

July 25, 2022

Jaina Nian  
U.S. Department of Agriculture  
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Dear Ms. Nian,

I write regarding the U.S. patent system's role in promoting competition, growth, and innovation in the agriculture sector.

The Public Interest Patent Law Institute (PIPLI) is a nonprofit, nonpartisan organization that works to ensure the patent system promotes the progress of science and technology for the benefit of all Americans. To enhance public representation in the patent system, PIPLI conducts policy research; provides pro bono counseling and legal aid to people who make and use new technology; advocates for greater transparency in the patent system; and represents the public's interest before institutions that shape patent law and policy, including federal courts and agencies.

Our patent system is supposed to promote innovation by giving inventors limited exclusive rights to their inventions. In exchange, the public gets information about those inventions and the right to make and use them once applicable patents expire. This system works as long as patents claim technology which is truly novel and inventive. When a patent instead claims old or obvious technology, its owner gets the power to stop others from making or using what would have been freely available to all if not for the patent. When patents take more than they add to the stock of technology available to the public, they chill competition, economic growth, and innovation.

Given the huge number of applications the U.S. Patent and Trademark Office (USPTO) receives and the limited resources the people responsible for reviewing them (patent examiners) have, many granted patents do not satisfy the legal requirements for patentability. Wrongly granted patents disproportionately hurt individuals and small businesses that cannot afford to challenge invalid patents in court or agency proceedings. When accused of infringement, they must choose paying for licenses they do not need, litigation they cannot afford, or going out of business. Those who reap the benefits of wrongly granted patents are big corporations that can afford to spend exorbitant sums on lawyers and thus threaten litigation against those who cannot afford to fight back. Because foreign entities receive more than half of patents granted each year, these benefits disproportionately flow to companies outside the U.S.

In recent years, the USPTO has granted more and more utility patents on agricultural products and methods without increasing the time, resources, or training given to examiners responsible for reviewing them. This has produced more and more wrongly granted patents affecting agriculture sectors. This system may be good for big companies that use patents to thwart competition, but they are harmful to small and mid-sized businesses operating on slim margins and unable to bear the costs of exorbitant—and unwarranted—legal or licensing fees. To ensure small and mid-sized farmers can compete and thrive, the USDA must act. Recommendations are provided below along with additional information about the patent system.

## Background: The Practical Reality of Patent Examination and Litigation in the U.S.

- *The USPTO receives a huge number of patent applications, which examiners do not have enough time to review thoroughly and accurately.*
  - The USPTO receives more than 600,000 new patent applications a year,<sup>1</sup> and employs approximately 8,000 patent examiners to review them.<sup>2</sup> On average, an examiner spends 19 hours reviewing an application over the course of 2 years.<sup>3</sup> This is not nearly enough time to review the application and prior art (references in the same technological field) to determine if the patent claims a truly novel and non-obvious invention.
  - Examiners admit that time constraints impede their ability to review applications thoroughly. According to one federal government survey, more than 70% of examiners say their limited time allotments make it difficult to complete thorough examinations.<sup>4</sup> The Patent Office Professional Association (the patent examiners' union) has also said examiners need more time to do their jobs, and that the lack of adjustments to time allotments since the 1970s has "le[ft] some dockets with an untenably low amount of time for examination."<sup>5</sup>
  - The amount of time examiners get affects the quality of granted patents. "Because patent applications are presumed to comply with the statutory patentability requirements when filed, the burden of proving unpatentability rests with the [USPTO]."<sup>6</sup> That means examiners who run out of time have to grant applications that do not satisfy legal patentability requirements. Studies confirm that "as examiners are given less time to review applications . . . , the less likely they are to make time-consuming obviousness rejections, and the more likely they are to grant patents . . . of weaker-than-average quality."<sup>7</sup>
- *Challenging patents is cost-prohibitive for most people and small to medium businesses.*
  - Challenging granted patents in federal district court is exorbitantly expensive. According to the American Intellectual Property Law Association's 2019 survey, a patent trial with less than \$1 million at risk "will cost \$700,000, while the very high

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<sup>1</sup> USPTO, *U.S. Patent Statistics Chart Calendar Years 1963-2020*, [https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us\\_stat.htm](https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm).

<sup>2</sup> USPTO, *Attend 2022 patent examiner virtual recruitment open house*, <https://www.uspto.gov/about-us/events/attend-2022-patent-examiner-virtual-recruitment-open-house>.

<sup>3</sup> Michael D. Frakes and Melissa F. Wasserman, *Is the Time Allocated to Review Patent Applications Inducing Examiners to Grant Invalid Patents?: Evidence from Micro-Level Application Data*, Rev. of Econs. and Statistics, July 2017, 99(3): 550, 552.

<sup>4</sup> U.S. GOV'T ACCOUNTABILITY OFFICE, *Survey of Patent Examiners* (GAO-16-478SP, June 2016), [https://files.gao.gov/special.pubs/gao-16-478sp/results.htm#question\\_3](https://files.gao.gov/special.pubs/gao-16-478sp/results.htm#question_3) (Question 13).

