

Food and Sustainability: Legumes and the Protein Transition



Marco Del Pistoia Slow Food Lucca, Compitese e Orti Lucchesi

Sustainability

What kind of sustainability?

Environmental

Economic

Climate

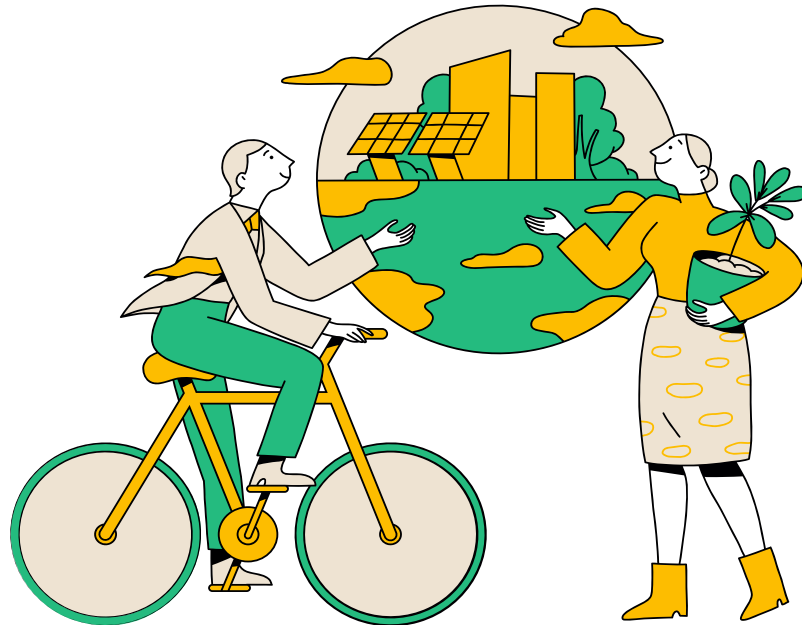
Social

Integrated or Alternative?



Sustainability for Slow Food

This can be summed up in a slogan:
Good, Clean, and Fair for All encompasses and
integrates all definitions.



Sustainability for Slow Food

- Food production, processing, and distribution in harmony with the ecosystem: Quality, Healthiness, Taste, Nutrition, Health, Environment, Climate



Value of Biodiversity



Production process



Respect for Natural Resources and a Sense
of Limits

The Protein Transition

For responsible consumption of animal proteins

To promote the use of plant-based proteins

for the environment and climate,

for the soil

for health and taste



Protein Transition: All Vegetarians or Vegans?

Let's avoid clichés

Are livestock farms only a source of problems?

What are the critical issues? Which farms? How are they managed? Can they be compatible with animal well-being? Sustainable with the environment and climate? Respectful of human health? In harmony with agricultural activities?



Animal Proteins and Critical Issues

Intensive farming

- **Environmental:** exploitation of natural resources
- **Climate:** emissions
- **Health and Nutrition:** unbalanced diet, antibiotic resistance
- **Ethics:** animal welfare, labor exploitation



Sustainable farming

• Farms that respect

Animals: Animal welfare, free-range farming, pastures

Environment: circular economy; from waste to resources

Climate: reduced emissions

Health and Nutrition: healthy products, reduced use of drugs

Ethics: respect for workers

Social: protection of the territory (marginal and mountain areas)



So what kind of protein transition?

Reduction in the consumption of animal proteins

- Reducing the consumption of animal proteins and increasing that of vegetable proteins, mainly derived from legumes.
- Improving quality by choosing eco-sustainable farms.





The Protein Transition: Legumes

Good for the environment and climate

- Respect for Natural Resources
- Reduction in Energy Inputs (fertilizers and pesticides)
- Reduction in CO2 Emissions
- Protection of Biodiversity



**SUSTAINABLE
NUTRITION**

The Protein Transition: Legumes

Good for the environment and climate: Biodiversity

Genetic diversity ensures:

- adaptation to climate change
- adaptation to different environments and contexts
- conservation of natural resources
- the health of the planet



**Biodiversity is Life itself.
For Peoples, Nature, and the Planet**



The Protein Transition: Legumes

Biodiversity and Legumes: Beans from the Lucchesia



Over 17 different ecotypes in the province of Lucca Adaptation to different environments, nutritional variety, and taste



