



Washington, D.C. June 15th, 2022

Bruce Summer
Administrator
USDA's Agricultural Marketing Service (AMS)
1400 Independence Avenue SW,
Washington, DC 20250-0201

Re: Competition and the Intellectual Property System: Seeds and Other Agricultural Inputs. Docket number AMS-AMS-22-0025.

Dear Mr. Summer,

On behalf of the members of the National Family Farm Coalition (NFFC); the Institute for Agriculture and Trade Policy (IATP); Health, Environment, Agriculture, and Labor Food Alliance (HEAL); the Food Chain Workers Alliance; and the Farmworker Association of Florida (FWAF), we thank you for the opportunity to offer comments on the *Competition and the Intellectual Property System: Seeds and Other Agricultural Inputs*. Our organizations are deeply invested in the defense of seed sovereignty, which includes the public intellectual property of autochthonous seeds, their diversity, sharing, and community benefit.

NFFC is an alliance of grassroots farmer- and advocate-led groups across 42 states representing the rights and interests of independent family farmers, ranchers, and fisherfolk. NFFC's 30 state, regional, and national farm and rural organizations are bound by the common belief that communities have the right to determine how their food is grown and harvested; that everyone in the food system should receive fair prices or wages; that all producers should have equitable access to credit, land, seeds, water, markets, and other resources; and, that our food and agriculture policy must support sustainable farming, ranching, and fishing practices.

IATP is a think tank that understands the interconnection between agriculture, trade and climate. For almost 30 years IATP has promoted sustainable food, farm, and trade systems by science-based research and advocacy. IATP identifies the impact trade agreements have on farmers, consumers and the environment, while promoting a fair trade system that supports locally based development, labor and human rights, and democratic institutions. IATP develops alternative economic models that integrate environmental sustainability into rural development.

HEAL Food Alliance is a multi-sector, multi-racial coalition building collective power to transform our food and farm systems. HEAL is led by 55 member organizations, who represent over 2 million rural and urban farmers, fishers, farm and food chain workers, indigenous groups, scientists, public health advocates, policy experts, community organizers, and activists.



FCWA is a national coalition of 31 worker-based organizations of workers in many sectors of the food chain, including agriculture, processing, selling, and serving. FCWA members represent over 300,000 multi-ethnic workers looking to improve their health, safety, and wages.

FWAF is a 39 years old statewide grassroots membership organization of farmworkers and rural communities working to transform our food system from a toxic and exploitative production to a fair and sustainable system.

Our organizations welcomes President Biden's Executive Order 14036¹ to promote a more open and fair competition given the real risks of the country's economic liberties and democratic accountability. We agree with the administration's assessments that farmers are squeezed between concentrated market power in the agricultural input industries—seed, fertilizer, feed, and equipment suppliers—and concentrated market power in the channels for selling agricultural products.

The outcome is, as expected, a rapid reduction of the number of farmers and a process of farming consolidation that, as the COVID-19 pandemic showed, makes the entire food system weak and cruel. "Farmers' share of the value of their agricultural products has decreased, and poultry farmers, hog farmers, cattle ranchers, and other agricultural workers struggle to retain autonomy and to make sustainable returns."² The final outcome of the American agricultural policies of the last 50 years is farm concentration and rural displacement. While a very small number of farms are required to produce 10% of all farm sales (374 farms average over \$103,000,000 in sales), it takes 105,453 farms to produce 75% of all sales. In other words, 5% of all farms produced 75% of total sales. The average sales for that group was \$2.76 million per farm.³

In April, when USDA Agricultural Market Services¹ requested these comments, they put forward a background with important observations about intellectual property, innovation, and the concentrated control seed markets for corn and soybean, machinery, and poultry; but it falls short on the overall problem that brought us to where we are today. USDA agricultural policy has been dominated by the wrong paradigm: food security based on technological efficiency and economic sustainability. In other words, cheap industrial production at the expense of producers, workers, consumers, soil, water, biodiversity, and rural prosperity.

¹ EO 14036.

<https://www.federalregister.gov/documents/2021/07/14/2021-15069/promoting-competition-in-the-american-economy>

² AMS-AMS-22-0025

<https://www.federalregister.gov/documents/2022/03/17/2022-05667/competition-and-the-intellectual-property-system-seeds-and-other-agricultural-inputs>

³ Gloy, B (2019) Concentration in Agricultural Production. Agricultural Economic Insight. <https://aei.ag/2019/06/10/concentration-in-agricultural-production/> Visited 05/13/2022



The companies driving technological advantages are not motivated by human food demands or equality, but by wealth accumulation, food supremacy, and political power. Intellectual property laws enable the concept of a cheap food system, and use it as a misleading tool of public relations.

Regardless of the massive concentration and efficiency of monocrop fields, “peasant, local, community, subsistence and family farming still produce 75% of the food that is consumed on the planet, and 90% of non-mechanized non motorized farmers of the world produce the majority of their seeds themselves. This situation is intolerable to transnational corporations, which have decided to put an end to it. They have already carried out this program in rich countries where some “improved” industrial varieties, almost identical to one another, have replaced the great diversity of peasant and farmers’ seeds in the fields.”⁴

Genetically modified seeds and their corollary pesticide products are part of this industrial complex that has benefited fossil fuel companies, pharmaceutical corporations, and the politicians who receive their contributions; but which has not benefited family farmers, ranchers, and fisherfolk who have been blindsided by financiers, policy makers, and the endless aspirations of American imperialism. However, NFFC and many other advocacy organizations still believe that fair and competitive local and regional food systems are possible. Transforming the food system is not just inspirational, but a matter of survival. It is not a matter of how much more food we can produce, but for how long we can maintain our production of nutritious, healthy, and sustainably grown foods.

Many may think that we should promote and create new markets and find new opportunities, including for value-added agriculture and value-added products; this is not an innovative proposal, but the resurgence of an inspirational America. Rural decay is an outcome of industrial consolidation and corporate greed. To re-create a system which meets the needs of farmers, ranchers, and fisherfolk, increase the wellbeing and livelihood of the food chain workforce; and support consumers' nutrition security, particularly for low-income populations, we need to transform our food system.

