

2021

## The Making of an Iconic Cheese: Mozzarella Di Bufala Campana D.O.P.

Michele Graziadei  
*University of Torino*

Follow this and additional works at: <https://ecollections.law.fiu.edu/lawreview>



Part of the [Agriculture Law Commons](#), [European Law Commons](#), [Food and Drug Law Commons](#), and the [International Law Commons](#)

---

Online ISSN: 2643-7759

### Recommended Citation

Michele Graziadei, *The Making of an Iconic Cheese: Mozzarella Di Bufala Campana D.O.P.*, 14 FIU L. Rev. 615 ().

DOI: <https://dx.doi.org/10.25148/lawrev.14.3.12>

This Article is brought to you for free and open access by eCollections. It has been accepted for inclusion in FIU Law Review by an authorized editor of eCollections. For more information, please contact [lisdavis@fiu.edu](mailto:lisdavis@fiu.edu).

# THE MAKING OF AN ICONIC CHEESE: MOZZARELLA DI BUFALA CAMPANA D.O.P.

*Michele Graziadei\**

## ABSTRACT

Mozzarella di bufala has been rightly described as the White Whale of American cheesemaking. The attempt to make this cheese in the US has been mostly unsuccessful so far. Yet, this fantastic cheese is regularly consumed on the tables of thousands of Italians each day. This essay will show how the production of mozzarella di bufala campana D.o.p. in Italy is regulated by a thick set of laws and regulations, which contributed to the emerging of this cheese as an iconic food, deservedly considered as one of the miracles of Italian cuisine. These rules arise from the coordinated efforts of a group of producers who managed to overcome some of the constraints associated with the small-scale dimensions of their farms and were thus able to develop a viable strategy for a niche product that would eventually pay off. The paper examines, as well, some of the tensions and problems associated with these developments.

I.	Introduction .....	615
II.	A Mouthful of the Real Thing. ....	619
III.	Buffalo Milk, Local Socio-Economic Development: The Web of Institutions and Rules Supporting the Production of the D.o.p. Cheese .....	622
IV.	Mozzarella Pluralism .....	629
V.	A Conclusion .....	630

## I. INTRODUCTION

The word is “mozzarella,” but the specification that follows (“*di bufala campana D.o.p.*”) is what makes the difference. By now, “mozzarella” is a generic name of a fresh *pasta filata* cheese produced and consumed

---

\* Full Professor of Comparative Law, Università degli Studi di Torino [University of Torino]; Collegio Carlo Alberto Fellow. I wish to express a warm thank you to Prof. Jorge Esquirol and to Dean Anthony Page for the invitation to participate to the FIU College of Law’s 26th biannual symposium *Made in Italy*, in many ways a memorable event. I also wish to thank Sofia Perla and the other editors of the law review for their excellent editorial work on this article.

worldwide. *Pasta filata* (“spun pasta”) is a technique in the production of a family of Italian cheeses known in English as stretched-curd or pulled-curd cheeses. This involves a plasticizing and kneading treatment of the fresh curd in hot water, which gives the cheese its structure.<sup>1</sup> The specifications for mozzarella are set out at the international level by the standard for this cheese codified in the *Codex Alimentarius*.<sup>2</sup> The *Codex* is the compilation of internationally recognized standards, codes of practice, guidelines, and other recommendations relating to foods, food production, and food safety under the care of the Food and Agriculture Organization of the United Nations and the World Health Organization. Different countries may still have different national standards because the *Codex* is not binding at the national level (although it is an important point of reference with respect to WTO litigations as well). Accordingly, the US has its own specifications relating to mozzarella, for example, just as many other countries do.<sup>3</sup> The US rules that are in force regulate both mozzarella and scamorza cheese, which in Italy are two different products.

Mozzarella di bufala campana D.o.p. is a legally protected denomination of origin (*denominazione di origine protetta*, hence the acronym D.o.p.) under EU regulation No. 1151/2012 of 21 November 2012 on quality schemes for agricultural products and foodstuffs.<sup>4</sup> This recognizes that the cheese is a substantially different product from generic mozzarella. The US is a significant market for this protected cheese. That market represents seven percent of Italian exports of mozzarella di bufala campana D.o.p. Instead, the mozzarella cheese that American consumers have come to know, mostly through its association with pizza, is made with cows’ milk. This is a nutrient with qualities that are substantially different from those of buffalo milk, both in terms of composition and production.

