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Miracle Foods: Quinoa and the Effects of Western Food Politics on the Global South

After World War II, international institutions became concerned about the worlds growing population. The concern was embedded in the thought that farmers could not sustain the ever-growing population's demand for sustenance. Developed countries also worried about the issue of world hunger in developing nations, making it their duty to "solve" this problem with their first-world perspective and science. Miracle foods were born from these ideals; developed countries believed they could create or distribute a single food that would solve world hunger and sustain the population. Lysine corn, golden rice, and quinoa are the most prominent miracle foods from the present day. I argue that miracle foods have created a dissonance between the global south and the global north. The global north has used miracle foods to exercise excessive political power over third-world bodies through their policing of hunger policies. This excessive political power can be seen through the western exploitation of quinoa. The global north has completely disenfranchised the indigenous Andes farmers in order to make a profit. My policy recommendations are that there should be a set of protections put in place to guarantee the livelihood of Andes farmers. Western nations will have to place direct foreign investment into Bolivia and Peru by making 90% of their workforce in these countries' locals. Bolivia and Peru should preserve quinoa's national image by highlighting its geographical indication like

Champagne has been in France. My last recommendation would be that the UN would provide sanctions for countries that exploit the crop without placing enough investment into the two countries. Implementing these policies will protect the indigenous communities of Bolivia and Peru that rely on quinoa for this livelihood. These policies will lessen the dissonance between the global north and global south since each country will benefit from the arrangement.

Miracle foods were introduced to the world in the 1960s as a single entity that could cure world hunger. The Western World has framed the Third World as having an inferior food problem and that the solution to this problem is finding a super nutrient. This super nutrient is where the miracle food discourse comes in. Instead of focusing on the inequalities and power dynamics that affect food production globally, Western countries concentrate solely on technical issues of hunger. Western nations frame hunger as a purely caloric intake issue. That hunger is caused by malnutrition: "an abnormal physiological condition caused by inadequate, unbalanced, or excessive macronutrients or micronutrients" (McDonell 2015, 75). By framing malnutrition and hunger as a caloric problem, Western nations are not focusing on how they add to the problem, thus allowing first-world countries to have politically excessive power over third-world bodies.

Corn was domesticated about 9,000 years ago in present-day Mexico. High-lysine corn was the first miracle food to be created in the 1950s. Researchers at Purdue University made high-lysine corn after nutrition experts first decided that protein was the leading cause of global hunger. In 1963 they created a cost-effective corn mutant to alleviate global hunger. They chose corn because "mankind depends on grain crops for 70 percent of its consumption of protein" (Harpstead 1971, 34). It also made since they chose to develop a grain crop considering that most people in developing countries cannot afford to purchase animal protein for sustenance. The

researchers altered the amino acid ratios in the corn to make it into a high-quality protein. High-lysine corn was a dra-matic improvement over ordinary corn as a food. It could be assumed that not all the new corn's improvement in nutri-tive value was attributable to its increase in lysine content. The "increase in tryptophan also made a significant contribution, and so might some of the other amino acids whose ratio was enhanced. At all events, the change of the protein pattern in opaque-2 and Roury-2 corn and the nutritive effects demonstrated that the laboratory discovery had in fact yielded a new product quite un- like "normal" corn" (Harpstead 1971, 38).

The media viewed this mutant corn as a major breakthrough in the fight against hunger. The Rockefeller Foundation, FAO, and UNICEF sponsored the corn's nutritional studies and implementation trials. They performed interest groups on everyone but the malnourished population they were trying to help in the first place. However, when they did implementation trials with farmers, they were not impressed, citing that high lysine corn was a problem for two factors. One is its poor yield amount, and the second is its different characteristics in taste; the texture and taste of this mutant corn were much different than traditional corn tt could also not mimic tortillas when it was processed.

High-lysine corn ultimately failed but reinforced the first world conception of hunger. There cannot be one size fits all solution to global hunger. If there is one solution, that would mean that hunger looks the same all around the world. Faith "in a one-size-fits-all solution illustrated the assumption that malnutrition is mostly the same around the globe, and with the right antidote, can be cured. Malnutrition is pathologized regarded as an abnormal condition with the inflicted group and treated as a problem with them" (McDonell 2015, 75). Western nations should have understood through the failure of high-lysine corn that the concept of miracle foods was never truly going to come to fruition.