Concentration and Market Power in Agricultural Inputs

(1) Please describe challenges, concerns, and any other views (including relating to any benefits) with market concentration and market power in the agricultural input industries, including, as applicable, effects on farmers, competitors and related markets; pricing; availability; transportation and delivery; quality; research and innovation; economic growth, labor markets, and inequality issues; supply chain resiliency; and any other factors.

⁴ La Via Campesina: Our Seeds, Our Future (2015)
<https://viacampesina.org/en/wp-content/uploads/sites/2/2013/06/EN-notebook6.pdf>



Seeds: When just few corporations control most of the seed market, farmers have very few options. Pricing, varieties, and techniques are limited; moreover, intellectual property rights may lead to farmers being penalized for growing GMOs seeds unintentionally in their fields due to drifts. Crop insurance and farm credits, for instance, do not consider “diversified operations”. If any, the benefits go to a food system which produces homogeneity at the cost of human and environmental health and farmers’ and workers livelihood. In terms of resiliency:

“Corn, rice, wheat, and soybeans make up 75% of calories consumed by the world's population. These crops were derived from wild varieties that are in danger of extinction. The world's food supply is hanging on by a delicate thread of remaining genetic resistance. Increasing genetic uniformity of these crops could lead to a world food crisis. One disease strain or type of pest could severely devastate a large population of any of those four crops”⁵

The war in Ukraine may not be a natural disaster but it demonstrates the weakness of the global “envisioned” food system that relies on very few crop options. Even before the Big 4 merged, three firms (Monsanto, Syngenta, and Vilmorin) controlled 60 percent of the global vegetable seed market.⁶

Machinery: Farm equipment manufacturing is one of the largest components of agriculture, primarily due to the greater relative cost of products. This segment includes tractors, combine harvesters, crop dusters, harrows, plows, planters, milking machines, and more. Lawn and garden equipment include - but are not limited to - powered lawn mowers, hedge trimmers, chippers, leaf blowers, and mulchers. Industry revenue is largely determined by commercial and individual participation in agricultural activities.⁷ The tractor segment is estimated to account for nearly three-fourths of the global agricultural equipment market share during the forecast period.⁸ While farm machinery is not as concentrated as the seed market, a significant problem is the use of technologies and contracts these companies employ to prevent farmers from repairing their own very expensive equipment.

With advanced technology being incorporated into agricultural production, it has become more and more difficult for farmers and ranchers to repair their own equipment, hurting the bottom

⁵ Martin, A. (2013). Seed Savers v. Monsanto: Farmers Need a Victory for Wilting Biodiversity. *DePaul J. Art Tech. & Intell. Prop. L.*, 24, 95.

<https://via.library.depaul.edu/cgi/viewcontent.cgi?article=1023&context=jatip>

⁶ Hubbard KK (2019) The Sobering Details Behind the Latest Seed Monopoly Chart, Civil Eats, January 11. <https://civileats.com/2019/01/11/the-sobering-details-behind-the-latest-seed-monopoly-chart/>. Visited 05/13/2022

⁷ IBISWorld (2021) Tractors and Agricultural Machinery Manufacturing Industry in the U.S. <https://www.ibisworld.com/united-states/market-research-reports/tractors-agricultural-machinery-manufacturing-industry/> Visited 05/13/2022

⁸ Persistence Market Research (2020) The tractor segment by product type is timeated to create incremental opportunity 8.5 times that of the combine harvester segmentation between 2016 and 2024. <https://www.persistencemarketresearch.com/market-research/agricultural-equipment-market.asp>



lines of both producers and local non-dealer-certified repair shops. As Senator Tester mentioned when introducing “right to repair” legislation:

“Manufacturers have prevented producers from fixing their own machines in order to bolster corporate profits, and they’ve done it at the expense of family farmers and ranchers, who work hard every day to harvest the food that feeds families across the country. Farmers operate in tight windows and on tight margins, and they simply can’t afford to waste time or money bringing their equipment to dealer authorized mechanics in the middle of a season. They need to be able to repair their own equipment, and this legislation will secure them that right.”⁹

Fertilizers: There is a particular request on this matter and we are supporting comments submitted by the National Resource Defense Council, Farm Action, and other groups, with an important caveat: the food system we envision should not rely on fossil fuel-mining fertilizers, but on agroecological processes that will reduce carbon emissions, enhance food sovereignty, and ensure the universal human right to healthy food access.

(2) Please share your views on access, availability, pricing, quality, and related matters relating to seeds. In particular, are seed companies offering an adequate variety of types of seeds and traits that meet your needs as a grower? Are seed companies regularly providing new and improved varieties for growers? Have gains in yield or net returns resulting from use of new varieties been adequate to compensate farmers for the cost of seeds? Are regional needs, tribal and underserved communities, climate concerns, and product-specific needs, such as organic seeds, being appropriately served by the seed marketplace?

International seed companies in the corn and soybean seed markets continue to acquire smaller seed firms, and increase the barriers to entry into the market through expensive licensing agreements and protective patents.¹⁰ As a result, the largest four providers of corn seed increased their market share by 41.6 percent between 2000 and 2015, from 60 percent to 85 percent, respectively.¹¹ The lack of competition among providers leads to higher prices for farmers.¹² Higher seed prices are one reason for the increase in the total cost of farm input

⁹ Office of U.S. Jon Tester, D-Mont (2022) ‘Right to Repair’ farm equipment and empowering family farmers is aim of Tester’s new legislation.

<https://www.thefencepost.com/news/right-to-repair-farm-equipment-and-empowering-family-farmers-is-aim-of-testers-new-legislation/> Visited 05/21/2022

¹⁰ Agricultural and Food Policy Center (2016) Effects of proposed mergers and acquisitions among biotechnology firms on seed prices. Texas A&M University.

https://www.afpc.tamu.edu/research/publications/675/WP_16-2.pdf

¹¹ McDonald J (2019) Mergers in Seeds and Agricultural Chemicals: What Happened. USDA Economic Research Services.

