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Organic Production In Brazil: Challenges And Prospects For Agroecology

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Abstract:
This research aims to expand and disseminate knowledge regarding organic production in Brazil. The methodology used to carry out the study of the theme was bibliographical with a qualitative background. For the development of the study, there was a distribution in some topics related to the subject, among which: the search for the development of environmental sustainability as a form of prevention, the use of pesticides in organic agricultural production in order to show how much the indiscriminate use of chemicals in food production are harmful to health and the environment and the scenario of organic production in Brazil: challenges and perspectives of agroecology, describing how the production of organic crops is in the Brazilian context and what difficulties are encountered. At the end of the study, it brought as a result several current research, and, it could be observed that, despite the problems, organic production in Brazil has grown admirably.
Key Word*: Agroecology, Organic production, Sustainability.*

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I. Introduction

The search for alternative means of food production, aimed at conserving agro-biodiversity, valuing environmental resources and, above all, preserving them for future generations, is indispensable and an imminent necessity for society, since the basic points of sustainability are aimed at our very survival on the planet, both now and in the future.

In this context, the concept of sustainable development has emerged as a term that expresses the collective desires, often placed as a utopia, but which requires a brief reflection on the most recent events that have problematized the growing concern with the sustainable use of the environment.

The main objective of this article is to analyze the effects of the exacerbated and irresponsible use of natural resources without worrying about their maintenance and preservation, which has led to the need for changes in the current unsustainable model of food production.

II. Development of Environmental Sustainability

According to Gomes and Freitas (2017), workers want to be able to fulfill everything determined by the institution to which they are attached and inevitably become frustrated when they fail to reach a certain goal, at which point they feel like failures and expose themselves to the risk of falling ill. On the other hand, one of the strategies pointed out for preserving workers' health concerns proper workload management, which aims to ensure that employees receive manageable volumes of demands and realistic deadlines, as a way of avoiding overload and excessive stress.

The relentless pursuit of economic development through the widespread consumption of natural resources at any cost and with an ever-increasing number of them has for a long time prevented environmental problems from being seen as a cause for concern for future generations. The pollution and environmental problems caused by chaotic and disorganized development are visible and, unfortunately, the seriousness with which they could interfere in future relationships has not been taken into account.

The development model adopted, characterized by aggressive consumption of environmental resources, combined with a consumerist society, can lead to environmental disorder and consequently to social and economic collapse.

But what exactly does sustainability mean? "The concept of sustainable development was established in Agenda 21, a document developed at the Rio 92 Conference, and incorporated into other world development and

human rights agendas, but the concept is still under construction according to most authors". (BARBOSA, 2008, p. 2).

Sustainability is a process of change that takes place over the long term and requires the cooperation of all social sectors in order to pursue economic development while at the same time preserving the environment, using natural resources intelligently so that they can have a long life to remain in balance and consequently at the service of future generations.

The proposal for sustainable development emerged at the end of the 20th century through studies carried out by the United Nations on climate change, as a way of giving humanity an answer to the social and environmental crisis the world was going through.

As a result, there has been a paradigm shift around the world in the face of the environmental imbalance present in our reality. Thus, countries have been adopting joint measures in order to establish international cooperation, since environmental problems do not know or respect borders, and whose main objective is to sustain and balance natural resources, through good conditions for the development of various forms of life and guaranteeing the maintenance of these resources.

Many of the concerns surrounding the environmental issue arose in the 1960s, when in 1962 the American biologist Rachel Carson published the book Silent Spring, which caused a real ecological revolution in the world, as it documented the harmful effects of pesticides on the environment, more specifically on birds. It was from this that, in 1969, the Americans were pioneers in demanding an EIA (Environmental Impact Assessment).

The 1988 Federal Constitution included a specific article on the environment (art. 225), as well as several other provisions related to environmental issues throughout the Charter.

In December 2015, COP 21 was held in Paris. This conference was a broad international diplomatic negotiation aimed at reaching an understanding between countries on the future of the climate. The Agreement aims to limit the increase in global temperature to 2°C, but is trying to make efforts to limit it to 1.5°C.

