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INTERNATIONAL FOOD SECURITY POLITICS

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Food insecurity has been causing increasing concern since 2008 when food crises led to regime changes in the Maghreb and the Middle East. Some Arab states that survived the sweep of change have been trying to adjust their political systems along the line of Western democracy, albeit with a little degree of success. Although concern for food security led to the formation of some global organizations such as the United Nations' Food and Agriculture Organization and the United Nations Children's Fund, there is a greater need to focus on food insecurity that may emanate from the population explosion projected to hit 10 bln by 2050. Worth noting is a ruse of food security based on the use of alternatives to fossil fuel and animal feeds. This implies that despite an increase in grain production, the world is contending with unavailability, unaffordability, and inaccessibility to the quantity and quality of food, especially in developing nations. This is despite promises that large-scale farming will neutralize food insecurity when it replaces subsistence farming, a system that focuses on agroecological food production rather than the recently imposed inorganic agriculture. In trying to capture the identified potential crisis, this paper relies on secondary sources of information and interrogates the problem through the employment of ecofeminism and agroecology paradigms with some elements of embedded liberalism. The paper concludes that organic farming is a *sine qua non* to food sovereignty in line with sustainable development goals.

Keywords: food security; food sovereignty; ecofeminism; agroecology; large scale farming; organic farming.

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МЕЖДУНАРОДНАЯ ПОЛИТИКА В ОБЛАСТИ ПРОДОВОЛЬСТВЕННОЙ БЕЗОПАСНОСТИ

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Проблемы продовольственной безопасности вызывают серьезную обеспокоенность с 2008 г. Тогда продовольственный кризис привел к смене режима в Магрибе и на Ближнем Востоке. Некоторые арабские государства, пережившие период преобразований, предпринимают попытки (хотя и с небольшим успехом) привести свои политические системы в соответствие со стандартами западных демократий. Несмотря на то что забота о продовольственной безопасности стала поводом для создания некоторых глобальных организаций, таких как Продовольственная и сельскохозяйственная организация Объединенных Наций и Детский фонд Организации Объединенных Наций, все чаще возникает потребность сосредоточить внимание на проблеме отсутствия продовольственной безопасности. Последняя может возникнуть ввиду ожидаемого к 2050 г. демографического взрыва, когда, предположительно, численность населения планеты достигнет 10 млрд человек. Следует иметь в виду, что темой продовольственной безопасности могут манипулировать в вопросе использования альтернативных ископаемому топливу источников энергии, а также животноводческих кормов. Это означает, что, несмотря на рост производства зерна, мир сталкивается с отсутствием, недоступностью и невозможностью получить необходимое количество качественных продуктов питания, особенно в развивающихся странах. Так происходит вопреки планам о том, что крупное сельскохозяйственное производство нейтрализует проблему продовольственной небезопасности при вытеснении системы натурального сельского хозяйства. Последнее основывается на агроэкологическом производстве продуктов питания, а не на недавно внедренном неорганическом культивировании. В исследовании выявляется и рассматривается ситуация потенциального кризиса. В работе используются вторичные источники информации, проблемы изучаются с применением парадигм экофеминизма и агроэкологии с некоторыми элементами либерализма. Делается вывод о том, что ведение органического сельского хозяйства является неременным условием продовольственного суверенитета в соответствии с целями устойчивого развития.

Ключевые слова: продовольственная безопасность; продовольственный суверенитет; экофеминизм; агроэкология; крупное сельскохозяйственное производство; органическое сельское хозяйство.

Introduction

Global use of food security as a tool is not a new development in international politics; the world has been contending with this for a long time. It started with the use of availability and non-availability of food either as a weapon to either starve some groups or state through blockades in war times, or as a carrot to allow others to have access to it for a political, strategic, diplomatic or economic reason [1; 2]. The formation of United Nations' Food and Agriculture Organization (FAO) attests to a need to have access to the quantity and quality food at all times. To ensure this, and in line with chapter 8 of the UN charter, a room has been created for the formation of regional organizations to address specific issues that will support political stability and create a conducive atmosphere for food production globally.

Globalization as a concept in international politics is not new in the field of international relations. It started to evolve from the 5th century during the Greek city-state system and the Chu dynasty. This was when people of different cultures, backgrounds, and colors started to interact through trade. Development in technology has eventually led to the promotion of globalization. From the time of the absolute advantage to the time of endowment international trade theories, which

led to a specialization in the production of goods and services, this further perpetuate the food security policy. Considering a projection that by 2050, the world population will be around 10 bln, there is a need to increase food production both quantitatively and qualitatively. To achieve this, there is a need to consider the 21st century food and nutrition security (FNS) in the form of food affordability, food accessibility and fair distribution of the same as against the present asymmetrical availability.

Two broad schools of thought came up regarding the issue of food availability, accessibility, affordability, and quality. While some think that at present, there is a production of enough food to feed the world, another school believes that there is a need for a paradigm shift in the production of food through a technological development approach that can meet demand by 2050. The first school attributes climate change to anthropogenic cause, which brings about a need to arrest climate variability with alternatives to fossil fuel; grain and sugar, for instance, that are meant for human consumption go to biofuel and thereby cause unavailability. Globally, 65 % of irrigated farmland is meant for cereal production, mostly for animal feeds and biofuel, while the remaining 35 % is for fodder and pastures,



fibre, beverage, oil, sugar, pulses, fruits, vegetables, and roots crops¹. To increase food, animal feeds, and alternative to fuel, there is a need to embark on large-scale farming, even though it works to the advantage of multinational corporations and, to a little extent, the profit margin of farmers [3–7]. An increase in the standard of living (SOL) contributes to the need for large-scale farming. In developed states and the Middle East, an increase in urbanization and affluence promotes new tastes and demand for more animal protein. The supply of this is augmented through land grabbing from Asia, Africa, and Latin America. Scramble for land and water by Arabs, Europeans, and Americans, through total buy-out or lease, to produce food and export the same to their home states commenced in the guise of globalization. Multinational corporations (MNCs), private individuals, and governments, using sovereign wealth funds (SWFs), started to exploit weak government and institutions through land acquisition [8–10].

