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Seed Aid: The Importance of Local Decision-Making

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Abstract

This policy paper focuses on the disconnect between donor and recipient states regarding seed aid and the implications of seed aid on local agricultural sovereignty and sustainability; it proposes that a reevaluation of international seed aid policies is needed. International food security organizations and food aid donors should prioritize local seeds for seed aid purposes to support local biodiversity and food sovereignty, and the stability and sustainability of local agricultural systems in the long term. Making adequate and accurate assessments of situations is crucial, and sourcing locally is an integral aspect of supporting local seed systems. The fundamental problem with the seed distribution system today is the limited availability of local seeds. Responding to food crises with an influx of seeds from donor countries poses a serious risk of undermining the livelihood security of farmers by disrupting local seed systems, risking local biodiversity, and resulting in genetic erosion. Therefore, efforts to increase food security in crisis situations should focus on supporting local seed production in the region or country whenever possible rather than bringing seeds in from outside or abroad.

Keywords

Food security, Seeds, International relations, Local policy

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1 ISSUE DEFINITION

This policy paper focuses on the disconnect between donor and recipient states regarding seed aid and the implications of seed aid on local agricultural sovereignty and sustainability; it proposes that a reevaluation of international seed aid policies is needed. International food security organizations and food aid donors should prioritize local seeds for seed aid purposes to support local biodiversity and food sovereignty, and the stability and sustainability of local agricultural systems in the long term. Making adequate and accurate assessments of situations is crucial, and sourcing locally is an integral aspect of supporting local seed systems[1]. The fundamental problem with the seed distribution system today is the limited availability of local seeds. Responding to food crises with an influx of seeds from donor countries poses a serious risk of undermining the livelihood security of farmers by disrupting local seed systems, risking local biodiversity, and resulting in genetic erosion. Therefore, efforts to increase food security in crisis situations should focus on supporting local seed production in the region or country whenever possible rather than bringing seeds in from outside or abroad.

2 BACKGROUND CONTEXT

Thousands of fruit and vegetable species are grown for food globally, yet less than two-hundred make substantial contributions to global food production. Additionally, thousands of plant species and varieties that used to be grown for food have become extinct[2]. The reliance of the global food system on such a limited number of crops, in the volatile conditions created by climate change, has made global food systems highly susceptible to loss or shocks. If even a handful of the major food crops were to experience shocks–crop failures, loss of environmental niches due to climate change, or extinction–food security across the globe would be at risk. Local and indigenous communities are most at risk of losing local varieties despite being major contributors to conservation and agrobiodiversity. This is due to a global food system that lacks adequate protections for these varieties in favor of hybrid and genetically modified organism (GMO) varieties created by public and private research and development efforts.

Creating a stable seed protection system that is focused on preserving local seeds would be an effective solution to reduce these risks. Seeds are key inputs for successful smallholder production, and the systems in place around seed saving, acquisition, and distribution are often disrupted in crisis and conflict situations. Some seed aid programs do exist, but the large majority of them utilize seeds from donor countries, like the US, rather than providing access to seeds from regions where food insecurity exists. This undermines growers' ability to be self-sufficient and inhibits the effectiveness and capacity of local growers by increasing their dependency on seed aid from international donors. Often, seed aid development programs focus on providing high-yield varieties to boost agricultural production, but they frequently fail to consider why farmers in the region choose and continue to use local varieties[3]. These programs do not recognize that local varieties are more appropriate for cultivation, both culturally and agronomically, because they are more resistant to local stressors, fare better under low-input conditions, and have more stable yields.