---

<sup>1</sup> Paul Kindstedt, Mariana Carić & Spasenija Milanović, *Pasta-filata cheeses*, in 2 CHEESE: CHEMISTRY, PHYSICS AND MICROBIOLOGY 251–277 (Patrick F. Fox, Paul L. H. McSweeney, Timothy M. Cogan & Timothy P. Guinee eds., 2004).

<sup>2</sup> CODEX ALIMENTARIUS COMM’N, *Codex Standard for Mozzarella*, CODEX STAN. 262 (2006), available at [http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B262-2006%252FCXS\\_262e.pdf](http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B262-2006%252FCXS_262e.pdf).

<sup>3</sup> 21 C.F.R. § 133.155 (2019). Low-moisture and part-skim mozzarella, and scamorza cheese have different specifications.

<sup>4</sup> According to art. 5.1 of this regulation, a “designation of origin” is a name that identifies a product:

- (a) originating in a specific place, region or, in exceptional cases, a country;
- (b) whose quality or characteristics are essentially or exclusively due to a particular geographical environment with its inherent natural and human factors; and
- (c) the production steps of which all take place in the defined geographical area.

Regulation 1151/2012 of the European Parliament and of the Council, art. 5, 2012 O.J. (L 343) 8 [hereinafter Reg. 1151/2012].

Mozzarella di bufala, produced from buffalo's milk, is not yet easily available in the US, while in Italy, it is available in most, if not in all, parts of the country. Mozzarella di bufala campana D.o.p., the product that is protected under the EU scheme for protected designations of origin, is a particular variety of this cheese, produced in specified areas of Campania, Apulia, and Latium by farms working according to regulations established by law for the production of the cheese. It is protected by the label released by the Consorzio di tutela della mozzarella di bufala campana D.o.p.<sup>5</sup>



The importance of this economic sector is remarkable in terms of workforce, with about 11,200 workers occupied in production and a business value of € 1.2 billion for the territory where this product is produced.<sup>6</sup> To be sure, the contribution of immigrant and migrant workers to the production of mozzarella is no more negligible; they are an important presence in the agricultural sector and are directly involved both in the managing of the livestock and in the production of the cheese.<sup>7</sup> The work and living conditions for a good part of these workers are harsh. A substantial part of the immigrant workforce is heavily exploited, working for too low a remuneration, without contract, and without rights, in conditions that are by all means terrible.<sup>8</sup>

<sup>5</sup> See *infra*, Section 3.

<sup>6</sup> *Rapporto sulla mozzarella di bufala DOP*, SVIMEZ (June 20, 2019), <http://lnx.svimez.info/svimez/bianchi-presenta-rapporto-su-mozzarella-bufala-dop/>.

<sup>7</sup> *The Sikh Migrants Keeping Italy's Mozzarella Industry Alive*, NEWSWEEK (May 13, 2015), <https://www.newsweek.com/sikh-migrants-keeping-italys-mozzarella-industry-alive-327179>; Michele Nori, *The Shades of Green: Migrants' Contribution to EU Agriculture*, MIGRATION POL'Y CTR., Nov. 2017, at 5, <https://op.europa.eu/en/publication-detail/-/publication/20e0e4c6-f4ef-11e7-be11-01aa75ed71a1/language-en/format-PDF/source-165507860>.

<sup>8</sup> Tina Cioffo & Fabio Mencocco, *Quell'esercito di indiani «invisibili» dietro l'affair mozzarella di bufala* [That Legion of "Invisible" Indians Behind the Mozzarella Business], IL MATTINO (June 27, 2018), [https://www.ilmattino.it/caserta/quell\\_esercito\\_di\\_indiani\\_invisibili\\_dietro\\_l\\_affair\\_mozzarella\\_di\\_bufala-3822326.html](https://www.ilmattino.it/caserta/quell_esercito_di_indiani_invisibili_dietro_l_affair_mozzarella_di_bufala-3822326.html). As mentioned below, in the last section of this paper, in 2020, the Italian government launched a first regularization program that provides a patch of rather limited, partial solutions to the plights of irregular migrants and undocumented workers.