More recently, at the end of 2016, the 22nd session of the Conference of the Parties (COP 22) to the UNFCCC was held in Marrakesh, Morocco. This conference emphasized support for countries vulnerable to climate change.

In an ADI, the Supreme Court expressly recognized the principle of sustainable development, stating that

"The principle of sustainable development, as well as being eminently constitutional in nature, finds legitimizing support in international commitments made by the Brazilian state and represents a factor in achieving a fair balance between the demands of the economy and those of ecology. However, the invocation of this postulate, when there is a situation of conflict between relevant constitutional values, is subject to an unavoidable condition, the observance of which does not compromise or empty the essential content of one of the most significant fundamental rights: the right to the preservation of the environment, which translates a good of common use to the generality of people, to be safeguarded in favor of present and future generations." (ADI 3.540/DF, Rel. Min. Celso de Mello, DJ 03/02/06).

It is clear that concern about preserving the environmental balance has been the subject of various meetings, debates and agreements for decades; however, effective decisions need to be taken to guarantee the development of this century (HINIZ; VALENTINA; FRANCO, 2006, p. 92).

III. Use of Pesticides in Organic Production

The impact of pesticide use on human health has been treated as one of the main priorities of the entire scientific community around the planet, particularly in developing countries where these chemical agents are widely used in agricultural production.

In order to approach the subject, it is essential to know the concept of what agrotoxins are. In this sense, the author Frederico Amado (2015) says that they are considered:

agrochemicals are products and agents of physical, chemical or biological processes, intended for use in the production sectors, in the storage and processing of agricultural products, in pastures, in the protection of forests, native or implanted, and other ecosystems, as well as urban, water and industrial environments, whose purpose is to alter the composition of flora or fauna, in order to preserve them from the harmful action of living beings considered harmful.

Due to environmental contamination and pesticide residues in food, we can also estimate that populations living near cultivation areas and urban dwellers are also significantly exposed to the harmful effects of these chemical agents.

The indiscriminate use of pesticides in Brazil - as in other Latin American countries - results in severe levels of environmental pollution and human poisoning, since most farmers are unaware of the risks they are exposing themselves to and consequently neglect some basic health and safety standards at work.

The rampant use of pesticides results in severe levels of pollution and human poisoning, not only from pesticides, but also from the use of synthetic fertilizers. One proposal is organic farming, which is a production

system that doesn't use synthetic fertilizers, pesticides, growth regulators or synthetic additives to feed animals. Brazil is making a name for itself as a major producer and exporter of organic food, now with government support.

According to Frederico Amado (2015),

people have the right to an existential ecological minimum in order to enjoy a dignified life, because without clean water to drink, clean air to breathe and food free of pesticides or other ailments, all other fundamental rights will be jeopardized, especially the right to health.

In his view, human beings need the bare minimum to live a healthy and balanced life and the environment makes a huge contribution to this.

Organic food is food that has not had any chemicals added to it. It is usually produced by family farmers, offering a better quality of life and a better family income when produced in cooperatives. In terms of health, as well as being more nutritious than conventional products, they don't contain any harmful chemicals.

Organic farming follows four basic principles, according to Folha newspaper.

The consumption of organic food, which does not contain any type of pesticide, is an alternative to protecting yourself from pesticides. However, it is still not very accessible to the majority of the population. On average 30% more expensive, these foods are not available everywhere.

The behavior of pesticides in the environment is quite complex. When a pesticide is used, regardless of how it is applied, it has great potential to reach the soil and water, mainly due to winds and rainwater.

Law 7.802/1989 also regulates the components of pesticides and related substances, as well as the active ingredients, technical products, raw materials, inert ingredients and additives used in the manufacture of pesticides and related substances.

CONAMA issued Resolution 334/2003, which provides for environmental licensing procedures for establishments intended to receive empty pesticide containers:

Administrative. Ordinary appeal in writ of mandamus. recycling of empty pesticide containers. Responsibility of producing and marketing companies.