To actualize privatization of land for food, feed, and bio-fuel, many international regimes such as the defunct General agreement on tariffs and trade (GATT), World Trade Organization (WTO), World Intellectual Property Organization (WIPO), and European Union, among others, were formed in furtherance of the neoliberal global economic system. With the collapse of communism in Eastern Europe, many states from the former Union of Soviet Socialist Republics turned to the west for economic development by adopting the western form of politico-economic development. With the opening of the rest to the liberal economic system, land that used to be for rent has turned into a commodity, subject to the forces of demand and supply; one can buy and dispose of land at will. By this, dispossession of land through government and traditional rulers has been entrenched in many liberal democratic constitutions to create enabling environment for exploitation.

Materials and methods (theoretical framework)

In social sciences, there is hardly a theory or model that captures all human behaviors. This paper, therefore, intends to examine two theories: agroecology and ecofeminism. As indicated above, there are going to be some elements of embedded liberal theory for an academic understanding of the problem at hand.

The agroecological paradigm is a theory of sustainable means of food production and an agricultural system that has been in practice for a very long time. It is a theory that gained popularity through the works of M. A. Altieri and C. I. Nicholls [18], I. M. Li [19] and recently subscribed to by the FAO, International Fund for Agricultural Development (IFAD), UNICEF, World Food Program (WFP), and WHO². This is an approach to food politics that relates plants, animals, humans and the en-

The food crisis of 2008 brought about a total change such as land ownership and politics of food production [11]. This was when the scramble for land and water, which was concretized by the Western idea of globalization, became a permanent phenomenon. At the same time, the introduction of the Green revolution (GR) that failed in many parts of developing states was later forcefully implemented globally (Latin America could be said to be a continent that was forced to embark on genetically modified food and animal production as it has been in place in North America. For more information on this see [12–15]). GR brought about P. Howards (2021) seminal book “Concentration, and power in the food system: who controls what we eat?” The book, like the work of R. Walters (2011), focuses on how seeds, seedlings, fertilizers, tractors, pesticides, and herbicides or roundup are concentrated in the hand of a few oligopolistic and monopolistic MNCs with negative implications on consumers and farmers [16]. The financial support that MNCs’ home states are receiving from these global giants transferred the rule of the world to them as observed by D. Korten [17].

The focus of this paper is to examine the crises of food politics at the global level and how it compromises the quality of food available to consumers. In trying to do this, the paper recommends organic farming in the form of an agroecological approach to food production. Theories employed, except for agroecology, as discussed below are ecofeminism and embedded liberal theories. In some cases, attributes of social constructivism will be employed as environmental factors that bring about the futility of one-size-fits-all neoliberal theory. The reason behind this is to give a critique of the destructive technology of large-scale farming that compromises the basis of food security: availability, accessibility, affordability, and quality. In doing this, women’s roles in food sovereignty will receive an academic discussion.

environment together in a sustainable way. The approach is a combination of pure science and social science because of its bottom-up approach. Some scholars see it rather as a social movement than as a theory; but for this study, it is contextualized as a theory [20]. Its efficiency in resource allocation is among its pluses for food security, and by extension, food sovereignty; it is also a means of maintaining a balanced ecosystem. It addresses the threat of unsustainable large-scale monocropping to biodiversity [21; 22]. The theory identifies biodiversity as an agent of a healthy environment, production of organic food, and by implication a means of arresting hidden hunger that is prevalent in the world [23].

Agroecology theory promotes social justice, equity, and improvement of rural livelihood because it fosters

¹Aquastat [Electronic resource]. URL: <http://www.fao.org/3/i4203e/i4203e.pdf> (date of access: 26.02.2021).

²The state of food security and nutrition in the world 2020 [Electronic resource]. URL: <http://www.fao.org/documents/card/en/c/ca9692en> (date of access: 26.02.2021).



family farming, which requires little inputs, and produces food for healthy people and leaves no room for exploitative profits to the MNCs. It is a *sine qua non* for good management of natural resources and human development. The approach is a means of empowering the youths who would have been roaming the streets, looking for inexistent white-collar jobs. Agroecology, the main focus of this paper, also addresses the plight of indigenous peoples who are always the most affected by large-scale farming, which the neoliberal economic system proffers as a solution to feeding people sustainably and uplifting the world.

Deforestation, the main characteristic of large scale farming, always displaces indigenous peoples as happened in the Amazon in Southern America, the Congo Basin in Africa, and Maori in New Zealand. This is in addition to the plights of peoples who at the same time were contending with the negative impacts of climate change, eviction, and killing [24; 25]. According to FAO (nd), the adoption of agroecology in FNS demonstrates some intrinsic advantages embedded in it³. These are regeneration, diversity, synergies, efficiency, recycling, co-creation, knowledge sharing, human and social values, culture and food traditions, responsible governance, and circular and solidarity economy. This approach is opposed to the secretive aspect of intellectual property rights (IPRs) that corners the globe's resources for the pocket of a few in line with the tenets of the WIPO⁴.

Like agroecology theory, ecofeminism has to do with readjustment or adjustment of injustice against women and girls in any society. It is gender, race, and class-based theory that focuses on men's exploitation of women and the environment. This theory is necessary, based on historical development relating to culture, economic system (liberalism), and social stratification. On this, some scholars are of the view that the theory could be divided into four but later collapsed social and socialist perspectives to one [26] broad part viz: liberal ecofeminism calls for a paradigm shift regarding the existing arrangement where the masculine system consumes feminism. It calls for an adjustment in law and regulations regarding women and the environment. From a feminist perspective, liberal feminism calls for equal relationship and treatment of men and women in the workplace, and access to resources based on competition at work without gender consideration. This is in line with ecofeminism. The second variant of ecofeminism is cultural ecofeminism that calls for a reassessment of the patriarchy system because of the relationship between women and nature. Culturally, the theory avers that women are biologically close to the environment from pregnancy to childbearing [27–29]. The position of this variant is to maintain a sustain-

able environment that brings about development. The third type is a social and socialist perspective of ecofeminism. It is an approach that calls for social justice in line with the works of J. Rawls [30] and C. Hughes [31].

