especially regarding relations with the Western Balkan Region. He is an organic farmer, forester and beekeeper.

Meet the Authors



Iason Paschalidis-Gerostergiou

I am Iason Paschalidis-Gerostergiou (he/him), Young Green from Greece, Co-coordinator of Νέοι Πράσινοι - Neoi Prasinoi, MSc in Management of Water resources in the Mediterranean and cMSc in Human Geography.



Dusan Ljumovic

Bachelor of marketing management who as a young student served a sentence of eight months in prison for possession of forty grams of cannabis for personal usage. Since then is recognisable activist for grassroots initiatives and legalization of cannabis. Worked in USA on cannabis farm one whole summer. Worked for Ura, green party of Montenegro, as an intern for nine months. Still an active member.



Angela Timmermans

Angela Timmermans is a French and Dutch political scientist and aspiring journalist who writes about human rights and the environment. A polyglot living out of a suitcase, she is also a feminist constantly questioning the status quo.



Nessa Molina

Nessa Molina is a lawyer and economist, currently finishing an internship of a Master's Degree in Diplomacy at the Catalan employers' Association. Her life has also been marked by associationism and leisure education. She currently participates in Joves Ecosocialistes and is a member of the Secretariat of the National Youth Council of Catalonia. Her passions include debating, presenting and collaborating on F98, a Youtube channel on youth debates.



Melissa Muhr

Melissa C. Muhr is currently pursuing a Master degree in Environmental Governance at Freiburg University, Germany. In her private life as well as in research, she is interested in feminist and gender issues related to the environment.



Emil Schenkyr

Emil is a Political Science graduate student at Heidelberg University with a focus on International Relations and European Studies. His main interests lie with a value-based foreign policy and European integration. Next to his studies, Emil works for a German MP and is actively engaged in the Conference on the Future of Europe, advocating youth ideas for the EU's role in the world.

THE FOOD ISSUE