<https://www.ers.usda.gov/amber-waves/2019/february/mergers-in-seeds-and-agricultural-chemicals-what-happened/#:~:text=After%20meeting%20>

¹² Schnitkey G, Swanson K, Paulson N. (2022) Historical relationship suggests rising corn seed cost from 2022. Farmdoc Daily.



expenditure in the United States over the last decade, particularly in the Midwest and the Great Plains.¹³ The total cost of farm input expenditures increased by \$77 billion between 2010 and 2020, despite no similar increase in net farm income. Between 62.5 percent and 80.9 percent of small family farms (which account for 90 percent of all farms) have an operating profit margin of less than 10 percent, which the USDA defines as “at high risk financially.”¹⁴

(3) For agricultural inputs other than seeds, please share similar responses to those solicited for seeds in Question 2, above, relating to access, availability, pricing, quality and related matters. Please respond as to whether companies are offering adequate product varieties to meet producer needs, whether there are new and improved varieties or products, and whether there are gains in yield or other producer benefits, including net returns. Are regional needs, tribal and underserved communities, climate concerns, and product-specific needs, being appropriately served by the marketplace?

The correlation between seed ownership concentration and pesticide branding can not be ignored. There is a vertical integration that uses arguments previously established: food security; technical advantages; and labor shortages. Chemical-free food should be the norm, but the pesticide industry has a major financial interest in keeping their toxic products on the market. The estimated environmental and health care costs of pesticide use in the U.S. is estimated to be upwards of \$12 billion annually. Meanwhile, the top pesticide manufacturers reap over \$150 billion in profit each year from pesticides and other agricultural technologies.¹⁵

The pesticide industry has undergone massive consolidation in recent years, and just four corporations now control over 84 percent of the market for pesticides: Bayer-Monsanto, DowDuPont, Syngenta-ChemChina and BASF. A United Nations report accuses pesticide corporations of the “systematic denial of harms,” “aggressive, unethical marketing tactics” and heavy lobbying of governments which has “obstructed reforms and paralyzed global pesticide restrictions.”¹⁶

Intellectual Property

(4) Please share your views on whether, and if so how, the existing IP system—including plant patents, utility patents, and plant variety protection certificates—appropriately balances the need to incentivize innovation with the goal of ensuring public access to new and improved products

<https://farmdocdaily.illinois.edu/2021/06/historical-relationships-suggest-rising-corn-seed-costs-for-2022.html>

¹³ USDA-NASS (2020) U.S. Farm Production Expenditures 2019.

<https://www.nass.usda.gov/Publications/Highlights/2020/2019-farm-expenditures.pdf>

¹⁴ USDA (2020) America’s Diverse Family Farms.

<https://www.ers.usda.gov/webdocs/publications/100012/eib-220.pdf?v=4512.8>

¹⁵ Friends of the Earth. Learn the truth about pesticides companies.

<https://foe.org/learn-truth-pesticide-companies/>

¹⁶ U.N. Human Right Council (2017) Report of the Special Rapporteur on the right to food.

<https://documents-dds-ny.un.org/doc/UNDOC/GEN/G17/017/85/PDF/G1701785.pdf?OpenElement>



at reasonable cost. Please explain why or why not, and discuss in context of seeds or the particular agricultural input of concern. If you have concerns, please explain the concerns and provide suggestions on how the IP system can be improved to address those concerns.

Historically, seed innovation is a fallacy as we know it; it has not occurred in large laboratories or by highly trained geneticists who have contributed to the development of agriculture over millennia. In the context of user-innovation, agriculture has been a field where farmers substantively contributed to developing and improving existing and new plant varieties.¹⁷ The main problem, as it was previously mentioned, is the colonized nature of seed development and production. NFFC recognizes that some of these seeds increase yields, but they also have important economic, human, and environmental impacts, and farmers may engage in conventional farm practices because there are no other reasonable options for them. Fair floor prices and non industrial, monocrop yield practices must drive food production.

We had previously questioned the benefits of genetically modified seeds for several reasons, among them the poor nutritional value of the end crops, the environmental and human cost of the main purpose of that alteration (pesticide resistance), and the predatory practices in which the patented seed corporations treat producers.¹⁸

(5) For seeds in particular, is the patent side of the plant-related IP system appropriately reserving its grant of statutory patent monopolies to inventions that are of significant utility, novelty and non-obviousness? Do you have concerns about patent quality in the area of plant-related IP or plant-related technologies? If you have concerns, please explain.

The United States should not regard agriculture production as an export commodity without paying the consequences of increased inequalities, environmental degradation, and poor nutrition. Most patent plant developments are focused on efficiency and pest resistance with the usage of chemical pesticides and fertilizers. The main reason is the vertical integration we mentioned above: corporate greed, not humanitarian nutrition interest, is driving science development in this field.

(6) Does the existing IP system, as relating to seeds and other agricultural inputs, effectively meet the statutory goal of rewarding invention through protection from competition for a fixed term? Does it fairly and effectively promote competition and innovation, or does it inappropriately suppress competition and innovation? Please explain. If you believe the IP

¹⁷ Aoki K (2009) Free Seeds, Not Free Beer: Participatory Plant Breeding, OpenSource Seeds, and Acknowledging Innovation in Agriculture. *Fordham Law Review*.
<https://core.ac.uk/download/pdf/144229373.pdf>

¹⁸ NFFC (2021) CoMments on APHIS Environmental Impact Statement of Nonregulated Status for GE Maize.

<https://www.federalregister.gov/documents/2022/03/17/2022-05667/competition-and-the-intellectual-property-system-seeds-and-other-agricultural-inputs>



system inappropriately suppresses competition or insufficiently rewards innovation, please explain and provide concrete examples where possible.

No. In many cases, corporations and ambitious academic institutions profit out of traditional well known seeds. A recent relevant example is the so called “corn of the future”¹⁹ ; as Alejandro de Avila, director of the Ethnobotanical Garden of Oaxaca, told journalist Seth Jovaag:

“Policies from Mexico and the United States consistently favor industrialized agriculture, rather than indigenous communities maintaining old farming traditions. One result: young people around Oaxaca aren’t farming anymore. They’ve migrated north, looking for jobs. The gene diversity of maize and other crops is being left to people in their 60s, 70s, or 80s.