In the 1990s, the world was introduced to the next miracle food: golden rice. Golden rice was created as a solution to the fact that 100-300 million children in rural Asia, Africa, and Latin America were suffering during this time from VAD, and another 500,000 were going blind. The VAD outbreak was blamed on the fact that these communities had an over-reliance on rice, which lacks Vitamin A. Dr. Ingo Potrykus, "a German plant biotechnologist who has long lived in Switzerland, was on a roll. In 1999, just as he was about to retire, Potrykus and his colleagues had stunned plant scientists and biotechnology opponents alike by creating a rice variety that produced a group of molecules called pro-vitamin A in its seeds. The researchers thought this "golden rice" named for the yellow hue imparted by the compounds - held a revolutionary promise to fight vitamin A deficiency, which blinds or kills thousands of children in developing countries every year" (Enserink 2008, 468). This rice could not be bred in the classical sense "although pro-vitamin A is present in the green parts of the rice plant, no known strain makes it in its seeds. The only option is to tinker with the rice's DNA to produce the desired effect. Throughout the 1980s, the Rockefeller Foundation funded several exploratory studies, but the plan didn't gel until a brainstorming meeting in New York City in 1992m at which scientists discussed the bold idea of reintroducing the biochemical pathway leading to beta carotene, the most important pro-vitamin A, into rice but putting it under control of a promoter that's specific to endosperm" (Enserink 2008, 469).

The media pushed golden rice as the new miracle food by the media. But on the ground, golden rice was genuinely controversial. Corporations like Greenpeace launched aggressive campaigns against golden rice, stating that the crop was an industry PR plant that did not truly help poverty. Greenpeace believed that there were far better solutions to fixing the Vitamin A deficiency of developed nations worldwide. Other people called golden rice a crime against

humanity and that creating a Frankenstein-like food is not humane. In the present day, Golden Rice is not available for cultivation even after all the research that went into it. Most companies do not believe that it is worth funding. As of 2016, the FDA banned golden rice from being produced, citing that the beta-carotene content did not provide sufficient amounts of vitamin A. In 2021, the Philippines decided to approve the commercial propagation of golden rice. Greenpeace, however, has denounced this decision; this calls into question if golden rice will ever be imported on a large scale. Golden rice is yet another example of why there cannot be a single solution to world hunger. First-world countries must understand the needs of developing countries need to be true allies. Without understanding, they are doomed to fail, waste money, and help no one in the process.

Quinoa is the newest miracle food to be cultivated in the world. Unlike high lysine corn and golden rice, Quinoa was not created in a lab and is instead a natural resource. Quinoa was first domesticated about 5,000 years ago in Southern Peru and Bolivia. The Inca Empire called quinoa "the Mother Grain" as it played an essential role in their daily meals and ritual activities. Presently, Quinoa is critical to the Andean Community as a culinary and cultural cornerstone. Until very recently, quinoa was ignored by foreign observers until Andean researchers discovered that quinoa has an excellent nutritional profile with 20% protein, no gluten, many vitamins and minerals, and all nine essential amino acids. This, combined with the grain's adaptability and hardiness, has made quinoa a natural miracle food and miracle crop. Although "it doesn't provide as many grams of protein per volume, quinoa is nourishing and filling, a great attraction, and possesses a valuable ability to grow under marginal conditions, in poor soil, in soils with high salinity, and with little water. Most often grown at higher altitudes and in soils that would not support corn or wheat, quinoa has provided a staple food for populations whose

other food often had to be traded for and transported in due to inhospitable conditions" (Gibson, 172). This caused quinoa to be "framed as a tool to alleviate urban malnutrition in the Andes and incorporate peasants into national economies, an "underutilized species" poised for global cultivation" (m 77). Quinoa was posed to be "the grain of the future" for a multitude of consumers. Peru and Bolivia saw quinoa as a national development opportunity, while quinoa was also seen as an economic opportunity on the global scale. Quinoa was first brought to North America by traveler Steve Gorad in 1978. Gorad thus partnered with entrepreneur Don McKinley to form the Quinoa Corporation, which started exporting quinoa from Bolivia to the United States in 1983. By 1988 quinoa became a staple in US health food stores, with 750 tons sold. By the early 2000s, the demand for quinoa outside of the Andres increased rapidly; quinoa exportation quickly increased, causing Bolivia and Peru to start rapidly developing their export markets to try and capitalize on what is known now as the "Quinoa Boom." The United Nations even named 2013 The International Year of Quinoa; during this year, fifteen countries launched a series of year-long events to promote quinoa consumption and production all around the world. During the quinoa boom, Bolivians sent their children to college and university, bought new material goods such as motorcycles and cars, new homes, and even new farming technology to benefit their quinoa harvest.