Especially in the last decades, these workers are the unsung heroes of the story that I am going to tell. In considering the overall picture, one should also be concerned about the environmental impact of the sector<sup>9</sup> and about the welfare of the animals, as the methods of livestock husbandry are intensive.<sup>10</sup> The idyllic pictures that are often presented in the literature describing the areas of production of the cheese do not always reflect the conditions of the animals in their stalls and those of the workforce that tends to them. Last but not least, this is a sector in which organized crime significantly invests regardless of controls<sup>11</sup> and enforcement against the presence of criminal organizations.<sup>12</sup> Several key producers, who are part of the Consorzio di Tutela della mozzarella di bufala campana D.o.p. (see *infra*, section 3), have been investigated for serious crimes, although these investigations have led to acquittals.<sup>13</sup> Reacting to such news, in 2012, the above-mentioned association of producers of mozzarella di bufala campana D.o.p. adopted an ethical code aimed at preventing the infiltration of organized crime in the sector.<sup>14</sup>

In terms of the legal process, the latest dispute involving this cheese, in particular its method of production, resulted in the judgment of the European Court of Justice of 17 October 2019, Case C-569/18, originating from a request for a preliminary ruling under Article 267 TFEU from the Italian Consiglio di Stato (Council of State, Italy) in the proceedings *Caseificio Cirigliana Srl and others v. Ministero delle Politiche agricole, alimentari e*

<sup>9</sup> See, e.g., Roberta Infascelli et al., *The Environmental Impact of Buffalo Manure in Areas Specialized in Mozzarella Production, Southern Italy*, 5(1) GEOSPATIAL HEALTH 131–37 (2010).

<sup>10</sup> *Mozzarelle dopate, è la bufala dei boss, Anabolizzanti agli animali per avere più latte [The Bosses' Mozzarella: Anabolic Steroids to Animals to Get More Milk]*, LA STAMPA (Oct. 10, 2006), <https://www.lastampa.it/cronaca/2006/10/10/news/mozzarelle-dopate-e-la-bufala-dei-boss-1.37145238>.

<sup>11</sup> Controls are subject to criminal infiltrations. See, e.g., Giuseppe Tallino, *Controlli farsa sulla mozzarella Dop. L'inchiesta porta a processo 27 imputati [Fake Checks on Mozzarella Dop. The Investigation Brings 27 Defendants to Trial]*, CRONACHE DI (Aug. 23, 2019), <https://cronachedi.it/2019/08/23/controlli-farsa-sulla-mozzarella-dop-linchiesta-porta-a-processo-27-imputati-il-presidente-del-consorzio-sostituita-la-societa-che-certificava-il-prodotto/>. The certification of the products is now carried out by a different body, the *Dipartimento di qualità alimentare*.

<sup>12</sup> For a recent investigation, see, for example, Angela Trocini, *La mozzarella della camorra: resta in cella l'imprenditore La Marca [Mozzarella in the Hands of Camorra: The Businessman Mr. La Marca Remains in Jail]* IL MATTINO (Apr. 6, 2019), [https://www.ilmattino.it/salerno/l\\_imprenditore\\_gianluca\\_la\\_marca\\_resta\\_in\\_carcere\\_la\\_decisione\\_del\\_riesame-4410490.html](https://www.ilmattino.it/salerno/l_imprenditore_gianluca_la_marca_resta_in_carcere_la_decisione_del_riesame-4410490.html). For a thorough analysis of the incentives and the relationship between legal and illegal practices in this sector, see generally Marcello De Rosa & Ferro Trabalzi, *Everybody Does It, or How Illegality Is Socially Constructed in a Southern Italian Food Network*, 45 J. RURAL STUD. 303 (2016).

<sup>13</sup> For a discussion of the allegations, see Michele Santoro presenta, *Servizio Pubblico Più - Una vera bufala*, YOUTUBE (La7 television broadcast June 20, 2013), <https://www.youtube.com/watch?v=71VDKw4wkF8>.