That’s where the real story is, said de Avila. Focusing on one miraculous variety of corn masks the larger dilemma. Plant breeders of the future — the small farmers tinkering daily with their crops in the face of a changing climate — are disappearing. And if they go away, no one is left to defend, or preserve the seeds.”²⁰

The system inappropriately suppresses the rescue and dissemination of known conservation and resilient agricultural practices, and artificially rewards “innovation”. In the case of “the corn of the Future”, the UC Davis/Mars researchers received a certificate of compliance with the Nagoya Protocol,²¹ an international agreement aimed at compensating indigenous communities for their biological resources and traditional knowledge. Still, the situation surrounding Totontepec’s maize raises complex questions about how indigenous communities equitably benefit when research scientists and multinational corporations commercialize local crops and plants.²² UC Davis holds patent rights from the indigenous seeds and its corporate partner Mars said that the patent royalties would be shared with the Totontepec community; but even when they are acting under the umbrella of international agreements the practice is scientific colonialism at best and biopiracy at large.²³

¹⁹ Dalye, J. (2018) The Corn of the Future is Hundreds of Years Old and Makes Its Own Mucus, *Smithsonian Magazine* <https://www.smithsonianmag.com/science-nature/corn-future-hundreds-years-old-and-makes-its-own-mucus-180969972/>

²⁰ Jovaag S. (2019) The Seeds of Tomorrow: Defending Indigenous Mexican Corn that Could Be Our Future, *The Best of Our Knowledge* <https://www.ttbook.org/interview/seeds-tomorrow-defending-indigenous-mexican-corn-could-be-our-future>

²¹ United Nations (2011) The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity. In *Convention on Biological Diversity* <https://www.cbd.int/abs/>

²² Pakowki M (2019) Indigenous Maiza: Who Owns the Rights to Mexico’s ‘Wonder’ Plant? *Yale Environment* 360. <https://e360.yale.edu/features/indigenous-maize-who-owns-the-rights-to-mexicos-wonder-plant>

²³ Rose J (2016) Biopiracy: when indigenous knowledge is patented for profit. *The Conversation* <https://theconversation.com/biopiracy-when-indigenous-knowledge-is-patented-for-profit-55589>



Biopiracy is defined as the exploitation of indigenous knowledge and biological resources without permission.²⁴ The practice goes back centuries. For example, international companies have exploited the botanical riches of the Amazon for well over a century, from the expropriation of the seeds of Brazilian rubber plants in the 1870s²⁵ to the modern-day controversy over the international patenting of the Amazon's Cupuaçu fruit.²⁶

(7) Do farmers, ranchers, and other stakeholders have sufficient access to off-protection and generic options? If not, are regulatory tools, systems, or practices being utilized to inhibit access? For example, do you believe there is evidence of inappropriate strategies to extend the life of patents? Please explain and provide examples.

In order to transform our food system from one of destruction and greed to one sustainable and fair we will need a radical transition that can not be sudden, many fields had be exhausted with the intense usage and will need to be regenerated, and food consumption will need to change in order to make healthy food available and desire. The development of GMOs has brought us to uncharted territories. It is not that humans have been modifying seeds and animals for their own benefit, it is the ways in which these changes happen that may put humans at risk.

(8) Please share your views on whether and how the different forms of IP protection for new plant varieties appropriately promote access to germplasm for the development of new varieties. Please share specifics where possible and provide suggested improvements to ensure farmers' and breeders' access to germplasm for variety development.

As Elisa Da Via had suggested,²⁷ the reproduction of farm-saved seeds is closely associated with the promotion of agroecological practices aimed at recycling nutrients and energy on-farm, enhancing soil organic matter and biological activity, and optimizing interactions, integration and stability.^{28 29} Under highly variable climatic and market conditions, the use of different crops on the same farm, different cultivars of the same crop, and heterogeneous cultivars reduces the

²⁴ Pakowkii, Idem

²⁵ Sims S (2015) The Rubber Thief of Brazil. OZY

<https://www.ozy.com/true-and-stories/the-rubber-thief-of-brazil/60424/>

²⁶ Al Jazeera News (2003) Bio-piracy in the Amazon.

<https://www.aljazeera.com/news/2003/10/12/bio-piracy-in-the-amazon/>

²⁷ Da Via, E. (2012). Seed diversity, farmers' rights, and the politics of re-peasantization. *The International Journal of Sociology of Agriculture and Food*, 19(2), 229-242.

²⁸ Gliessman, S.R. (1998) Agroecology: Ecological Processes in Sustainable Agriculture. Ann Arbor, MI: Ann Arbor Press.

²⁹ Altieri, M.A. and Toledo, V.M. (2011) The agroecological revolution in Latin America: rescuing nature, ensuring food sovereignty and empowering peasants, *Journal of Peasant Studies*, 38(3), pp. 587–612.



risk of crop failure and generates sustained yields with lower costs and intake requirements while providing for more varied dietary and livelihood opportunities.^{30 31}

Correspondingly, the genetic heterogeneity of local landraces allows farmers to cope with fluctuating pest and disease pressures, and work in complex agro-ecosystems characterized by variation in soil qualities, topography, and water availability.³² As the product of diverse breeds produced and maintained by farmers over several cultivation cycles, local seeds are the vehicle of recombined genotypes and newly formed diversity that co-evolve with changing socio-cultural practices and needs.^{33 34} Under the same rationale, the transition to agro-ecology puts renewed emphasis on the role of peasant innovation in processes of agrarian change.³⁵

More specifically, as a counterpoint to the privatization and specialization of agricultural research, the mobilization of seed networks provides an arena for farmers to work collectively at the dynamic management of agricultural biodiversity by means of shared experiences of participatory plant breeding, collaborative research, and farmer-to-farmer exchange.³⁶

(9) Please comment on IP enforcement. Do you believe farmers, breeders and small and medium sized enterprises face challenges concerning enforcement of their plant related IP rights? If so, please provide concrete examples. Do you believe farmers, breeders and small and medium sized enterprises face challenges from other companies asserting their IP rights against them? If so, please provide specific examples. Please also offer recommended solutions for mitigating those challenges.

Farmers, breeders, and small and medium sized enterprises can't count on enforcement procedures, even if there is legislation to protect them. There are many laws in the book that are not enforced because the agencies who are supposed to do it do not have the resources to do it.

“While any Administration’s efforts to promote competition and restrict consolidation in the agricultural sector are to be applauded, we have heard little but talk and seen little

³⁰ Ceccarelli, S. (2009) Evolution, plant breeding and biodiversity, *Journal of Agriculture and Environment for International Development*, 103(1/2), pp. 131–145.

³¹ Lockie, S. and Carpenter, D. (2010) *Agriculture, Biodiversity and Markets: Livelihood and Agroecology in Comparative Perspective*. London: Earthscan.

³² Da Via, idem.