Seed aid systems perpetuate the underlying issues and trap farmers in dependency cycles that donor countries and multinational corporations benefit from, but this was not the original intention of the system. As Louise Sperling, an analyst for the International Center for Tropical Agriculture notes, seed aid started as a very innovative solution to giving food; it sought to empower people rather than make them feel like victims[4]. The problem arises in the disconnect between donors and the reality on the ground. Seed handouts often mean that farmers are less incentivized or capable of being self-sufficient, especially if that seed aid returns season after season, as it has in many African nations like Burundi and Ethiopia[4]. As noted by the emergency relief organization Cordaid, in crisis or conflict situations food insecurity does not necessarily mean seed insecurity and crop failures do not necessarily mean that seeds are not available[1]. For example, following a drought in Kenya, 85% of the next season's seed came from local crop yields despite the devastating crop losses faced

in the region[4]. In an attempt to address these issues, donors like the Office of US Foreign Disaster Assistance have reduced the funding they direct towards seed handouts and prioritized voucher programs for local markets to support local economies after disasters[4].

3 CAUSAL FACTORS

Western countries, particularly the United States, largely dominate discussions around food aid policies. Food crises have long been defined by Western global leaders as issues of inadequate regional food production, and Western countries often use these food crises as an opportunity to introduce corporate seeds, chemical fertilizers, and market systems into struggling countries[3]. In essence, what looks like seed aid in the short term becomes agribusiness in the long term. Current policies overwhelmingly benefit donor states, making them unwilling to change the status quo. Some nations, like the UK, have made changes but the biggest player in international seed aid, the US, is resistant to change.

The Food and Agriculture Organization, or FAO, an arm of the United Nations, included many key goals focused on public and private sectors or economic policies geared towards diversifying farmer revenues during recent discussion of seed aid policies. The FAO was also responsible for the Global Conference on Green Development of Seed Industries, which was organized as an opportunity for industry leaders, FAO partners, and other stakeholders to discuss "how best to make quality seeds of preferred productive, nutritious and resilient crop varieties available to farmers"[5]. The main objectives of this conference, through the debate of evidence and sharing updated knowledge, were: increasing awareness for seed industry contributions to green innovation; promoting cooperation between the public and private sectors; setting priorities; and pooling scientific, technical, and financial resources needed for strengthening seed systems[5]. They also substantially focused on improving farmers' abilities to access new and improved varieties, but paid little attention to local seed varieties, biodiversity, or improving local resiliency[6]. There is no mention as to how the conference intends to support smallholder farmers or how initiatives would protect local interests, including local varieties and biodiversity. The conference failed to address these issues, reflecting the shortcomings of the FAO's goals to reach broader objective goals.

The privatization of agriculture in the last several decades has disrupted the seed aid process dramatically. Historically, seed aid largely relied on the public sector, and usually was supplied for free to farmers in need. Today, a small number of multinational companies control more than half of the global seed market. Most conversations around seeds today in the food aid world revolve around private seeds that farmers now have to buy with strings attached[3]. Farmers thirty years ago could have given excess seeds to a neighbor in need, but now they are disincentivized to do so on multiple levels due to use restrictions imposed by seed corporations. The surging agricultural commodity prices caused by rapidly increasing demand have triggered a rush by major corporations to take advantage of the entire food chain in developing countries. Major companies are moving towards greater involvement in food production through contract farming, which has transferred agricultural control from farmers to CEOs and politicians. The interests of farmers and corporations are rarely aligned, as businesses want to control seed supplies that feed global commodity markets and have little, if any, interest in local seeds or the preservation of biodiversity that farmers tend to prioritize. In Africa, for example, 90% of the seeds used are local varieties, and local food systems rely on diversity for success[3]. However, with increasing investment and interest from corporations, a struggle has developed between corporate control over a globalized industrial food system versus efforts to support and expand local food sovereignty. Additionally, seed companies have become increasingly reliant on subsidies, which has led to volatility in seed production. For example, when Mozambique was dealing with food insecurity, the Emergency Seed Program supported seed production internally, and the Seed Company of Mozambique (SEMOC) saw annual sales increase to 14,000 metric tons during the crisis in 1993. As soon as the emergency seed subsidies dried up in 1997, their sales plummeted to 3,000 metric tons[7]. This volatility is destabilizing to international seed systems and can result in additional shocks as seeds and seed aid become unreliable and highly fluctuating.

