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CERTIFICATION COURSES

Organic Farming for Sustainable Agricultural Production

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Lecture 28 : Organic Meat Production

What is organic meat?

What is required for meat to earn the organic label? The USDA passed rules in 2002 that set guidelines to be considered for certified organic meat. They include the following criteria:

- The cattle are born and raised on certified organic pasture
- They never receive antibiotics
- They never receive growth-promoting hormones
- They are fed only certified organic grain and/or grasses
- They have unrestricted outdoor access

“Organic meat, poultry, eggs and dairy products come from animals that are given no antibiotics or growth hormones.”

Characteristics of Different Types of Meat

	Conventional Meat	Organic Meat	Natural Meat	Grass Fed Meat
USDA Definitions	No special definition	Produced according to USDA National Organic Standards	No artificial ingredients, minimal processing	None
Usage of Hormones	Yes	No	Vary	Vary
Antibiotics	Yes	No	Vary	Vary
Feed Grown with Chemical Pesticides and Fertilizers	Yes	No	Vary	Vary
Necessary to Allow the Cattle to Graze on Pastures?	No	Yes	No Standards (Normally farmers allow cattle to graze)	No Standards (Normally farmers allow cattle to graze)

Characteristics of Different Types of Meat

	Conventional Meat	Organic Meat	Natural Meat	Grass Fed Meat
Animal Confinement	Yes	No (Outdoor access not necessary, if weather is not favorable)	No Standards (Normally farmers provide outdoor access)	No Standards (Normally farmers provide outdoor access)
Meat Irradiation Carried Out	Vary	No	No	Vary
Presence of GMOs in Feed	Yes	No	No	Vary

What is Animal Welfare?

- Nowadays meat producers are beginning to use animal welfare methodologies.
- Animal welfare, in organic meat production or otherwise, calls for implementing various guidelines including:
 - i. Providing more space to animals and reducing the number of animals per acre
 - ii. Provide access to sufficient open fields, water, and food
 - iii. Ensuring holistic food instead of feeding purely energy-rich diet
 - iv. Greater healthcare facilities and reducing the [stress](#) levels of the animals



Four Types of Freedom for Animals

Farm Animal Welfare Council, a UK-based organization, has laid stress on five types of freedoms for animals, whether on the farm, in transit, or at the slaughter house. These five freedoms are:

1. Freedom from Hunger and Thirst

The livestock should be given a free access to a fresh water source and a fresh diet.

2. Freedom from Discomfort

The animals should be given a comfortable shelter.

3. Freedom from Pain, Injury or Disease

Healthy conditions should be maintained and immediate attention should be paid to diseases and disorders.

4. Freedom to Express Normal Behavior

The animals should be given free space and company of their own species.

Breeds and breeding

- Breeds should be chosen which are adapted to local conditions.
- Reproduction techniques should be natural.
- Embryo transfer techniques are not allowed.
- Hormonal heat treatments not allowed.
- Use of GMO (Genetically Modified Organisms) not allowed.

Feeding

- The livestock should be fed 100% organically grown feed.
- More than 50% of the feed shall come from the farm unit itself or shall be produced within the region.
- However, in some cases 15-20% of total feed could be obtained from conventional farms.
- The use of synthetic growth promoter substance, synthetic appetizers, preservatives, artificial colouring agents, urea, solvent extracted oilcakes, genetically engineered organisms or products thereof, are not allowed.

Animal health

An important objective of organic livestock husbandry is the avoidance of reliance upon routine and/or prophylactic use of conventional veterinary medicines.

- **Natural medicines** and methods, including homeopathy, ayurvedic medicine and acupuncture, shall be emphasized.
- The use of **conventional veterinary medicines** are allowed when no other non-allopathic alternative is available and where these are used, the withholding period shall be twice the legally required period.
- **Vaccines** shall be used only when diseases are known or expected to be a problem in the region of the farm and where these diseases can't be controlled by other management techniques. However, genetically engineered vaccines are prohibited.



VACCINATION

Organic Cattle Rearing Principles

Space Allowance

- Indoor area to be supplemented by outdoor area i.e.: 75% of indoor area.
- Animals should not be kept in close confinement as it influences both physical and behavioural issues.
- Greater space and environmental diversity permit expression of a wider range of behaviour.

Flooring and provision of bedding

- Farm animals must be provided with litter.
- Completely slated floors are not allowed.

Nutrition and feeding

- Cattle: grass-based system. At least 60% of dry matter in daily ration has to consist of roughages, fresh or dried fodder, or silage

Organic Cattle Rearing Principles

Human care

- Cleaning, disinfection and vaccination.
- Cattle reared in organic system had less liver and kidney disease compared to conventional system.

Mutilation

- Mutilation is an act of physical injury that degrades the appearance or function of any living body.

Ex: Castration, dehorning, tail docking, beak trimming that causes fear, pain and distress among the animals and birds.



Dehorning

Health treatment

- Regular, patient, careful observations are essential.
- In order to perform clinical examination, animal showing disease symptom has to be separated from the group.
- In organic farming phytotherapeutic and homeopathic products are used in preference to chemically synthesized allopathic medicinal products or antibiotics
- If the use of authorized substances are not effective, and if the treatment is essential to avoid suffering and distress, chemical products may be used.
- If the animal receives more than two courses of treatment with chemical product within a year, the product derived may not be sold as organic.



Pros of organic meat:

- ✓ Reduces exposure to harmful chemicals as well as growth hormones and genetically modified organisms.
- ✓ Organic meat tastes better.
- ✓ Organic meat is tracked from farm to plate.
- ✓ Reduces exposure to illness transmitted through animals.

Cons of eating organic meat:

- ✓ Organic meat tends to be more expensive.
- ✓ Organic butcher shops are not conveniently located
- ✓ Organic meats are not usually available at most restaurants.

Quality of Organic Meat

- There was little difference in meat quality (pH, shear force and colour), but the fat profiles varied considerably between production systems and season. Meat fat from organic cattle contained higher concentrations of conjugated linoleic acid and omega-3 fatty acids and had a lower ratio of omega-6 to omega-3 fatty acids compared with non-organic meat.
- Content of dry matter, crude protein, ash, fat and n-3 fatty acids was higher in organic chicken meat. Sensory panelists assessed organic broiler meat as tougher and tastier

[Kamihiro, S.](#), [Stergiadis, S.](#), [Leifert, C.](#), [Eyre, M.D.](#) and [Butler, G.](#) (2015). Meat quality and health implications of organic and conventional beef production. [Meat Sci.](#) 100:306-18

PDF) *Quality of chicken meat from conventional and organic production*. Available from:

https://www.researchgate.net/publication/242278923_Quality_of_chicken_meat_from_conventional_and_organic_production [accessed Jul 06 2018].