<sup>5</sup> Patent Office Prof'l Assoc., *Quality Initiatives*, <http://www.popa.org/about/history/quality-initiatives/>.

<sup>6</sup> Frakes & Wasserman, *supra* n.3, at 550.

<sup>7</sup> Frakes & Wasserman, *supra* n.3, at 560.

value cases will cost \$4M or more.”<sup>8</sup>

- Challenging granted patents in administrative proceedings at the USPTO is less expensive than doing so in court, but still more expensive than most individuals and small to mid-sized businesses can afford. The USPTO charges over \$40,000 to initiate a proceeding,<sup>9</sup> which does not include attorneys and expert witnesses, which add \$100,000 to \$600,000 in additional costs.<sup>10</sup>
- *Many granted patents are found invalid when challenged in court or agency proceedings.*
  - Those who can muster the resources to challenge the validity of granted patents often succeed: in district court, they succeed at least 42.4% of the time,<sup>11</sup> and 46.5% in agency proceedings at the USPTO.<sup>12</sup>

### **Recommendations: Improving the Patent System’s Ability to Promote Competition, Growth, and Innovation in the Agriculture Sector**

1. *The USDA should participate in the development of training materials for examiners of patents relating to agricultural products and methods.*
  - The USPTO conducts trainings and provides training materials to examiners, partly to ensure their knowledge of technological developments remains up to date. Given the USDA’s expertise on developments in the agriculture sector, it should take an active role in developing training materials given to patent examiners to ensure they are accurate, comprehensive, and current.
2. *The USDA should take an active role in setting time allotments for examiners of agriculture-related patent applications.*
  - Patent examiners need more time to give applications the scrutiny they require. The USDA should take an active role in evaluating and setting time allotments for examiners of agriculture-related patent applications. The USDA’s involvement would help the USPTO overcome opposition from patent owners, who benefit from the status quo and vociferously oppose efforts to change it.

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<sup>8</sup> Rus Krajec, *Current Patent Litigation Costs Are Between \$2.3 to \$4M - from the BlueIron blog*, Associated Press, July 10, 2020, <https://apnews.com/press-release/news-direct-corporation/technology-business-intellectual-property-patents-a5dd5a7d415e7bae6878c87656e90112>.

<sup>9</sup> USPTO, *USPTO Fee Schedule*, <https://www.uspto.gov/learning-and-resources/fees-and-payment/uspto-fee-schedule>.

<sup>10</sup> Patexia, *Patexia Insight 89: IPR Cost and Market in 2020*, <https://www.patexia.com/feed/patexia-insight-89-ipr-cost-and-market-in-2020-20200915>.

<sup>11</sup> John R. Allison, Mark A. Lemley, & David L. Schwartz, *Understanding the Realities of Modern Patent Litigation*, *Texas L. Rev.*, Vol. 92:1769, 1787 (2014).

<sup>12</sup> Josh Landau, *PATENT PROGRESS, A Little More Than Forty Percent: Outcomes At The PTAB, District Court, and the EPO*, May 1, 2018, <https://www.patentprogress.org/2018/05/01/a-little-more-than-forty-percent/#marker-5676-11>.

3. *The USDA should help farmers and small businesses in the agriculture sector turn their work into prior art references without requiring them to obtain patents.*
  - When determining whether a patent application claims a non-obvious advance over preexisting developments, patent examiners rely heavily on patents and published patent applications. As a result, they largely ignore technological advances reflected in industry practices and non-patent publications. This gives companies with the resources and sophistication to acquire patent portfolios the ability to obtain patents on advances made and used by others years earlier.
  - To mitigate this danger, the USDA should educate and help small to mid-sized farmers turn their advances and practices into prior art references that patent examiners can readily consider. For example, the USDA could provide grants to small businesses to submit patent applications for publication without expecting or requiring them to pay the additional fees the USPTO requires for patent examination and issuance.
4. *The USDA should conduct a study of the impact patents grants have had on competition and innovation in the agriculture sector.*
  - Science policy should be based on science. The USDA should conduct an evidence-based study the impact of agriculture-related utility patents on competition and innovation in the agriculture industry, including by studying how markets conditions have changed in response to changes in patent ownership and acquisition.
5. *The USDA should conduct a study to determine the extent to which patent owners are getting utility patents under the Patent Act on subject matter that is or could be protected under the Plant Variety Protection Act.*
  - The Plant Variety Protection Act (PVPA) is distinct from the Patent Act. The different statutes protect different types of subject matter. Yet, patent owners are increasingly using the Patent Act to obtain utility patents on plants that should be protected, if at all, under the Plant Variety Protection Act. The USDA should conduct a study to determine the extent to which utility patents are being granted on plants that could be or already are protected under the PVPA. If utility patent protection were available for plant varieties, Congress would not have created the PVPA to make such protection available, and the USPTO does not have the authority to expand the Patent Act's scope.

Thank you for your consideration of these important issues. Please contact me at [alex@piplus.org](mailto:alex@piplus.org) if you have questions or need additional information.

Sincerely,



Alex Moss  
Executive Director  
Public Interest Patent Law Institute