4 CASE STUDY: BENIN

Benin is a country that has been experiencing ongoing issues with food security. In 2008, Benin was spending $7 million in subsidies to provide farmers with improved seed varieties in order to meet food production goals. Despite widespread efforts and funding for the dispersal of the improved hybrid seeds, there was no support for the distribution and multiplication of local and traditional varieties[3]. Benin struggles with food sovereignty and self-sufficiency, relying on imports for 90% of their rice[3]. Local organizations believe that supporting Benin's efforts toward greater self-sufficiency would help alleviate the ongoing food crisis. This could be done by implementing policies that support biodiverse farming and guarantee adequate prices for small-scale producers. In addition to their struggle for self-sufficiency, Benin is fighting against the threat of GMOs. Benin has a regionally unique moratorium on GMOs in their country, and have been closely monitoring seed and food aid from outside sources. Most of their con-

cerns lie with neighboring Burkina Faso, who had allowed the production of two GMO cotton varieties from Monsanto, which could easily cross the border and disrupt local biodiversity and Benin's food sovereignty[3]. Benin has made its goals and expectations for food aid clear, and honoring these goals is core to supporting Benin's food sovereignty. Additionally, supporting local groups' efforts to put an emphasis on biodiversity, local heritage, and price protection in the name of food sovereignty is crucial. As of now, Benin is still struggling with food security and has been limited in its capacity to practice food sovereignty policies due to a lack of international support for self-sufficient agricultural practices.

5 CASE STUDY: THE PHILIPPINES

In an effort to address food crises in the Philippines, the government created a program called FIELDS. FIELDS was designed to provide subsidies and loans to farmers in order to establish rice self-sufficiency because the Philippines are one of the world's largest importers of rice. The seeds promoted by this program are mostly privately developed, and while they are predominantly owned by a local Filipino firm, foreign corporations like Bayer and Monsanto are also major players[3]. Filipino farmers and activists are concerned that the program would only serve to make rice farmers reliant on private companies. Wilhelmina Pelegrina of SEARICE, an NGO (Nongovernmental Organization) working on the conservation and development of local seeds with farming communities in the Philippines, said that "providing input subsidies for hybrid rice is not a sustainable way of achieving rice self-sufficiency and addressing the rice crisis"[3]. Not only are private companies heavily involved in distributing rice hybrids in The Philippines, but they are being handed the reins of hybrid rice commercialization in the country, giving them access to publicly held germplasm and exclusive rights to commercialize rice hybrids that were developed through public research programs[3]. The privatization of hybrid rice commercialization could have devastating results for local food sovereignty and biodiversity. While the full impacts of these policies have yet to be seen or researched, it is clear that the privatization of seed research and development does little to support local biodiversity or smallholder rights, and impedes progress towards food sovereignty.

6 CASE STUDY: SENEGAL

In 2008, Senegal's president Abdoulaye Wade launched an initiative to make the country's food self-sufficient by 2015 by supporting the production of basic food and feed crops. The government earmarked $792 million for this project and intended $443 million to subsidize fertilizer purchases, $120 million to subsidize seed purchases, and $30 million to subsidize pesticide purchases[3]. Many of the companies involved in the production and distribution of the aforementioned subsidies are foreign-owned and are likely to profit from this project. The National Rural Exchange and Cooperation Council, Senegal's main farmers' organization, was not consulted about the project and opposed its failure to address long-standing structural issues preventing farmers from accessing fair market prices for crops.

Senegal has made several efforts over the years to move towards self-sufficiency and food sovereignty but has often met resistance to their efforts. In 2012, local communities in Senegal demanded the return of agricultural land that had been stolen from them a decade before by the foreign agribusiness corporation that currently controls the land without consent from the community, but they have yet to see their land returned to them[8].