³³ Visser, B. (2002) An agrobiodiversity perspective on seed policies, in: N.P. Louwaars (ed.) *Seed Policy, Legislation and Law: Widening a Narrow Focus*. Binghamton NY: Food Products Press, pp. 231–245

³⁴ Chable, V. Goldringer, I., Dawson, J., Bocci, R., Lammerts van Bueren, E., Serpolay, E., González, J.M., Valero, T., Levillain, T., Van der Burg, J. W., Pimbert, M., Pino, S. and Kik, C. (2009) Farm Seed Opportunities: a project to promote landrace use and renew biodiversity, in: M. Veteläinen, V. Negri and N. Maxted (eds) *European Landraces: On Farm Conservation, Management, and Use*, *Biodiversity Technical Bulletin No. 15*. Rome: Biodiversity International, pp. 266–274.

³⁵ Altieri, M.A. (1995) *Agroecology: The Science of Sustainable Agriculture*. Boulder: Westview Press.

³⁶ Da Via, idem.



but crocodile tears when it comes to putting farmers' interests over those of consolidated agribusiness.

The Obama Administration held a series of USDA/DOJ workshops on competition in agriculture around the country in 2010 to 'explore the appropriate role for antitrust and regulatory enforcement in agriculture'. And what exactly came of those efforts?— absolutely nothing. The Administration and USDA Secretary Tom Vilsack did nothing to rein in consolidation or make any effort to put policies in place regulating markets and increasing competition so farmers could get a fair price for their labor and pay a fair price for their inputs. Will anything of benefit to farmers and farm workers come from President Biden's round of executive orders? I'm hopeful, but we farmers have been disappointed before."³⁷

(10) Are there other ways in which the IP system, including copyrights and trademarks, may positively or adversely affect choice, quality, and other aspects of competition in seeds or other agricultural inputs? For example, what role does IP play, if any, in farmers' and ranchers' ability to repair and maintain equipment? Please provide examples.

American farmers have long had a clear favorite when it comes to tractors - John Deere is king in rural America today - farmers are in a bruising battle with John Deere and other tractor manufacturers over what they are allowed to repair on their equipment. It is not just the economic impact that agriculture machinery has on farmers as an investment and later as a never-ending lease for costly repairs, but it is also the time required to be at the dealer for service, the distance between the farm or ranch and the dealership, and the labor impact from local rural mechanics' inability to repair their neighborhood tractors. These equipment manufacturers are holding farmers hostage to them, forcing farmers to use their dealerships to repair their equipment - on their schedule, on their time and at their rates.³⁸

It is true that today's tractors have fancy touch screens and are packed with software and sensors that can help a farmer plant, spray, and harvest with great precision, but farmers may own the hardware and not the software, making even simple repairs off-limits for most companies.³⁹ It is clear that one reason companies are able to get away with this practice is because they have market and political power behind them.

³⁷ Goodman J (2021) NFFC is hopeful about executive order 'promoting competition'.

<https://nffc.net/nffc-is-hopeful-about-executive-order-promoting-competition/>

³⁸ Berliner U (2021) Standoff Between Farmers and Tractor Makers Intensifies Over Repair Issues. *National Public Radio*

<https://www.npr.org/2021/05/26/1000400896/standoff-between-farmers-and-tractor-makers-intensifies-over-repair-issues>

³⁹ Idem



Business Practices and Other Competition Matters

(12) Is there evidence of contracting or sales practices locking a farmer into a mode of production and inhibiting them from entering other farm enterprises? To what extent do requirements or inducements to buy a main product (e.g., seed) with a second product (e.g., pest management chemical), bundle, stacked trait, or service impact the farmer or other agricultural input competitors? For instance, does such a practice lock a farmer into or out of certain product choices? Please offer specific recommendations for reforms.

Genetically modified seeds and chemicals are a forced bundle. The seed treatment industry operates with minimal federal oversight, due to a loophole in EPA's governing law, leaving questions about the amount of pesticides applied via this route and how unused treated seed is discarded each year.⁴⁰ In the meantime, a growing number of federal and academic studies are casting doubt on its necessity, particularly in soybean fields.^{41 42} Another body of research is finding most of the pesticides coated on the seeds aren't staying put, with alarming consequences for water quality and wildlife.⁴³

One of the problems to go beyond the power control of the conglomerated seed-chemical factory is the growing difficulty to find naked seeds. Most companies treat nearly 100% of their corn seed before the corn is bagged and shipped to distributors. Some larger seed companies simply don't sell untreated corn seed, forcing growers to turn to small, non-GMO or organic seed companies - many of which have been bought and closed by larger corporations. Seed companies that do offer untreated seed, such as Pioneer (now owned by Corteva) and Syngenta, must be asked months in advance and will only offer a limited selection of hybrids.⁴⁴

(13) What role do marketing and labeling practices have on competition in seeds or other agricultural inputs? Do labeling and naming practices provide sufficient notice that the seed or other agricultural input in question is protected by IP or not protected? Please explain.

NFFFC would like to stress the importance of pesticide labels here. Our partner farmworker and environmental organizations have requested for far too many years that pesticide labels be

⁴⁰ Unglesbee E (2021) Treated Seed Troubles. *Progressive Farmers*.

<https://www.dtnpf.com/agriculture/web/ag/crops/article/2021/07/13/seed-treatment-overload-unintended>

⁴¹ Pimentel, D., & Burgess, M. (2014). Environmental and economic benefits of reducing pesticide use. In *Integrated Pest Management* (pp. 127-139). Springer, Dordrecht.

https://link.springer.com/chapter/10.1007/978-94-007-7796-5_5

⁴² Mourtzinis, S., Krupke, C. H., Esker, P. D., Varenhorst, A., Arneson, N. J., Bradley, C. A., ... & Conley, S. P. (2019). Neonicotinoid seed treatments of soybean provide negligible benefits to US farmers.

Scientific reports, 9(1), 1-7. <https://www.nature.com/articles/s41598-019-47442-8>

⁴³ Hladik, M. L., Bradbury, S., Schulte, L. A., Helmers, M., Witte, C., Kolpin, D. W., ... & Harris, M. (2017). Neonicotinoid insecticide removal by prairie strips in row-cropped watersheds with historical seed coating use. *Agriculture, Ecosystems & Environment*, 241, 160-167.

https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/EPAS/natural-resouces-analysis/Water/pdfs/Neonicotinoid_insecticide_removal_by_prairie_strips.pdf

⁴⁴ Unglesbee, Idem.



available in Spanish. We would like to eliminate the usage of pesticides all together, but since that is probably not going to happen any time soon, we strongly recommend that USDA, EPA, and the pesticide corporations move forward with translating these labels into Spanish, and making them accessible online in other languages (Haitian Kreyol, for example).