Slow Beans
comunità leguminosa


Slow Food®
Lucca, Compitese e Orti Lucchesi



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The Protein Transition: Legumes

Good for the soil

- Preserving soil fertility
- Soil regeneration and enrichment (nitrogen fixation by legumes)
- Development of the microbiological component of the soil



The Protein Transition: Legumes

Good for health

- Legumes are a valuable source of carbohydrates and proteins.
- Excellent source of micronutrients and fiber.
- High nutritional density of dried legumes.
- 10% water; 60% carbohydrates (slow absorption); 20% protein; 4% lipids
- Minerals (copper and iron); vitamins (B1, B2, B5)
- 20% protein, like meat, but lacking two essential amino acids: methionine and cysteine, which are present in cereals, so...

...Legumes and grains = A perfect match!
No deficiencies, complete amino acid profile



The Protein Transition: Legumes

Good for health

- Slow-absorbing complex carbohydrates (starches)
- The “sugar” (glucose) derived from the digestion of legume starch passes slowly into the bloodstream, avoiding a “glycemic spike.”
- The high fiber content slows down its absorption.



Low Glycemic Index



The Protein Transition: Legumes

Good for health: minerals and vitamins

- Important sources of B vitamins
- Calcium present in quantities similar to those found in milk.
- Iron present in quantities similar to those found in eggs and some meats.
- Iron potentially less absorbable: supplement with fruits and vegetables rich in vitamin C: kiwis, oranges, strawberries, cabbage, peppers, tomatoes.





The Protein Transition: Legumes

Good for health: digestibility

- It is important to soak the beans (for about 12 hours) to eliminate some of the “anti-nutritional” components, which are then completely eliminated during cooking.
- To remove the foam that forms on the surface during cooking.
- To accompany legume dishes with digestive aromatic herbs such as sage, rosemary, and thyme.





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The Protein Transition: Legumes

Good for health: digestibility

- By including them regularly in our diet, our body (the intestinal flora) adapts to their consumption.
- Those who are not used to eating them regularly can start with small amounts and gradually increase their consumption.
- Digestibility improves if the legumes are pureed and the “skin” is removed. The outer skin contains the least digestible substances.



The Protein Transition: Legumes

Good for Taste

Legumes in the kitchen: tradition and innovation

A few examples

- **Traditional recipes:** Frantoiana soup, spelt soup, Farinata, beans with tomato sauce, baked beans, chickpea cake, legume purées, beans cooked in a flask
- **Innovative dishes:** Lentil tofu, hummus, lentil ragout, lentil meatballs, legume burgers



Famous and little-known legumes:
Peanuts, Chickpeas, Grass Peas, Beans,
Broad Beans, Lentils, Lupins, Peas,
Roveja, Soybeans

LEGUMES AS A SINGLE COURSE



Lentil Ragout

- While the pasta cooks, sauté the celery, carrot, and onion in a pan with a little oil and water.
- Cover the pan and cook until the vegetables are soft.
- Add the lentils and tomato sauce, then cook over low heat for the entire time the pasta is cooking.
- Toss the pasta with the lentil sauce.

LEGUMES AS A SECOND COURSE

fast

Chickpea burger



super fast

Chickpea hummus



- Chop the celery, carrot, and onion in a food processor.
- Add the cooked chickpeas to the food processor along with paprika, salt, pepper to taste, and a little oil; blend and mix, stirring the mixture with a spoon.
- Add the oat flakes and a little water to the mixture: if the mixture is too soft, add a little breadcrumbs to achieve the right consistency.
- Cook in a pan until crispy.

- Put the cooked chickpeas in a food processor and add lemon juice, tahini, oil, a clove of garlic, salt, and pepper to taste.
- Blend until you get the right consistency: add a bit of water if needed.
- What is tahini? It's a sesame seed-based sauce that's a specialty of Middle Eastern cuisine.

LEGUMES AS A SNACK

Baked chickpeas



- Mix the cooked chickpeas, a little flour, a drizzle of oil, and spices to taste, including paprika, turmeric, curry, and chili pepper, in a bowl.
- Spread the chickpeas out evenly on a baking sheet and bake at 180°C in a preheated oven until they are golden brown and crispy (about 25-30 minutes).

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