<sup>14</sup> Marcello de Rosa, Ferro Trabalzi & Tiziana Pagnani, *The Social Construction of Illegality Within Local Food Systems*, in A HANDBOOK OF FOOD CRIME: IMMORAL AND ILLEGAL PRACTICES IN THE FOOD INDUSTRY AND WHAT TO DO ABOUT THEM 43, 52 (Allison Gray & Ronald Hinch eds., 2019).

*forestali and others*.<sup>15</sup> However, before discussing this ruling and the more recent agreement for the protection of mozzarella di bufala campana D.o.p. reached in 2019 to protect this cheese in the US, I will address the socio-economic and cultural context surrounding this product.

Why is mozzarella di bufala campana D.o.p. an iconic cheese, and what is at stake in its protection? What are the legal aspects involved in the making of such an important, special product? To cover these points, I will first recall certain features of the cheese. I will then explain why the growing appreciation of its qualities tells a success story from both a socio-economic and, more broadly, cultural angle, notwithstanding the serious problem that I have just mentioned. Even though beyond the scope of this essay, the latter should be addressed without delay, in all their complexity and tragic consequences, as intrinsically legal issues involved in the protection of this type of cheese.

## II. A MOUTHFUL OF THE REAL THING.

A few years ago, a wonderful article featured in the New York Times Magazine described mozzarella di bufala as the:

Great White Whale of American cheesemaking . . . a dream so exotic and powerful that it drives otherwise sensible people into ruinous monomaniacal quests. Despite all the recent triumphs of our country's foodie movement . . . no one in the United States has, as of yet, figured out how to recreate precisely this relatively simple Old World delicacy.<sup>16</sup>

The article went on to narrate the extraordinary efforts of Craig Ramini, a former software consultant based in California who, at the age of 51, had decided to become a farmer to meet the challenge to produce the famous cheese in the US. Mozzarella di bufala is definitely not easy to transport because it loses its best qualities about two days after it is made. It is, therefore, difficult to import and to consume fresh, in a country that is as vast as the United States. Perhaps because of the difficulty of getting the right stuff in the US, the production of buffalo mozzarella was an exciting challenge for this entrepreneur, who passed away much too early.<sup>17</sup>

---

<sup>15</sup> Case C-569/18, *Caseificio Cirigliana Srl v. Ministero delle Politiche agricole*, ECLI:EU:C:2019:873 (Oct. 17, 2019).

<sup>16</sup> Sam Anderson, *Go Ahead, Milk My Day*, N.Y. TIMES (Oct. 11, 2012), <https://www.nytimes.com/2012/10/14/magazine/buffalo-mozzarella-craig-ramini.html>.

<sup>17</sup> Sam Roberts, *Craig Ramini, Whose Heart Led to Buffalo Mozzarella, Dies at 57*, N.Y. TIMES (Jan. 30, 2015), <https://www.nytimes.com/2015/01/31/business/craig-ramini-who-followed-his-heart-to-buffalo-mozzarella-dies-at-57.html>. His business is continued by his widow, Audrey Hitchcock. Tim Carl,

Nonetheless, obtaining buffalo milk in adequate quantities to produce the product is not easy at all: one kilogram of buffalo mozzarella is made out of four liters and a half of buffalo milk, but each buffalo produces no more than twelve liters of milk per day.<sup>18</sup> Starting the production of mozzarella di bufala is not a thing that can be rushed, nor can it happen anywhere.<sup>19</sup>

A few years have gone by since the newspapers covered this story, and now buffalo mozzarella turns out to be the Made-in-Italy product most loved by North American influencers. According to a survey on the consumption trends of Italian food, conducted by the Union of the Italian Chambers of Commerce operating abroad (Assocamerestero), mozzarella di bufala is the product preferred according to a poll of 550 food and wine influencers in the United States, Canada, and Mexico.<sup>20</sup> The survey was carried out as part of the “True Italian Taste” project aimed at promoting knowledge of the real made in Italy agri-food. The initiative seeks to combat the phenomenon of “Italian Sounding” foods, namely fake Italian foods. These are foodstuffs with no connection with the real thing. Rather, they consist of imitations of the Italian originals and look and sound like, but have little or nothing else in common with, original Italian products. According to the survey mentioned above, mozzarella di bufala comes in first in Mexico and Canada among the most loved Italian foods, while it is second, just after fresh pasta, in the US.