Pollution of the environment by men is tantamount to the pollution of women due to their relationship with earth or nature. GHGEs considered to be a rapacious ambition of men to amass wealth at all cost without considering its environmental negativities and its impacts on the sustainability of the earth is well documented by R. Tong and T. F. Botts [32]. In the appreciation of women's contribution to food security through food sovereignty, mentioned authors observed that they "concerned about unpolluted air, clean water, organically fertile soil, and lush plants" [32, p. 256]. This observation is in tandem with M. Nestle's position that women are more into the agroecological approach to food production so as to preserve biodiversity and ensuring sustainable development [33]. The theory is based on the sustainability of the environment on the one hand and on the other, a need to address destructive technology as promoted by capitalists in food systems as observed by E. Holt-Giménez [22]. In an attempt to ensure sustainable development as captured by sustainable development goals (SDGs), the roles of women in food production and agricultural systems cannot be overemphasized as they are the food basket in many societies, even in a developed economy where technology has taken over the roles of human beings. According to C. Gillian's theory, women are perceived as caretakers and helpmates; this brings about their sustainability roles in the form of seed preservation and the large heart to share their farm inputs with neighbors within their community [34].

As alluded to above, there is a need to examine some attributes of social constructivism and embedded liberal theories. The two have some attributes in common. They call for a need to be environmentally conscious when applying a theory to a certain situation. While the embedded liberal theory is of the view that it is a fact that liberal and neoliberal theories are here to stay due to globalization that cannot be halted, at the same time, it has to be culturally, economically, and politically compatible with the situation or state demands [5–37]. What the two theories focus on is the need to embark on an approach that is most suited to the environment and ensures sustainable development as against the capitalistic copy-and-paste approach that large-scale farming of monocropping advocates. Its peculiarity is the basis of unity in diversity; a notion on which social reality is based [38; 39]. The next section of this paper will address the concept of globalization and its discontents while focusing on FNS.

³Agroecology knowledge hub [Electronic resource]. URL: <http://www.fao.org/agroecology> (date of access: 26.02.2021).

⁴Nirwan P. Trade secrets: the hidden IP right [Electronic resource]. URL: https://www.wipo.int/wipo_magazine/en/2017/06/article_0006.html (date of access: 26.02.2021).



Result and discussion

Globalization of land and food security in the 21st century. Globalization comes with some myriads of challenges as discussed by some scholars of development studies, political science, international relations, law, and sociology, among others [40–45]. The area of convergence of these scholars is that they broadly classify globalization into political, economic, and cultural compartments. These are the areas on which this paper will center its argument.

Politically, it has been imposed on the rest that the best practice is democratization in line with the Western notion of the “unipolar moment”, “the end of history” and Americanization of the globe. Economically, it calls for capitalism through a liberal theoretical path; it is also what some describe as the Washington consensus (WC) arrangement where the impacts of MNCs and international financial institutions (IFIs) dictate economic arrangements of its member and non-member states. These institutions imposed privatization and commercialization of factors of productions. The imposition of deregulation, tax reform in favor of the rich, free flow of foreign direct investment (FDI), competitive exchange rate, and many more have been institutionalized globally [46–49]. The arrangement perpetuates hunger, poverty, maldevelopment, and the global gap [26; 50].

Culturally, globalization advocates uniformity of culture; an approach that is the leitmotif of political instability in the form of “the clash of civilization”, “the geopolitics of emotion” and promotion of MNCs profit through Halal food production (Halal food, permissible or lawful food by Muslims, is more than the food taken, rather it involves politics, power, and ethics which brings about new regimes of food production, packaging, trade, regulation, and consumption. This is an opportunity that MNCs have exploited to promote their economic ambition to the satisfaction of shareholders and executive directors. For more information on this, see an edited book by [51–53]). This notion is well captured by the works of I. Wallerstein’s *World systems theory* (1974, 1980, 1989) as cited from A. Giddens and P. W. Sutton [42, p. 16], that capitalist system operates at a transnational level, constituting a world system with a core of relatively rich countries, a periphery of the poorest societies, and a semi-periphery squeezed in between. This aptly captures international politics of food production, distribution, and consumption through land grab, deforestation, and large-scale farming as discussed below.

Land grab. As tangentially discussed above, the land grab is one of the fallouts of large-scale food pro-

duction. Concretized by the introduction of global production of goods and services and the free movement of factors of production, except for certain categories of labor, an entrepreneur has right in line with the neo-liberal approach to the global economy, to move to where other factors of production are relatively cheap. This is in the form of FDI. Land that was considered to be an asset meant for rent is being relegated to a commodity that can be bought and sold as long as there are willing sellers and willing buyers at a point in time. From this perspective, government and traditional leaders in most of the host states are in the business of selling land to private individuals, foreign governments, and MNCs, as well as to local investors. The state is the credible unit of analysis and the only entity constitutionally allowed to use force in an unstable geographical location against its population and to sometimes connive with MNCs to dispossess its subjects of their land. This is in the guise of development for the commonwealth of a nation. Right to development as proclaimed through the Vienna declaration of the 1993 World conference on human rights was, expectedly, blocked by developed states, led by the US [54, p. 202]. Land grabbing by the MNCs, private individuals and SWFs managers that are moving to where arable forest lands are available for the production of food for their home states is ongoing and unabated. Developing states that ought to specialize in inputs provision such as agricultural products for the developed economy are gradually forfeiting the roles. The precise figure of the rate at which land and water grabbing are taking place globally is difficult to estimate because many of these deals are shrouded in secrecy [55]. This brings about conflicting figures. For instance, between 2005 and 2009, the International Food Policy Research Institute declared that 20 mln hectares of land changed hands. World bank figure declared 45 mln hectares between 2007 and 2008; while Oxfam says between 2000 and 2011, land grab was 227 mln⁵. Land grab borders on the eviction of peoples from their communities and this are mostly felt by the indigenous peoples. In Indonesia for instance, a series of conflicts were recorded between communities and MNCs because the latter embarked on palm oil, pulpwood, and logging businesses. Some of the companies in land grab adventure are the US’s Cargill commodity giant, UK-based Unilever, and UK-Dutch oil major, Shell⁶. As of 2017, states that were mostly accused of unabated land grabbing are the US, Canada, China, Japan, Italy, Norway, Korea, Germany, Denmark, and the UK in descending order [56]. Indigenous peoples

⁵The global land grab. A primer [Electronic resource]. URL: <https://www.tni.org/files/download/landgrabbingprimer-feb2013.pdf> (date of access: 26.02.2021).