In 2016, Senegal took steps to desalinate agricultural land in their efforts toward food self-sufficiency[8]. This initiative was designed to support farmers who had been forced to develop techniques to retain water runoff and to use different crop varieties that were more suitable as a result of the land salinization. The project's goals included poverty reduction and the strengthening of food security. In terms of impacts, the affected regions saw greater food security, improved incomes, diverse economic activities, and the protection and regeneration of the ecosystem. Local people have been more involved in local initiatives like market gardening, bee-keeping, stock-breeding, and fishing, as less time and effort has been focused on water retention[8]. This initiative has been considered successful in providing greater arable land and reducing the burden on farmers in the target regions. In 2017, Senegal recorded record yield, attributing their success to substantial investments in the agriculture sector, better selection of seeds, and better mechanization of the agricultural process[9].

Continuous efforts are being made to modernize, develop strategies for producers to deal with climate change impacts, and support pastoralism[9]. While support for local biodiversity is unclear in these projects, Senegal seems to be meeting many of their goals set in regard to reducing hunger and supporting food security. If Senegal can continue to invest in these practices, it could be possible to achieve a degree of self-sufficiency and food sovereignty.

7 POLICY RECOMMENDATIONS

Based on the research presented, this paper recommends three specific policies to be introduced individually or in collaboration with each other.

7.1 *Restructuring who is in charge of food aid systems and interventions*

States that are experiencing, or have experienced, food insecurity should be in charge of defining what aid looks like and where it is coming from. The countries experiencing food insecurity and instability should have a say in what resources would be most beneficial, and what will allow them to reach toward greater food system stability and sovereignty. This policy will also serve to provide greater representation for smallholder and community voices and support local biodiversity efforts. It will likely decrease profits for donor countries like the US but contribute to greater international stability and reduce the need for future aid, thus curtailing overall expenses in the long run.

7.2 *Investment in seed banks*

Investment in seed banks helps to protect seed biodiversity in the face of shocks. Seed banks are created in order to prepare for natural disasters and climate change effects which could impact seed biodiversity. Seed banks are mainly a preventative measure, meant to be a failsafe in case other preservation methods fail, or in the occurrence of a natural disaster, war, or disease outbreak[10]. Seed banks can protect heritage and local crop varieties against genetically modified plants and climate change reducing the available land. Moreover, ensuring the conservation of local crops through seed banks is important given these varieties are already adapted to their regions and can provide appropriate agricultural stability when crises occur.

7.3 *Support for long-term efforts to build resilient agriculture systems*

Building resilient agriculture systems is more cost-effective than repeated emergency interventions. A system structured around long-term efforts would have to be conflict-sensitive and would include reviving seed markets at local, regional, and national levels[11]. Kenya has established a start to such efforts with the Kenya Cereal Enhancement Program–Climate Resilient Agricultural Livelihoods program. This program emphasizes crop diversification and climate resiliency alongside training in agricultural economic practices and financial literacy in order to encourage farmers to adopt new and appropriate varieties[7]. While this program has a ways to go in terms of proving its success and ensuring that local varieties and local heritages are preserved, the foundation it is built on are in the direction of where seed systems need to go in order to be resilient and responsive. This policy would likely include a shift from vouchers or direct donations to cash transfers in emergency situations. Cash allows farmers the ability to independently decide whether to invest in seed or other resources based on individual needs. If farmers chose to purchase seeds, cash would allow them to decide which varieties of crops and where to purchase them[7]. This also serves to strengthen local seed systems and broader economic markets, contributing to stability and resilience.

8 AUTHOR'S NOTE

This paper began as a paper written for Dr. Susan Bridle-Fitzpatrick's "Feeding the World" undergraduate course at the Josef Korbel School of International Studies.

9 EDITOR'S NOTES

This article was peer-reviewed.

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