1. In this case, the plaintiff intends to engage in the activity of recycling empty pesticide containers. It is asking for the environmental license to be granted, regardless of whether a commitment agreement is signed with the National Institute for Processing Empty Packaging (INPEV).
2. According to Paragraph 5 of Article 6 of Law 7.802/1989, included by Law 9. 974/2000, 'companies that produce and sell agrochemicals, their components and the like are responsible for disposing of the empty packaging of the products they manufacture and sell, after they have been returned by users, and for disposing of the products seized by inspection and those unfit for use or in disuse, with a view to their reuse, recycling or destruction, in compliance with the rules and instructions of the competent registration and health-environmental bodies'.
3. The manufacturer or, when the product is not manufactured in the country, the importer is responsible for the final destination of empty pesticide containers.
4. In exercising this obligation, the companies that produce and sell agrochemicals are currently represented by the National Institute for Processing Empty Packaging - INPEV, whose membership includes 99% of Brazil's pesticide manufacturers and the seven main trade associations in the sector.
5. Given this context, it can be said that INPEV acts as a true trustee for the companies that produce and sell agrochemicals, which are solely responsible for the final disposal of empty packaging.
6. Thus, if these companies are to be held responsible for any damage to the environment resulting from the recycling of empty pesticide containers, it is only fair that they have the prerogative to enter into partnerships according to their convenience.
7. Ordinary appeal in writ of mandamus dismissed" (STJ, RMS 25399, 17.02.2009).

It should be noted that it is possible to issue state, district and municipal legal rules on pesticides, in accordance with the peculiarities of these political entities, as this is a matter of concurrent legislative competence, in accordance with article 24, VI, of the 1988 Federal Constitution.

Pesticides, their components and the like can only be produced, exported, imported, marketed and used if they have been previously registered with a federal body, in accordance with the guidelines and requirements of the federal bodies responsible for the health, environment and agriculture sectors, under the terms of article 30 of Law 7.802/1989.

The problem of assessing the behavior of a pesticide after it has been applied is due to the need to consider the influence of agents that act to cause its physical displacement and its chemical and biological transformation. Substances undergo physical, chemical or biological processes, which can modify their properties and influence their behavior.

The most important legal reference is Law 7802/89, which governs the process of registering a pesticide product, regulated by Decree 4074/02. Pesticides are considered extremely important in the country's agricultural development model. Brazil is the largest consumer of pesticides in the world. As a result of their significant importance, both in terms of their toxicity and the scale of their use in Brazil, pesticides have extensive legal coverage in Brazil, with many legal regulations.

It can be seen that the legislation restricts the sale and use of pesticides on the consumer market in order to protect the population from agricultural products that could harm the health of consumers and the environment.

Ibama assesses the potential for environmental danger of all pesticides registered in Brazil. In order to be produced, exported, imported, marketed and used, pesticides must first be registered with a federal agency, in accordance with the guidelines and requirements of the federal agencies responsible for the health, environment and agriculture sectors.

IV. Organic Production in Brazil: Challenges and Prospects for Agroecology

Before discussing the panorama of organic production, it is important to note that the National Policy for Agroecology and Organic Production (PNAPO) was launched by the federal government with the publication of decree 7.794 on August 20, 2012, as an important step towards expanding and implementing actions to promote sustainable rural development. One of the main instruments of this policy is the National Plan for Agroecology and Organic Production (Planapo), also known as Agroecological Brazil.

Responsible for increasing the number of family farmers involved in organic production, the National Plan for Agroecology and Organic Production (Planapo) aims to strengthen agroecological and organic agricultural production, as well as increasing the supply and consumption of healthy food, supporting the sustainable use of natural resources and disseminating knowledge about agroecology, in order to improve the quality of life of the Brazilian rural and urban population.

According to the Brazilian standard, an organic product, whether fresh or processed, is one that is obtained in an organic agricultural production system or comes from a sustainable extractive process that does not harm the local ecosystem. In order to be marketed, organic products must be certified by bodies accredited by the Ministry of Agriculture, so farms must seek certification by audit in order to be able to use the official seal on their products. The seal is provided by conformity assessment bodies accredited by the Ministry of Agriculture. They are responsible for monitoring and inspecting the products.

Certification guarantees the origin and production method of the food that reaches the consumer, certifying that production is in harmony with the environment. It is the Federal Government, through its inspection bodies, that issues the Organic Production seal.

However, only food produced by family farmers who are part of social control organizations registered with the Ministry of Agriculture, Livestock and Supply (MAPA) and who sell exclusively directly to consumers is exempt from this certification.