The agricultural sector has accumulated harmful levels of corporate market power, in part due to high corporate concentration, increasing mergers, and mechanisms such as vertical integration and production contracts. The harms of high concentration fall disproportionately on those with the least economic and political power, including people of color, immigrants, and low-income communities.⁴⁵

(14) Please comment on implications, negative or positive, of mergers in the seed industry and in industries that sell other agricultural inputs. Have certain mergers changed contracting or sales practices? Have certain mergers allowed the acquisition of rivals or technologies or companies that competitor firms rely on? Have mergers delivered efficiencies? Please offer recommendations for specific actions where appropriate.

NFFC has systematically opposed seed company mergers. In 2018, in collaboration with Farm Aid and other organizations, we conducted a poll of 957 farmers in 48 states, and the vast majority of them rejected the Bayer-Monsanto merger. All together, the farmers who responded to the poll cultivated close to 2 million acres and represent all sectors of farming.⁴⁶

“Why worry? Unchecked corporate power distorts markets and leaves farmers and ranchers vulnerable to abuse and unfair practices. For consumers, unchecked corporate power means higher prices and less choice. Food costs have risen steadily since the 1980s, while the farmer’s share of the retail food dollar has plummeted by 50%. Because of their market power, corporations can push down the prices paid to farmers without passing on their savings to consumers.”⁴⁷

(16) Please comment on any other concerns relating to competition matters. For example, do you have concerns relating to manufacturer restrictions on aftermarket competition, preferential pricing schemes that may favor one farmer or competitor over another, or contractual arrangements such as tying or exclusivity arrangements? Do you believe there is evidence of attempts to fix prices, allocate markets, or to restrict from where a farmer buys inputs and sells product? Do you believe there is evidence of agricultural input firms using their market power to price below cost and run losses to undercut and eliminate competitors or potentially competing

⁴⁵ Haider A, Tesfaselassie A, Aneja S, Wilson S. (2022) A Growing Problem: How Market Power in Agriculture Fuels Racial and Economic Inequality. Georgetown Center on Poverty and Inequality. <https://www.georgetownpoverty.org/wp-content/uploads/2022/04/AGrowingProblem-April2022.pdf>

⁴⁶ Farm Aid (2018) Farmers Overwhelmingly Opposed Bayer Monsanto Merger. <https://www.farmaid.org/issues/corporate-power/farmers-overwhelmingly-oppose-bayer-monsanto-merger/>

⁴⁷ Idem



firms? Is monopsony—where sellers are harmed from market power abuses by buyers—relevant in these industries and supply chains, and if so how? What role, if any, does financing or financial markets play in any of the issues addressed above? Please provide examples for concerns raised.

In 2014 and 2017, the Seeds and Breeds for the 21st Century Coalition, a national network of non-profit, public, and private researchers, advocacy organizations, agricultural businesses, seed companies and individual farmers, advocated for policies and funding that support and advance classical public breeding research programs and germplasm infrastructure in order to protect agricultural genetic diversity and address long-term challenges to agriculture such as climate change and global food security.⁴⁸

The petition of the 58 organizations and businesses requested funding and report language to enhance public plant breeding for the 21st century. Public resources for cultivar development have dwindled, while resources have shifted toward genomics and biotechnology, with a focus on a limited set of major crops. This problem has been particularly acute for organic and sustainable farmers, who seek access to germplasm well suited to their unique cropping systems and their changing local environments and climates. Now, as then, we are requesting report language to reiterate that the funding for classical plant and animal breeding should be a priority area within the AFRI process, and urging USDA to focus on public cultivar development as a distinct priority within AFRI.

“Farmer access to regionally adapted seeds and breeds is paramount to fostering the competitiveness of agriculture in all regions of the U.S. As agricultural research has shifted toward an emphasis on lab-based and molecular breeding, seed choice has not kept up with demand, and the diversity of our plant genetic resources has narrowed. Farmers need access to seeds that are bred specifically for their regions and cropping systems. In particular, farmers lament limited cultivar options in major crops, especially publicly held cultivars released by land grant universities that are adapted to regional farming needs to satisfy the national market. By improving agricultural productivity and resilience, classical breeding also improves food security for our growing population.”⁴⁹

The National Plant Germplasm System collection has been stagnant for years, while the demand for seeds in the collection is expanding greatly. Due to lack of funding, many seeds in the collection have not been characterized to improve utilization or re generated to ensure germination and long-term viability. We are requesting a 10 percent increase in overall funding for the germplasm system to address these concerns.

⁴⁸ The Seeds and Breeds for the 21st Century Coalition (2014) Written Statement of FY2015 Request Submitted to Subcommittee of Agriculture, Rural Development, FDA, & Related Agencies Senate Committee on Appropriations April 4, 2014. <https://www.rafiusa.org/blog/fy-2015-requests-to-usda/>

⁴⁹ Idem.



Information Resources

(17) Do you believe farmers, breeders and other stakeholders have appropriate access to information, education, and support services around seeds and other agricultural inputs, including information on IP protection and IP-related risks covering seeds they buy and the varietal identity of those seeds? If not, what are the most effective means for improving access to such information? What about other agricultural inputs?

There is not enough information about IP protection or IP-related risks. In 1976 Dr. Norgaard recognized that “we must acknowledge that the misuse of pest control inputs is a social problem”⁵⁰, and the problem envisioned then has not been solved. On the contrary, misuse has grown because for corporations the intent is not to solve food insecurity or environmental degradation but to grow their economic bottom line in order to satisfy their shareholders and their executives.