⁶Jong H. N. “Hungry” palm oil, pulpwood firms behind Indonesia land-grab spike: report [Electronic resource]. URL: <https://news.mongabay.com/2021/02/palm-oil-pulpwood-firms-behind-indonesia-land-grab-agrarian-conflict-spike-report/> (date of access: 26.02.2021).



are the most affected due to their anti-Western development idea and (or) lack of representation in government. The mostly experiencing states are Tanzania, Kenya, Cameroon, Botswana, India, Myanmar, Colombia, Chile, and Russia, among others. Their indigenous peoples, despite relevant international laws that protect their heritage and culture, are on daily basis facing eviction. Not only that their land is disposed of, but rivers and groundwater that support their existence are also either polluted or overused for irrigation [6; 57]. Therefore, the basic rights such as the right to food, right to water, land right, and the basic tenets of right to free, prior, and informed consent (PIC) have been vitiated despite relevant rights such as the United Nations declaration on the rights of indigenous peoples, the International Labor Organization (ILO) convention No 169, the International convention on civil and political rights, the International covenant on economic, social and cultural rights, the International convention on the elimination of all forms of racial discrimination and the Convention on biological diversity (CBD). At the regional and sub-regional levels, many international organizations' declarations such as the African charter on the rights and welfare of the child, Comprehensive Africa agriculture development program, ECOWAS agricultural policy, Inter-American Commission on Human Rights, Permanent Interstates Committee for Drought Control in the Sahel and many more are hardly observed. These organizations focus on FNS, but it is instructive to note that many of these organizations' global declarations, conventions, and covenants such as CBD and its attributes, PIC, geographical indications (GIs), and access, sharing, and benefit (ASB) are hardly observed by MNCs and their home states, especially the Western states that are daily exploiting the resources of indigenous peoples and sometimes evict them from their ancestral land and gods. Deforestation is the main impact of local and foreign companies who operate in developing areas with little or no regard for the basic principle of CBD and indigenous biological resources as discussed below.

Deforestation. Deforestation is one of the common outcomes of large-scale farming. MNCs and private companies that embark on farming in many developing areas over that unused land, sometimes classified as *terra nullius* are up for grab from indigenous peoples and smallholder farmers, with or without compensation. This has been the practice in the rainforest of the world under the guise of globalization. This is not far from human right abuses that developing states have perennially been facing. In Chile, for instance, the Mapuche, Aimara, Rapa Nui, Atacamenoew, and Coya tribes were subjected to series of humiliations such as forceful *assimilado* policy despite their willingness to retain their culture, food processing, production, and

religion. Their sources of income were taken away from them through the privatization of land and water [57]. Forest resources of every part of the globe have been privatized and appropriated, without any concrete national law on the flora and fauna [58]. Some of the instruments regarding the preservation of forest against over-exploitation for sustainable development and preservation of the indigenous peoples are, among others, the United Nations framework convention on climate change, CBD, the United Nations convention on combat desertification in those countries experiencing serious drought and/or desertification. Other relevant multilateral conventions are Ramsar convention on wetlands, World heritage convention, Convention on international trade in endangered species, Ozone layer convention, and Indigenous and tribal peoples convention. Unfortunately, all these conventions are not binding on its members. Besides this, any nation can withdraw its membership if its "national interest" is not served. Despite the reality of climate change and its negative impacts on food security, attempts to preserve the forest for carbon sequestration are on daily basis frustrated through unsustainable FNS approaches of the multinationals and private individuals' large-scale farming as discussed extensively above.

Large scale farming and food security. The *sine qua non* to food security is not the acreage of land devoted to farming. The 21st century farming approach has indicated that a large amount of food produced on farms is not meant for the consumption of host communities. With factory farming, it is estimated that currently, 70 % of global freshwater goes to agriculture and it is estimated that by 2050, 15 % more will be needed. The following is how, in descending order, regions consume water for food production: South Asia, Middle East, and North Africa, sub-Saharan Africa, Latin America, and the Caribbean, East Asia and Pacific, Europe, and Central Asia⁷. Through the virtual water approach, a large portion of these foods is exported to other states. The water footprint is a source of concern for developing areas because of its impacts on the local consumers who benefit almost nothing from their water resources. Both virtual water and water footprint amount to the globalization of water [59]. Irrigation system in food production is a common attribute of commercial farming.

The need to feed a population of 10 bln by 2050, as projected by demographers, requires an improved method of food production. There is also the need for political stability to prevent the type of food crisis that brought about regime changes in many parts of the Maghreb in 2008. In an attempt to ensure this, large-scale production of food was mooted as an alternative to family farming. In a bid to increase the quantity of food production, many variables should be taken into consideration. Tractors, fertilizer, herbicides, and pes-

⁷Khokhar T. Chart: globally, 70 % of freshwater is used for agriculture [Electronic resource]. URL: <https://blogs.worldbank.org/opendata/chart-globally-70-freshwater-used-agriculture> (date of access: 26.02.2021).



ticides that, in the long run, serve as agents of unsustainable FNS are needed. Tractors are needed to clear forests, irrespective of their ecological impacts, fertilizer is needed as an enhancer in the monocropping system, and herbicides and pesticides are needed to control pests and weeds, a practice that eventually puts many herbal plants and edible insects into extinction.

Another impact of deforestation is caused by the introduction of dubious afforestation, which Western private companies rely on to turn developing states forests into national parks and game reserves. This is put on the table through reducing emissions from deforestation and forest degradation, an approach, which when religiously followed, will bring about a reduction of emission from deforestation and of forest degradation. It is also an agent of conservation, sustainable management of forest, and enhancement of forest carbon stocks⁸. The need for this is to address about 15 % GHGs that come from deforestation. There is a need for more land since it is a fixed asset that cannot be expanded except through land reclamation from oceans, seas, riverbeds, and lake beds⁹.

Almost every state is into the business of large-scale farming either as a host state or home state to agribusiness companies of various types. In September 2019, the Belarusian chief of presidential affairs V. Sheiman in a bid to achieve food security for his state, visited Zimbabwe to negotiate for trade, investment, and agricultural collaborations. Part of the deal was to embark on wheat, soya beans, dairy, beef, poultry, and horticulture farming for local consumption and export to Minsk¹⁰. In this deal, 10 000 hectares of land was allocated to Minsk farmers in Kantemba village at Mbi-re district of Mashonaland that borders Mozambique and Zambia¹¹. Two years earlier, in 2017, Chinese dairy farm, DRex Food Group signed a deal with the Belarus government where 45 000 hectares of land were taken away from Tolochin and Senno districts to make way for the Chinese company's food production. The Chinese company aims at exporting its products in line with

Beijing's Road and Belt initiative¹². Not only China has an interest in Belarus' fertile land for food production for export to home states. Qatar, and United Arab Emirates (UAE) are also interested in food production in the country with a special focus on sheep breeding. UAE specifically aims at outright buying land in Belarus for the production of grain for Emirati consumption¹³.