In these regions, Quinoa is the only significant cash crop that can be cultivated. The quinoa boom did not last long, moving from the cost of quinoa to be $4 per pound in 2007 to fall to $0.60 per pound by the end of 2014. While the Andean farmers were at first seeing a significant surge in their incomes, there was soon to be a tradeoff that no Bolivians could afford to eat a crop they lived off for centuries. According to the countries, agricultural ministry, quinoa consumption fell 34 percent. With quinoa being $5 a box in America, few Bolivians can afford to

feed their families quinoa. Quinoa Corporation has had little care for the fact Bolivians can no longer afford it and have stated that it is just a part of life and the economy. The lack of availability of quinoa has caused younger generations in the Andes to have an aversion to quinoa. They have traded toasted quinoa flour for white bread and boiled water, sugar, and quinoa flour mixed for Coca- Cola. Quinoa costs an average of 4.85 per kilo in Bolivia as opposed to 1.10 for white rice. Bolivians have long struggled with malnutrition, so this new surge of processed foods in the country has caused concern. Families must make hard choices between keeping their quinoa crop for their own or selling it to afford housing, education, food, etc.

This new emphasis on Quinoa has hurt the Andean communities that have traditionally benefited from them. Western countries have taken quinoa and made it their own, all while disproportionately hurting the Andean people. This rise in quinoa prices has created food security sovereignty issues. The solution to this issue is not to have western nations stop buying quinoa but rather to implement policies to protect Bolivian locals and farmers. Research has already been done on how quinoa exploitation by developed countries has affected the Andes indigenous community. I am expanding on this research by framing quinoa at a global scale and ushering it into a larger narrative of disparities between the global north and the global south. The problem with the research already done on quinoa production is that it is probably inaccurate. The United Nations Food and Agricultural Organization (FAO), Bolivian government, and quinoa producers' associations track all quinoa production in Bolivia.

Unfortunately, they are all reporting different statistics because there are informal quinoa sales, contraband quinoa smuggled into Peru, and the lack of quinoa producing documentation. To understand the market, The United Nations Food and Agricultural Organization (FAO),

Bolivian government, and quinoa producers' association need to be on the same page when gathering the data of quinoa production. This would allow them to understand how much illegal quinoa activity is going on in the country so that they could crack down on it. This will help farmers receive the best price for this quinoa possible by cracking down on smugglers and exploiters.

The global hierarchies of power involved in food production need to be dismantled for Bolivian and Peruvian locals to be protected truly. This means companies directly profiting from quinoa production need to make sure that locals can afford to eat it. Having food from around the world is only a luxury if those who historically cultivated it can still enjoy it. International actors and quinoa producers need to find a happy medium. Andes communities need foreign consumers for income. Without them, the poverty and malnutrition issues in Bolivia would only worsen. If foreign players understood their role in the current malnutrition, they could help alleviate the problem.

The quinoa boom and eventual bust left Andean farmers disenfranchised in a production they once had a monopoly on. The now crowded market full of international players left small Andean farmers unable to compete. International players had the capital and technology to keep up with the ever-growing demand. Small farmers were used to only providing a small crop and were not at all able to keep up with the international corporations. This is another example of policy recommendations coming into play, and Andean farmers need to be protected. In this sense, Andean farmers can be protected by international companies making 90% of their workforce local Andeans. The farmers know the quinoa crop the best as they have been farming it for centuries. The small-scale farmers could be given the right capital and technology to be able to produce quinoa on a larger scale. International companies could employ them rather than

work against them so that each could mutually benefit. This would allow farmers and their families to have a steady income doing something they have done for ages. International companies would also need to give the farmers benefits such as health, life insurance, retirement, paid time off, and disability. These are the same benefits they would provide would American workers. Bolivia and Peru would slowly start to be ushered into the global scale by international companies treating Bolivian and Peruvian workers the same as American ones. This would also slowly bridge the gap between the global south and the global north.

Bolivia and Peru should protect the geological indication of quinoa. They should take a note from Champagne, France, and make it possible for quinoa only to be legitimized and called quinoa if it is produced in regions that historically grew it. The Andean region would be able to create its own brand and packaging. It would also keep foreign producers from monopolizing on quinoa as they have in the past. The benefit of differentiating quinoa from quinoa being produced somewhere else is that it would also increase its value. Bolivia is already beginning this process as "Quinoa Real," legitimizing quinoa made in the southern part of Bolivia. Peru is also producing its own collective quinoa brand.