“The Global Agrochemicals Market was valued at USD 239.85 billion in 2019 and is expected to reach USD 365.16 billion by 2030 expanding at a CAGR of 3.8 percent during the forecast period from 2020 to 2030. Based on volumetric sale, the demand for agrochemicals was valued at 289.07 million tons in 2019, and is anticipated to reach 402.18 million tons by 2030, rising at a CAGR of 3 percent from 2020 to 2030.”⁵¹

A new euphemism for controlling the devastated impact of fertilizers and pesticides has taken ground on policymakers and academic institutions. The Climate Smart Agriculture proposal is not just an insult to traditional, organic, and agroecological farmers but a coverup of larger corporations to maintain their hold of the agricultural system. The reality is that treated seeds and the binomial of pesticide-resistance seeds are to blame for cutting short the lives of farmers, farm workers, and rural residents, not to mention the endless degradation of water, soil, and the environment.

For operators and workers, illiteracy, poverty, and a perception that exposure to pesticides is an inevitable part of their work results in limited adoption of safety precautions while using and

⁵⁰ Norgaard, R. B. (1976). The economics of improving pesticide use. *Annual Review of Entomology*, 21(1), 45-60.

<https://www.annualreviews.org/doi/abs/10.1146/annurev.en.21.010176.000401?journalCode=ento>

⁵¹ Industry Research (2021) Agrochemicals Market and Agricultural Robots Market Size 2021-2030: Covid 19 Impact, Revenue Estimates and Growth Analysis, Business Strategic Planning, Competitive Landscape, Marketing Channel, Distributors and Customers Demand Analysis. Global Newswire.

<https://www.globenewswire.com/news-release/2021/06/05/2242364/0/en/Agrochemicals-Market-and-Agricultural-Robots-Market-Size-2021-2030-Covid-19-Impact-Revenue-Estimates-and-Growth-Analysis-Business-Strategic-Planning-Competitive-Landscape-Marketing.html>



storing pesticides.⁵² The human cost of pesticide exposure is well documented.⁵³ GMO-based food products are banned in over 60 other countries, mainly because of the toxicity of their linked chemicals.⁵⁴

Additional Matters

(20) Please share any information relevant to regional needs, tribal and underserved communities, climate concerns, and product-specific matters, such as organic seeds, in relation to any of the concerns raised above.

As we mentioned before, the dominant presence of treated seeds has limited the availability of organic seeds in the market. NFFC supported organic production before it became a trending market. Certified organic seeds for crops and other organic agricultural uses has been a long-standing problem within the organic industry. Both seed availability and debates over organic versus non-organic seed production systems equally play a part.⁵⁵

The same companies - Monsanto being the largest - that have inflicted GMO crops on American food supplies also control the non-GMO seed market. This is a fairly recent development - done over the last 20 years - and one that's mostly been hidden from the public (you'll find innocent-sounding or familiar company names on seed packages, but not "Monsanto," the actual supplier of the seed).⁵⁶

The dangers of seed consolidation are well-known to organic gardeners. Brenda Wagner states that the health of any ecosystem is measured by its plant diversity. Shrinking this diversity invites disease and insect infestations that can wipe out entire monocultures.⁵⁷ Producers and consumers require transparency, but the business models of corporations reject this concept because it reduces their profits; we should not be paying for their greed.

⁵² Remoundou, K., Brennan, M., Hart, A., & Frewer, L. J. (2014). Pesticide risk perceptions, knowledge, and attitudes of operators, workers, and residents: a review of the literature. *Human and Ecological Risk Assessment: An International Journal*, 20(4), 1113-1138.

<https://www.tandfonline.com/doi/abs/10.1080/10807039.2013.799405>

⁵³ Oncology Learning Network (2019) Pesticide Exposure Tied to Worse Outcomes with Immuno Chemotherapy for DLBCL, Global Learning Network.

<https://www.hmpgloballearningnetwork.com/site/onc/news/pesticide-exposure-tied-worse-outcomes-immunochemotherapy-dlbcl>

⁵⁴ Vinje E and Kohlhaase B (2013) Seed Control and GMO Companies: Will Monsanto take control of your backyard vegetable patch? Planet Natural Research Center.

<https://www.planetnatural.com/seed-control/>

⁵⁵ Chait J (2020) A Guide to Organic Versus Non-Organic Seeds. Small Business.

<https://www.thebalancesmb.com/are-organic-seeds-required-for-organic-certification-2538177>

⁵⁶ Vinje & Kohlhaase. Idem.

⁵⁷ Wagner B (2010) Monsanto in Your Garden: Why You Need to Buy Organic Seeds. Organic Consumer Association.

<https://www.organicconsumers.org/news/monsanto-your-garden-why-you-need-buy-organic-seeds>



(21) Please comment on any international policy or risk implications related to any of the above matters. Do one or more of the currently available IP forms of protecting plant-related technologies have particular challenges or benefits in the international context in terms of ensuring fair competition and providing farmers access to improved varieties, and quality, affordable seeds? What about for other agricultural inputs?

“The free access and free use and exchange of seeds became central to cultural identities and to the expansion of agriculture around the world, as well as for the capacity of peoples to secure food, medicine, clothing, and shelter. Up until only fifty or sixty years ago, any attempt to restrict these freedoms would have been considered absurd, an unacceptable attack, breaking the basic norms of a civilized coexistence.”⁵⁸

However, in 1961 a Geneva-based intergovernmental organization with only six-member States - the International Union for the Protection of New Varieties of Plants (UPOV) - gained attention when it published a document about the alleged “protection of varieties”, which was, in reality, a first attempt to privatize seeds and crops. We urgently call the Biden Administration to oppose UPOV being incorporated into any bilateral, or multilateral, trade agreements that the U.S. is party to.

We recognize the United States’ influence on the global stage. It is important that our policies reflect our values and some of the current administration’s commitments to address pressing challenges in our agricultural system: climate change; fair markets; infrastructure; human rights; and democracy.⁵⁹

While the United States is not signatory to the United Nations Declaration on the rights of peasants and other people working in rural areas,⁶⁰ NFFC strongly supports its principles and urges the Biden administration to fundamentally reorient its approach to global policy development on food and agricultural issues.