In the domestic market, organic products continue to grow, especially in the number of organic and sustainable farming units, which has risen to 18,000 in the last 12 months, an increase of around 15%. While world production is growing at an average rate of 4.5% per year, Brazil has seen growth of 30% per year over the last five years.

Brazil is the world's fifth largest organic farming power with only 940,000 hectares under cultivation. Just as a comparison, we should remember that in Brazil today we have 240 million hectares dedicated to conventional farming and a reserve of arable land still to be exploited of approximately 55 million hectares.

According to a survey carried out by the Agroecology Coordination Office (Coagre) of the Secretariat for Agricultural Development and Cooperativism (SDC), linked to the Ministry of Agriculture, Livestock and Supply (MAPA), the area of organic production in Brazil could exceed the 750,000 hectares registered in 2016, driven mainly by family farming.

According to Coagre, there has been a leap from 6,700 thousand units (2013) to approximately 15,700 (2016). In just three years, this type of planting has more than doubled on Brazilian soil. In the ranking of the regions that produce the most organic food, the Southeast is in first place, with a total of 333,000 hectares and 2,729 producer registrations in the National Register of Organic Producers (CNPO). This is followed by the North (158,000 hectares), Northeast (118,400), Midwest (101,800) and South (37,600).

In 2016, the sector earned $ 3 billion reais on the domestic market and the outlook is for growth of around 25% to 30% in 2017. Although exports closed slightly below estimates, Brazil remains the main supplier of sugar, nuts, fruits and their derivatives and, with the largest organic mate plantation, exports 100% of its mate to the world's five continents. Erva mate in bulk, packaged and private label solutions and tea line.

There is plenty of room for growth in exports to Europe, China, the Middle East and Asia. North America remains the market with the greatest export potential in 2017. Brazilian companies are prepared to serve all markets," explains Ming Liu, director of Organics Brasil and ORGANIS, the National Council for Organic and Sustainable Production.

The director of the Organic Farming Association, José Estefano Bassit, believes that as soon as Brazil improves from the crisis, organic farming will grow even more. "It's one of the fastest growing sectors in Brazil and I see a lot of pent-up demand. The moment Brazil has a bit of growth and better income distribution, our growth levels will reach spectacular heights," he says.

Organic farming is not just a cultivation process that culminates in healthy products with high nutritional value and no contaminants whatsoever. It also contributes to the creation of more balanced ecosystems, helping to preserve biodiversity, natural cycles and the biological activities of the soil.

So it's clear that the benefits of consuming organic products are not only reflected in our health. In fact, when we opt for these products we help to strengthen the sustainability of an ecologically and commercially fair supply chain.

V. Final Considerations

Organic farming is a practice that has gained thousands of followers in recent years. The changing mentality of the population, who are increasingly looking for healthy food that doesn't contain substances that put their health at risk, has led many farmers to change the way they produce.

We can refer to organic farming as a production process that is totally committed to natural crops and the production of organic food with the aim of guaranteeing the health of consumers. This method of production, which focuses on product quality, ensures the supply of healthy and tastier food.

Organic farming has been one of the most talked about topics when it comes to food production, since it doesn't use any type of pesticide or chemical input to grow the crop.

The organic production process, by not using any type of pesticide, maintains biodiversity and significantly reduces the environmental impacts that can be caused by planting a monoculture. Organic farming uses a number of practices to guarantee food quality and reduce environmental impacts.

It consists of an agricultural practice that adopts specific techniques, with the aim of economic and ecological sustainability, maximizing social benefits, minimizing dependence on non-renewable energy, employing cultural, biological and mechanical methods, as opposed to the use of synthetic materials, eliminating the use of genetically modified organisms at any stage of the production, processing, storage, distribution and marketing process, and protecting the environment.

In Brazil there are approximately 15,000 certified farms producing organic food, 70% of which belong to family farmers. Brazil accounts for around 3.77% of world consumption.

Nowadays, a portion of the population is aware of ecological problems and many have opted for natural products, although these foods are more expensive than traditional ones. Organic sales represent only a small portion of total food sales, no more than 4-5%.

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