I believe that both countries should work together to create a pan Andean quinoa brand that would be extended to all regions of the Andes that have historically grown quinoa. A pan Andean brand would help more people keep jobs and heighten the quality of life in the entire area. The protection of quinoa would make foreign investors have to negotiate directly with each country. It would allow more minor exploitation as foreign countries couldn't produce authentic quinoa anywhere except the Andes. Foreign customers who purchase quinoa for high prices would only want to buy the genuine product and not an off brand one grown in an unfamiliar place.

A counterargument to my policies is the fact that since quinoa is a natural resource, every nation should have a particular claim to it. People could argue that since quinoa is a part of the free market, no one truly owns it, and whoever has the resources to cultivate it should have access to it. This is harmful and plays into the idea of a "resource curse," which is the belief that many resource-rich countries can never truly benefit from their countries' natural resources. The resource curse problem trickles into every aspect of society. Countries have stunted economic growth, less democracy, and have a hard time developing compared to countries with not as many natural resources. Governments with natural resources do not need to create revenue from taxing their citizens; instead, they can take it from their natural resources. This makes a lack of government dependency on its citizens. On the other hand, citizens demand greater representation and accountability from their government. The government has no incentive to give its citizens the demands they need. Instead, they often reply negatively to their citizen's requests. Resource revenue can be used to help leaders repress their citizens. This instability can, in turn, create a high level of violence, creating civil wars and immense corruption. The political resource curse, in turn, explains why countries with natural resources have a more challenging time becoming democracies.

Bolivia already has a troubled past with government corruption and issues with democracy. The first issue of resources curses came in the 17th and 18th centuries when foreign countries took the countries silver and gold. During the 90s, people in Bolivia became dissatisfied with the country's traditional political leaders and parties. In addition, neoliberalism and race and class discrimination also called citizens to demand more equality. This was all coupled with the government's corruption and low level of democracy. As a result, multiple social organizations called for a new political structure that would align with their demands and

encourage their political involvement. In addition, the U.S. during this time backed a plan to sell Bolivia's natural gas to the U.S. through Chile. This led to the Gas Wars of 2003, in which Bolivians of all class lines came together to create social movements to fight this globalization. The main issue in the gas wars was Bolivia's giant natural gas reserve. Bolivia has the second-largest gas reserve in South America after Venezuela, but Bolivia could not afford the exploration costs. The government of Bolivia wanted to use the profits from gas to lift the country's failing economy. People argued that the poor cost of exporting gas was international actors exploiting Bolivia's natural resources. The Gas Wars ushered in a new change in the country the president and vice president stepped down. In 2005 Evo Morales won the election in a landslide as the country's first indigenous president. Allowing the indigenous community to gain more civil and social rights in the government launched a new Bolivian political era. Unlike the globalization of natural gas, Bolivians have welcomed the globalization of quinoa.

Countries that are more prone to this resource curse, like the Andean region, should be This is an example of the ways in which the resource curse has already affected Bolivia. Even though the resolution seems optimistic, the political climate in Bolivia can quickly go back with a new resource curse quinoa to this if they are not protected, protected by foreign countries, not exploited by them. If a country has more natural resources, sanctions should be placed on just how much of the resource can be taken by foreign players.

This leads me into my following policy recommendation. The fact that the UN should implement sanctions for every country that exploits quinoa without placing enough foreign investment into the Andean region. I would want the United Nations Security Council to take over the sanctions as they are the only entity in the United Nations that can impose sanctions on other countries. The Security Council's central premise is to maintain or restore international