Policy, Programs, and Solutions

(22) Please comment on the strengths, weaknesses, effectiveness, and gaps in current USDA policies and programs to facilitate access to affordable seeds and other agricultural inputs for farmers, plant breeders, ranchers, and other stakeholders. Are information services, grow out services, and access to seed varieties that are not subject to IP protections sufficiently

⁵⁸ Alianza Biodiversidad: Sustento y Cultura (2021) UPOV: The Great Seeds Robbery. GRAIN. <https://grain.org/system/articles/pdfs/000/006/644/original/EI%20gran%20robo-ENG-6MAR.pdf?1617722769>

⁵⁹ Tovar A (2021) NFFC Statement to USDA on UNFSS 2021. <https://nffc.net/nffc-statement-to-usda-on-unfss-2021/>

⁶⁰ Claeys P and Edelman M (2019) The United Nations Declaration on the rights of peasants and other people working in rural areas. *The Journal of Peasant Studies*. DOI: 10.1080/03066150.2019.1672665 <https://www.universal-rights.org/wp-content/uploads/2019/11/The-United-Nations-Declaration-on-the-rights-of-peasants-and-other-people-working-in-rural-areas.pdf>



available? Do farmers, plant breeders, ranchers, and other stakeholders have sufficient voice within relevant agency decision-making, and if not, how could it be improved? How could labeling practices be improved? Please suggest actionable steps that USDA could take to help address any identified concerns.

“The primacy and legitimacy of the public sector is threatened by corporate capture of policy spaces while multilateralism is under attack from populist nationalism, and corporate-led multi-stakeholderism, as deployed in the UN Food Systems Summit. Coalitions of powerful commodity exporting countries are undermining the UN Committee on World Food Security, the only global food policy forum in which small-scale food producers and other concerned constituencies are full participants. But the prospects for transforming food governance are not unmitigatedly negative. COVID-19 has unveiled and exacerbated the structural inequalities and fragilities of global food chains, but it has also underscored the resilience of territorially-embedded food systems and the creativity of community-based responses of solidarity, often supported by local and sometimes national authorities.”⁶¹

There are many regulations as institutions that have failed to control corporate greed. We understand that it is not the Executive branch that is responsible for the perils of the food system, but as many heads of the government had come from the Legislative power, they had failed to implement or envision an alternative food system.⁶²

First, the independent branches of government are the main responsible for the consolidation process we see now, not just in agriculture. The Department of Justice and the Federal Trade Commission have not been effective partners for consumers and small producers.⁶³

Second, the Farm Bill, debated every five years, when family farmers, ranchers, farm workers, and environmentalists propose ways to transform our food system from disparities to parities. Unfortunately, our voices do not have the leverage that other industries - or the same industry in a different scale - has on the legislation. That has not changed our commitment to transform our system.⁶⁴

⁶¹ Kreienkamp J (2022) Transforming Global Food Governance – Putting Public Policies Before Corporate Investments. UCL Global Governance Institute.

<https://www.ucl.ac.uk/global-governance/events/2022/may/transforming-global-food-governance-putting-public-policies-corporate-investments>

⁶² The National Family Farm Coalition Weighs In (2019) Statement in Support of the UN Committee on World Food Security, Agroecology and Small-Scale Food Producers & Against US Obstructionism.

<https://nffc.net/statement-in-support-of-the-un-committee-on-world-food-security-cfs-agroecology-and-small-scale-food-producers-against-us-obstructionism/>

⁶³ National Family Farm Coalition Weighs In (2017) Farm and Food Groups Say Bayer-Monsanto Merger Will Create Vegetable Seed Monopoly.

<https://nffc.net/farm-and-food-groups-say-bayer-monsanto-merger-will-create-vegetable-seed-monopoly/>

⁶⁴ <https://disparitytoparity.org/>



Third, at the executive branch, the Department of Agriculture and the Environmental Protection Agency, among others agencies, have served the interest of corporations more than that of small producers and consumers. We understand that in part they respond to what the legislature mandates them to do, but it's clear that on a few occasions their discretionality affects us.⁶⁵

Finally, we should not fall into the trap of agribusinesses that benefit from man-made crises; the combined wheat production of Russia and Ukraine accounts for only 15 percent of the global production, per the Washington Post.⁶⁶ The demand for American farmers to feed the world is a common argument used by trade groups as a way to justify industrial farming methods. While recognizing the war's distressing and very real threats to global food security, NFFC members have long refuted this claim. Data shows that ramping up US agricultural production doesn't solve world hunger; in fact, less than one percent of American exports are shipped to countries with high or very high rates of hunger. Furthermore, the majority of these grain exports are for animal feed, not for human consumption.

(25) What other policy changes, tools, investments, or programs could USDA or other agencies deploy to enhance the competitiveness of seeds and other agricultural input markets in relation to any of the concerns highlighted by your responses to the aforementioned questions?

Individual members of the National Family Farm Coalition had historically defended and promoted seed diversity. RAFI-USA's seeds and breeds work exists to protect our agricultural diversity by addressing some of the systemic policy root causes, such as a lack of funding and public support for classical breeding programs. Protecting our agricultural genetic diversity and expanding crop diversity is essential to the future viability of family farms and may offer promising long-term solutions to address climate change and global food security.⁶⁷

The possibility of a global food crisis underlines the need for countries everywhere to build robust, resilient local food systems. We simply cannot rely on large agribusinesses – or farmers in any one country, including the US – to feed the world.⁶⁸ Farming is not easy. Nothing meaningful seems to be easy, but there's a deep satisfaction that comes in knowing your own sense of purpose.⁶⁹

⁶⁵ National Family Farm Coalition Weighs In (2019) NFFC Comments on Farm Bill Implementation 2/26/19. <https://nffc.net/nffc-comments-on-farm-bill-implementation-22619/>

⁶⁶ Ciezadlo A (2022) Weaponizing Wheat. The Washington Post Outlook. May 8. <https://www.washingtonpost.com/outlook/2022/05/06/wheat-weapon-putin-ukraine/>

⁶⁷ Rural Advancement Foundation International-USA (2021) Seeds and Breeds for 21st Century Agriculture. <https://www.rafiusa.org/issues/seeds>

⁶⁸ National Family Farm Coalition (2022) Feeding the World - A Corporate Con. <https://nffc.net/feeding-the-world-is-a-corporate-con/>

⁶⁹ Henderson E (2021) Vision for the Next 50 Years of NOFA and the Global Movement for Farmers, Consumer, and Racial and Climate Justice. *The Natural Farmers*. <https://thenaturalfarmer.org/article/visions-for-the-next-50-years-of-nofa-and-the-global-movement-for-farmer-consumer-and-racial-and-climate-justice/>



Once again, we thank you for opening this space to stakeholders comments. If any additional questions arise please contact us at antonio@nffc.net.

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