The essence of the above paragraph is to prove that globalization of land is here to stay as long as the majority of the states of the world are members of the WTO, an organization that is promoting ultra-capitalism, where the neoliberal system of economy is important for the benefits of a few developed states in the international system. The neoliberal economy's key objectives are deregulation and privatization through the worldwide free movement of factors of production, except labor¹⁴ [62]. With the politics of patenting through intellectual property rights, it is not only that plants, animals, and nature have been privatized, other international regimes such as Multilateral Investment Guarantee Agency (MIGA), trade-related investment measures (TRIMs), trade-related aspects of intellectual property rights (TRIPS) are also part of international regimes that support the concentration of food systems in a few MNCs. TRIMs and TRIPS have received protection from the Berne and Paris conventions since 1886 and 1896 respectively but came to the fore in the negotiations that led to the Marrakesh agreement in 1995 [12; 63–65]. Although there was a move to protect the indigenous peoples and protected areas through CBD, its art. 8j and 10c, there is a call for state parties to get involved in the protection and development of the indigenous peoples by promoting their indigenous knowledge systems on biodiversity and giving them access to it through PIC, ASB, and GIs. This has however remained a mirage and challenge to large-scale farming.

Challenges of large scale farming. From available records [4; 6; 7; 11–14; 66; 67], large scale farming is a source of misery, underdevelopment, poverty, political instability, health challenges, and a veritable

⁸What is REDD? [Electronic resource]. URL: <https://www.forestcarbonpartnership.org/what-redd> (date of access: 26.02.2021).

⁹This notion is being disputed by some scientists due to the reclamation of land from the sea. Many littoral states that share a border with international water such as ocean and sea have started to sand fill some mangrove areas and send water away to pave room for more land. China, the USA, the Netherland, South Africa, New Zealand, Qatar, and Monaco among others are a good example of this practice. For more information on this, see [60; 61].

¹⁰Chingono N. Food-insecure Zimbabwe turns to Belarus to revive agric sector [Electronic resource]. URL: <https://www.farmlandgrab.org/post/view/29514-food-insecure-zimbabwe-turns-to-belarus-to-revive-agric-sector> (date of access: 26.02.2021).

¹¹Kahari M.-K. Belarus slowly taking over part of Zimbabwe under Mnangagwa? [Electronic resource]. URL: <https://www.farmlandgrab.org/post/view/29514-food-insecure-zimbabwe-turns-to-belarus-to-revive-agric-sector> (date of access: 26.02.2021).

¹²Chinese company to invest massively in new dairy farms in Vitebsk oblast [Electronic resource]. URL: <https://eng.belta.by/economics/view/chinese-company-to-invest-massively-in-new-dairy-farms-in-vitebsk-oblast-103684-2017/> (date of access: 26.02.2021).

¹³UAE invited to invest in Belarus agricultural companies [Electronic resource]. URL: <https://www.farmlandgrab.org/post/view/24358-uae-invited-to-invest-in-belarusian-agricultural-companies> (date of access: 00.00.0000) ; Gulf Times. Qatar is eyeing food investment in Belarus [Electronic resource]. URL: <https://www.farmlandgrab.org/post/view/9274-qatar-is-eyeing-food-investment-in-belarus> (date of access: 26.02.2021).

¹⁴Labor has remained a contentious issue when it comes to the free movement of factors of production. It is only highly skilled laborers that may be allowed to move through MNCs. South Africa, for example, has been experiencing what could be termed as Afrophobia attacks on black non-South Africans due to the unemployment crisis in the country. For more information on this, see Amusan L., Mchunu S. An assessment of xenophobic/afrophobic attacks in South Africa (2008–2015): whither Batho Pele and Ubuntu principles? // South African Review of Sociology. 2018. Vol. 48. No 4. P. 1–18.



source of profit for a few amid abject poverty. For this sub-section, there is a need to examine the likely negative impacts of factory farming and the international politics involved in it. From the time of GATT to WTO, developed states, particularly the US, has continued to protect their local farmers through grandfathering and dirty investments. This grandfathering approach to food security is a direct means of discouraging farmers in developing areas. With dumping strategy and questionable humanitarian assistance to Africa, Asia, Latin America, and Eastern Europe, there is a clear indication of oligopolistic and monopolistic attempts in favor of MNCs in agribusiness. Foreign aid as a foreign raid is being noted by several students of development as a negative aspect of globalization [68; 69].

An attempt to discourage small-scale farmers from food production brought about GR, which was introduced in the 1970s. GR only recorded some appreciable success in Latin America, though with tears, but failed in Africa. Its failure in Africa was because a proper background check on their land tenure system was not conducted. The system was re-introduced through SAP that was imposed on debt peonage states through WC as discussed above. The implication of this is, among others, a need to rely on the use of fertilizer as a means of increasing food production; reliance on terminator GM seeds and seedlings that cannot be preserved for another planting season, especially by women [4; 12]. The approach also breeds monocropping that wipes off more than 75 % of wild vegetables, fruits, and many other plants that are considered to be organic and full of health benefits [66]. Chemical fertilizer without precision agriculture technology, which has been introduced to many host states, adds to stream, river, ocean, and underground water pollution, with negative implications on sustainable development. Yara, the main producer, and supplier of fertilizer globally aim at satisfying its shareholders and executive directors while the farmers, their stakeholders or consumers, are struggling to break even in an era of runaway inflation that has seriously affected the price of fertilizer. According to Yara 2019 annual report¹⁵, the multinational fertilizer company accepts responsibility for air and water pollution through transportation, mining of phosphate, mostly from North Africa, and these serve as an agent of nutrient losses through denitrification, volatilization or leaching, and as the causes of GHGs and eutrophication of waterways.

Close to this is the application of pesticides, and herbicides as opined by Lybery and Oakshoot that scientific agriculture has led us to a point where many times more energy goes into a field in the form of fuel, heavy

machinery, pesticides, and chemical fertilizers than is harvested from it [66, p. 238].