peace and security under Chapter VII of the United Nations Charter. Sanctions measures, under Article 41, encompass a broad range of enforcement options that do not involve the use of armed force. Since 1966, the Security Council has established 30 sanctions regimes" (United Nations Security Council). The Security Council has worked in countries such as Haiti, Iraq, Southern Rhodesia, South Africa, former Yugoslavia, Angola, Rwanda, Sierra Leone, Somalia, Eritrea, Ethiopia, Libera, DRC, Côte d'Ivoire, Sudan, Lebanon, DPRK, Iran, Libya (2), Guinea-Bissau, CAR, Yemen, South Sudan, and Mali, as well as against ISIL (Da'esh) and Al-Qaida and the Taliban. They have never worked in Bolivia and Peru or anywhere in the Andes Mountain region. The Security Council's sanctions have taken different forms to pursue a large variety of goals. The measures have ranged from "comprehensive economic and trade sanctions to more targeted measures such as arms embargoes, travel bans, and financial or commodity restrictions. The Security Council has applied sanctions to support peaceful transitions, deter non-constitutional changes, constrain terrorism, protect human rights and promote non-proliferation" (United Nations Security Council). Another counterargument to this proposal would be that the United Nations Security Council is too serious of an institution to place sanctions over something like quinoa production. I believe that it is the perfect entity to implement sanctions because monitoring quinoa production would restore peace and security in the Andean region. It would protect this region from the common trend of countries with resource curses, high levels of violence, civil wars, and immense government corruption. Foreign players are coming into the Andean region to take away their natural resources. An example of this has already been seen in the Gas Wars of 2003. The United States backed this plan because of its economic stake in it. Not because they care about the ways in which the Bolivian people, primarily the indigenous community, would be affected by the gas exploitation. If there were an international actor like

the United Nations Security Council to be impartial to either country, the Gas Wars wouldn't have escalated in the way it did. The United Nations Security Council could have placed sanctions on the United States if they didn't keep their end of the deal. The Security Council could also help Bolivia understand the economic importance of its quinoa, the right price to export it, and the right international actors to work with.

Foreign direct investment is defined as a cross-border investment in which one country with its own economy established a long-lasting economic relationship with a certain degree of influence over another country's economy. In this case, the foreign direct investment would be international players' investment in Bolivia's quinoa product. Therefore, this foreign direct investment has genuinely been one-sided, with the foreign investor gaining more than Bolivia who is providing the good. I believe that the foreign investment should be, in this case, put into industries that better the country, such as health care and education. Foreign direct investment into these industries would better the Bolivia's poor economy and would make sure that the country wasn't losing significant capital. Also, helping the government in health care and education would bring Bolivia to the international scale. Education and healthcare reform would only benefit the country's people by assisting them to become more educated and healthier.

Heightened education would allow Bolivians to create a better life for themselves. In addition, they would have more economic autonomy that would trickle into generations to come. Therefore, foreign direct investment would only be a win-win situation for both the foreign investor and the people of Bolivia. But if these foreign direct investors did not hold up their end of the bargain, then the United Nations Security Council would have to step in to protect Bolivia who does not have as much economic power are the foreign players. Although there is a multitude of sanctions, in this case, I would want to focus on economic and individual sanctions.

Economic sanctions could be enforced by placing sanctions on the import dues on international actors importing quinoa. Another economic sanction would be to restrict the export of quinoa from the country. The last economic sanction would be to block the sanctioned country's port so that no quinoa could get into the foreign actors' country.

Individual sanctions would include putting sanctions on political or economic leaders. The Security Council would place sanctions on economic leaders that are directly profiting from the exploitation of quinoa production. These sanctions would include either freezing the leader's assets or placing travel bans on them.

Each sanction varies in degree but allows flexibility for Bolivia and Peru not to get exploited by foreign actors. In addition, these sanctions would guarantee the livelihood for Andes farmers and the entire Andean community for generations to come. Foreign countries would no longer be able to exploit quinoa for their own gain without directly investing economically in the Andean communities.

Miracle foods are important because they highlight the problem with the western perspective of hunger politics. Western nations state that miracle foods are created to benefit developed countries and "solve" world hunger. But in reality, each miracle food has been made to profit western conglomerates economically. Miracle foods have created a dissonance between the global south and global north countries. High lysine corn and golden rice highlight the limits of the western perspective of hunger. How truly damaging they can be on the third-world bodies they are subjected upon. Countries in the global north have been able to exploit developing countries' natural resources for their own gain. This can be explicitly seen in the Andes region of Bolivia and Peru with their natural resource of quinoa. The exploitation of quinoa has caused many issues for the community of people who rely heavily on quinoa. Hence, bringing in my set

of policy recommendations to protect the people of the Andean region, there should be a set of protections put in place to guarantee the livelihood of Andean farmers. Foreign players should have to place a direct foreign investment into the countries if they want to benefit economically from quinoa production. Bolivia and Peru should work together to preserve quinoa's national image by highlighting its geographical indication by creating its own brand. This would help them monopolize quinoa on a global scale. My last recommendation would be to have the United Nations Security Council implement sanctions on foreign countries that exploit quinoa imports. These policies will benefit the Andean community and secure economic autonomy for them for generations to come. It will also help the global north understand the harmful effects of their food politics on the global south, lessening the dissonance between nations.

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