The application of antibiotics and injection of hormones for animal fattening is another challenge to the final consumers. As long as antibiotics are over-the-counter drugs, the issue of quality in food security will remain a mirage. Also of note is the politics behind labelling. Multinational retailing companies are of the view that if labelling is forced on them, the cost of food production will increase and be transferred to the consumers [12; 70; 71]. The politics behind this is to deny consumers the knowledge of what they consume. Any attempt to change government policy on food politics needs to get business to change, and then the politicians will follow in this era of silent take-over by global capitalism and the death of democracy [72, p. 157]. Any convention that does not promote the profit ambition of MNCs, especially of America's, can hardly see the light the day. For instance, the Rotterdam Convention on the PIC for certain hazardous chemicals and pesticides in international trade that entered into force in February 2004 was not ratified by the US. The same fate befell CBD and its supplementary Cartagena protocol on biosafety. Any hazardous chemicals banned in Europe and America usually find a market in Africa and other developing areas. Carbofuran that was banned in Canada, Europe, and the US, was available for purchase over-the-counter in Africa; granules of this chemical killed millions of birds and other insects that fed on it. The same led to the death of many lions in East Africa¹⁶. It is known globally that MNCs are good at food fraud, and are a prime agent of health challenges for consumers. Food fraud "is a collective term used to encompass the deliberate and intentional substitution, addition, tampering, or misrepresentation of food, food ingredients, or food packaging; or false or misleading statements made about a product, for economic gain" [73, p. 158].

How the use of farm inputs constitutes health challenges such as cancer, obesity, malnutrition or hidden hunger, tuberculosis, skin and respiratory allergenic is being documented in America and the European Union. Also of concern is the allergic reaction such as diarrhoea, nausea, asthma, muscular and cellular swelling, and dysfunction within minutes of consumption of GM food usually caused by antibiotic resistance, allergenicity, and toxicity [6]. The introduction of golden rice, a source of vitamin A, came with some fears that it could exacerbate malnutrition as consumers in developing areas may not have enough fat and protein to absorb beta-carotene. It is also proved to be a source of birth defects [12, p. 270]. StarLink corn, which was

¹⁵Crop Nutrition Company for the future [Electronic resource]. URL: <https://www.yara.com/siteassets/investors/057-reports-and-presentations/annual-reports/2019/yara-annual-report-2019-web.pdf/> (date of access: 26.02.2021).

¹⁶Insecticide killing Kenya lions [Electronic resource]. URL: <https://www.saef.co.za/enviro-mainmenu-28/human-mainmenu-39/35-killing-kenya-lions> (date of access: 26.02.2021).



meant for industrial inputs and animal feeds as approved by the US Environmental Protection Agency, contains biopesticide, a source of an allergic reaction to humans, found its way into Taco bell restaurant in Mexico¹⁷. This amounts to an aspect of food fraud discussed above. Air, water, and soil pollution are germane factors in factory farming. According to the power arrogated to GM companies such as Bayer, DowDuPont, and Corteva, they have their separate police that serves as informants to biotechnologists, though very many of their seeds are described as terminator seeds because they cannot be replanted nor store and share among peasant farmers. Any farmer found keeping seeds or

sharing the same with other farmers may be arrested for violating patent law and jailed for it [12, p. 273]. Contamination of organic seed and seedlings by GM seeds can negatively affect flora, fauna, soil, and water tables [7, p. 38]. The extinction of wildlife is another problem associated with large-scale farming. Bees, butterflies, and birds, which are major pollination agents and promoters of organic food through natural pollination are facing extinction. Some edible insects that are high in protein and fat are also facing extinction due to the use of pesticides; also, some insects that add nutrients to the soil through aeration have nearly gone into extinction [74; 75].

Conclusion

As discussed under the theoretical framework, there is a need for the promotion of organic farming with family farming as a point of departure. It is noted in this paper that the so much hyped influence of factory farming as an agent of food security for feeding the world has turned out to be a ruse. This is because much of the produced food have turned to cash crops since, after all, they are for industrial inputs and alternatives to biofuel. In some cases, foreign companies that invest in farming turn out to be producing only for their home states. Close to 50 % of the produced foods eventually end up in homes and restaurants' waste bin. Factory farming is tantamount to monocropping, with implication on job opportunities for women, who as agents of food sovereignty through their small farms, would be, by corrupt means, muzzled out by large scale farmers with or without compensation.

The indigenous peoples who are the agents of the balanced ecosystem through their sustainable economic system also face eviction and are in some cases killed, as was the case in Southern Africa where the Khoi and Sans were sent out of South Africa. Promotion of relevant international agreements, supranational in nature, which will protect the indigenous peoples, their sources of income, and management of their resources is needed. Climate change, which is deleterious to humanity, caused by anthropogenic activities especially through the unsustainable farming system and the use of hazardous chemicals as discussed above, has to receive global attention. The promotion of organic farming through empowering small scale farmers, especially with an emphasis on women, and the application of the latest technology such as precision agriculture will save humanity from self-immolation. The power

of MNCs as discussed is another area that is worth looking into. As long as they dictate to governments and various international organisations what to do regarding food security, the possibility of hidden hunger will remain unresolved. The politics of agricultural subsidy and dumping of food in the guise of humanitarian assistance as America did during the Marshall Aid Plan, is to discourage food sovereignty in many parts of the world. Transfer of appropriate technology as against food aids needs serious consideration.

There should be a land tenure system that considers land ownership, and individuals and foreign states that are interested in farming should support such a move to increase organic food production against chemically or organic food production through questionable biotechnology. Doing this will address series of diseases such as cancer, diabetes, respiratory ailment and obesity. Although this paper realises the reality of the complex interdependent system imposed on the globe through the neoliberal system, at the same time, there is a need to adhere to the basic principles of international trade that calls for specialisation. Hence biopiracy that is common under WTO and IPRs should be holistically addressed in the form of PIC, ASB and GIs. With this, women that have been seen as mere tools for men's success will be uplifted to the limelight where their natural roles as organic food producer due to their basic characteristics as caregivers, as custodian of nature and as agents of sustainable development may be well protected. This is because, as documented by some scholars, some GM seeds, after continuous planting, make some insect develop resistance to pesticides. Therefore, one can safely conclude that large-scale farming is huge-scale famine.

References

1. Cribb J. *Food or war*. Cambridge: Cambridge University Press; 2019. 350 p.
2. de Waal A. *Mass starvation: the history and future of famine*. Cambridge: Polity Press; 2018. 264 p.

¹⁷Moeller D. R. GMO liability threats for farmers: legal issues surrounding the patenting of genetically modified crops [Electronic resource]. URL: <http://www.flaginc.org/wp-content/uploads/2013/03/GMOthreats.pdf> (date of access: 26.02.2021).



3. Amusan L, Setlalentoa M. An assessment of socio-cultural aspect of large scale food production policies and politics in Africa. *Transylvanian Review*. 2017;XXV:4347–4356.
4. Goldberg RA. *Food citizenship: food system advocates in an era of distrust*. New York: Oxford University Press; 2018. 344 p.
5. Moran K. Benefit sharing under the convention on biological diversity. In: Riley M, editor. *Indigenous intellectual property rights: legal obstacles and innovative solutions*. Walnut Creek: Altamira Press; 2004. p. 153–172.
6. Paarlberg R. *Food politics: what everyone needs to know*. Oxford: Oxford University Press; 2013. 280 p.
7. Walters R. *Eco-crime and genetically modified food*. London and New York: Routledge; 2011. 176 p.
8. Amusan L, Saka L, Omede AJ. Sovereign Wealth Fund and fiscal federalism in Nigeria (2011–14): an assessment of contending issues. *Regional & Federal Studies*. 2017;27(4):441–463.
9. Carmody P. *The new scramble for Africa*. Cambridge: Polity Press; 2016. 326 p.
10. Cotula L. *The great African and grab? Agricultural investments and the global food system*. London: Zed Books; 2013. 248 p.
11. Pearce F. *The land grabbers: the new fight over who owns the Earth*. Boston: Beacon Press; 2013. 336 p.
12. Otero G. *The neoliberal diet: healthy profits, unhealthy people*. Austin: University of Texas Press; 2018. 256 p.
13. Norwood FB, Mix TL. *Meet the food radicals*. New York: Oxford University Press; 2019. 288 p.
14. Pollan M. *In defense of food: an eater's manifesto*. New York: Penguin Groups; 2008. 25 p.
15. Teubal M. Genetically modified soybeans and the crisis of Argentina's agriculture model. In: Otero G, editor. *Food for the few: neoliberal globalism and biotechnology in Latin America*. Austin: University of Texas Press; 2008. p. 189–216.
16. Howard PH. *Concentration and power in the food system: who controls what we eat*. London: Bloomsbury Academic; 2021. 232 p.
17. Korten DC. *When corporations rule the world*. Oakland: Berrett-Koehler Publishers; 2015. 424 p.
18. Altieri MA, Nicholls CI. Agroecology and the reconstruction of a post-COVID-19 agriculture. *The Journal of Peasant Studies*. 2020;47(5):881–898. DOI: 10.1080/03066150.2020.1782891.
19. Li TM. *Land's end: capitalist relations on an indigenous frontier*. Durham: Duke University Press; 2014. 240 p.
20. McCune N. Peasant to peasant: the social movement form of agroecology. *Farming Matters*. 2014;30(2):36–37.
21. Amusan L. SDGs 1, 2 and 5 actualisation in the age of ultra-Capitalism: likely roles of state intervention in South Africa. *Transylvanian Review*. 2020;XXXVIII(48):12220–12226.
22. Holt-Giménez E. *A foodie's guide to capitalism: understanding the political economy of what we eat*. New York: Monthly Review Press; 2017. 256 p.
23. Kimura AH. *Hidden hunger: gender and the politics of smarter foods*. Ithaca: Cornell University Press; 2013. 226 p.
24. Krakoff S, Lavalley JD. Natural resource development and indigenous peoples. In: Abate RS, Warner EAK, editors. *Climate change and indigenous peoples: the search for legal remedies*. Cheltenham: Edward Elgar Publishing Limited; 2013. p. 199–217.
25. Saito NT. *Settler colonialism, race, and the law: why structural racism persists*. New York: New York University Press; 2020. 368 p.
26. Momsen J. *Gender and development*. London: Routledge; 2010. 285 p.
27. Amusan L, Olutola O. Contextualising African women's empowerment in agriculture: challenges from climate change and mineral extraction perspectives. *Journal of International Women's Studies*. 2017;18(4):117–130.
28. Heller C. For the love of nature: ecology and the cult of the romantic. In: Gaard G, editor. *Ecofeminism: women, animals, nature*. Philadelphia: Temple University Press; 1993. p. 219–242.
29. Hooks B. *Feminist theory from margin to center*. Boston: South End Press; 1984. 174 p.
30. Rawls J. *A theory of justice*. Cambridge: The Belknap Press of Harvard University Press; 1971. 624 p.
31. Hughes C. *Key concepts in feminist theory and research*. London: Sage Publications; 2002. 222 p.
32. Tong R, Botts TF. *Feminist thought: a more comprehensive introduction*. New York: Routledge; 2018. 432 p.
33. Nestle M. *Food politics: how the food industry influences nutrition and health*. Berkeley: University of California Press; 2007. 534 p.
34. Muuss RE. Carol Gilligan's theory of sex differences in the development of moral reasoning during adolescence. *Adolescence*. 1988;23:229–243.
35. Hinrichs CC. Embeddedness and local food systems: notes on two types of direct agricultural markets. *Journal of Rural Studies*. 2000;16:295–303.
36. Keohane RO. The world political economy and the crisis of embedded liberalism. In: Macridis RC, Brown BE, editors. *Comparative politics: notes and readings*. Chicago: The Dorsey Press; 1986. p. 125–154.
37. Münke C, Halloran A, Vantomme P, Evans J, Reade B, Flore R, et al., editors. *The routledge handbook of sustainable food and gastronomy*. London; 2015. p. 204–213.
38. Pfadenhauer M. The cultural dimension of social construction: on the meaning of “doings” and the meaning of “dones”. In: Pfadenhauer M, Knoblauch H, editors. *Social constructivism as paradigm? The legacy of the social construction of reality*. London: Routledge; 2019. p. 65–74.
39. Srubar I. Autogenesis and autopoiesis: on the emergence of social reality in social and radical constructivism. In: Pfadenhauer M, Knoblauch H, editors. *Social constructivism as paradigm? The legacy of the social construction of reality*. London: Routledge; 2019. p. 207–215.
40. Ackerly B. Feminist and activist approach to human rights. In: Goodhart M, editor. *Human rights: politics and practice*. Oxford: Oxford University Press; 2016. p. 28–43.
41. Eckersly R. Green theory. In: Dunn T, Kurki M, Smith S, editors. *International relations theories: discipline and diversity*. Oxford: Oxford University Press; 2016. p. 259–280.
42. Giddens A, Sutton PW. *Essential concept in sociology*. Cambridge: Polity; 2017. 240 p.
43. Havemann P. Indigenous peoples' human rights. In: Goodhart M, editor. *Human rights: politics and practice*. Oxford: Oxford University Press; 2016. p. 333–350.
44. Hay C. International relations theory and globalization. In: Dunn T, Kurki M, Smith S, editors. *International relations theories: discipline and diversity*. Oxford: Oxford University Press; 2016. p. 281–289.



45. Johari JC. *Contemporary political theory: new dimensions, basic concepts and major trends*. New Delhi: Sterling Publishers; 2012. 776 p.
46. Amusan L. "Soulless Capitalism" in the context of the 2008 global economic crisis: any lesson for Africa? In: Samento CM, editor. *Plunging into turmoil in the aftermath of crisis*. New Castle upon Tyne: Cambridge Scholars Publishing; 2018. p. 41–61.
47. Amusan L. Social sciences as imperialism: analysis of the global economic crisis of 2008 and development gaps in the third world states. *Journal of Administrative Sciences*. 2016;4(27):13–31.
48. Evans T, Thomas C. Poverty, hunger, and development. In: Baylis J, Smith S, Owens P, editors. *The globalization of world politics: an introduction to international relations*. Oxford: Oxford University Press; 2017. p. 464–479.
49. Philips N. The political economy of development. In: Ravenhill J, editor. *Global political economy*. Oxford: Oxford University Press; 2017. p. 356–386.
50. Haass R. *A world in disarray: American foreign policy and the crisis of the old order*. New York: Penguin Books; 2017. 352 p.
51. Bergeaud-Blackler F. Islamizing food: the encounter of market and diasporic dynamics. In: Bergeaud-Blackler F, Fischer J, Lever J, editors. *Halal matters: Islam, politics and markets in global perspective*. London: Routledge; 2016. p. 91–104.
52. Khan MA, Riaz MN, Chaudry MM. Muslim demography and global Halal trade: a statistical overview. In: Riaz MN, Chaudry MM, editors. *Handbook of Halal food production*. London: Taylor & Francis Group; 2019. p. 29–60.
53. Riaz MN, Chaudry MM, editors. *Handbook of Halal food production*. London: Taylor & Francis Group; 2019. 399 p.
54. Fukuda-Parr S. Human rights and politics in development. In: Goodhart M, editor. *Human rights: politics and practice*. Oxford: Oxford University Press; 2016. p. 169–186.
55. Allan T, Keulertz M, Sojamo A, Warner J, editors. *Handbook of land and water grabs in Africa*. London: Routledge; 2013. 512 p.
56. Gilbert J. *Land grabbing, investment & indigenous peoples' rights to land and natural resources: case studies and legal analysis*. Copenhagen: International Work Group for Indigenous Affairs; 2017. 52 p.
57. Parmo DAL. *Indigenous peoples and the sale of water rights: the case of Chile*. In: Langford M, Russell AFS. *The human right to water*. Cambridge: Cambridge University Press; 2017. p. 57–83. DOI: 10.1017/9780511862601.005.
58. Ruis BMGS. No forest convention but ten tree treaties [Internet; cited 2021 January 25]. Available from: <http://www.fao.org/3/y1237e/y1237e03.htm>.
59. Agnew C, Woodhouse P. *Water resources and development*. London: Routledge; 2011. 368 p.
60. Murray NJ, Clemens RS, Phinn SR, Possingham HP, Fuller RA. Tracking the rapid loss of tidal wetlands in the Yellow Sea. *Frontiers in Ecology and the Environment*. 2014;12(5):267–272. DOI: 10.1890/130260.
61. Belic S, Rajkovic M. Conditions that land reclamation must ensure sustainable agriculture. *Studia Universitatis "Vasile Goldiș"*. *Seria Științele Vieții*. 2010;20(2):55–59.
62. Richards DL, Gelleny RD. Economic globalization and human rights. In: Goodhart M, editor. *Human rights: politics and practice*. Oxford: Oxford University Press; 2016. p. 216–234.
63. Amusan L. "Reap what you have not sown", "Architect of poverty": the political economy of biodiversity patenting in Africa. *Anthropologist*. 2018;31(1–3):25–33. DOI: 10.1080/09720073.2018.1424523.
64. Amusan L. Politics of biopiracy: an adventure into Hoodia/Xhoba patenting in Southern Africa. *African Journal of Traditional, Complementary and Alternative Medicine*. 2017;14(1):103–109. DOI: 10.21010/ajtcam.v14i1.11.
65. Capling A, Trommer S. The evolution of the global trade regime. In: Ravenhill J, editor. *Global political economy*. Oxford: Oxford University Press; 2017. p. 111–140.
66. Lymberry P, Oakeshott I. *Farmageddon: the true cost of cheap meat*. London: Bloomsbury; 2014. 448 p.
67. Roosen J, Hennessy DA. The economics of antibiotics use in agriculture. In: Cramer GL, Paudel KP, Schmitz A. *The routledge handbook of agricultural economics*. London: Routledge; 2019. p. 159–174.
68. Millet D, Toussaint E. *Who owes who? 50 questions about world debt*. Dhaka: The University Press; 2004. 224 p.
69. Moghalu KC. *Emerging Africa: how the global economy's "last frontier" can prosper and matter*. Ibadan: Bookcraft; 2013. 432 p.
70. Halleson DN. Socio-economic implications of GMO regulation in Africa: a quest for a pragmatic approach. In: Draper P, Khumalo N, editor. *Trade in genetically modified foods: decoding Southern African regulatory approaches*. Johannesburg: The South African Institute of International Affairs; 2007. p. 54–77.
71. Zilberman D, Wesseler J, Schmitz A, Gordon B. Economics of agricultural biotechnology. In: Cramer GL, Paudel KP, Schmitz A. *The routledge handbook of agricultural economics*. London: Routledge; 2019. p. 670–686.
72. Hertz N. *The silent take over: global capitalism and the death of democracy*. London: Harper Business; 2001. 304 p.
73. Spink J, Moyer DC. Defining the public health threat of food fraud. *Journal of Food Science*. 2001;76:157–163.
74. Carson R. *Silent spring*. Boston: Mariner Books; 2002. 400 p.
75. Hassenkamp M. Get ready to profit from plant- and insect-based protein. *Farmer's Weekly*. 2019;15:30–31.

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