So, what is so special about this product? Let me say, to begin with, that mozzarella di bufala is at galactic distances from the average mozzarella cheese sold in the United States. The production of mozzarella—the generic product—is a late phenomenon in the US, compared to the production of other Italian hard and semi-hard Italian cheeses. The circumstance that mozzarella is a fresh cheese, with a relatively short shelf life, means that for decades its production in the United States was confined to areas adjacent to the big cities of the East Coast with a strong Italian presence. The industry

---

*Ramini Mozzarella — Keeping a Dream Alive*, NAPA VALLEY REG. (Feb 19, 2019), [https://napavalleyregister.com/lifestyles/food-and-cooking/ramini-mozzarella-keeping-a-dream-alive/article\\_493676c7-c415-538d-af6e-ba4346373cb0.html](https://napavalleyregister.com/lifestyles/food-and-cooking/ramini-mozzarella-keeping-a-dream-alive/article_493676c7-c415-538d-af6e-ba4346373cb0.html).

<sup>18</sup> Matilde Calandrelli, *Manual on the Production of Traditional Buffalo Mozzarella Cheese*, FOOD & AGRIC. ORG. OF THE UNITED NATIONS, <http://www.fao.org/ag/againfo/themes/documents/milk/mozzarella.pdf>.

<sup>19</sup> Andrew Jenner, *How to Make Italian Mozzarella in the U.S.? Step 1: Learn to Milk Water Buffalo*, WASH. POST (Feb. 14, 2016), [https://www.washingtonpost.com/lifestyle/food/how-to-make-italian-mozzarella-in-the-us-step-1-learn-to-milk-water-buffalo/2016/02/12/a918f7a8-d031-11e5-88cd-753e80cd29ad\\_story.html](https://www.washingtonpost.com/lifestyle/food/how-to-make-italian-mozzarella-in-the-us-step-1-learn-to-milk-water-buffalo/2016/02/12/a918f7a8-d031-11e5-88cd-753e80cd29ad_story.html).

<sup>20</sup> ASSOCIAZIONE DELLE CAMERE DI COMMERCIO ITALIANE ALL'ESTERO, *Presentati i risultati dell'Indagine sulle tendenze di consumo del Made in Italy agroalimentare in Nord America* [ASSOCIATION OF THE ITALIAN CHAMBERS OF COMMERCE ABROAD, *A Presentation of the Survey on Consumption Trends of the Made in Italy Agri-food Industry in North America*], ASSOCAMERESTERO, <http://intranet.assocamerestero.it/default.asp?idtema=1&idtemacat=1&page=news&index=1&order=a1&categoria=109&paginazione=10&action=read&idnews=1063>.

demand for mozzarella linked to the diffusion of pizza in the affluent post World War II era eventually changed the production landscape in the US. The production process of mozzarella was reshaped thanks to a toolbox of approaches that the industry could apply to commercial mozzarella cheesemaking.<sup>21</sup> As a consequence, the mozzarella cheese commonly used for the topping of pizza in the US has certain qualities that do not quite match those of the original product, turning it into a pizza cheese version of the original cheese, known as low-moisture mozzarella, which to my knowledge, is hardly ever seen in Italy. I must now clarify why mozzarella can be considered a generic name. It appears that this statement is by no means uncontroversial, as demonstrated by the struggle in the European Union for a system of geographical indications to protect the status of labels like parmigiano, fontina, and feta—just to mention a few cheeses. However, in 2019 an agreement was reached between the Consorzio di tutela della Mozzarella di Bufala Campana D.o.p., the U.S. Dairy Export Council (USDEC), and the Consortium for Common Food Names (CCFN), which allows the use of mozzarella as a generic name, while acknowledging that mozzarella di bufala campana D.o.p. is a protected label.

Mozzarella di bufala is light-years from mozzarella made out of cows milk, as I said. It remains a high-moisture soft cheese, which is sold immersed in a special liquid. Given the conditions required for its production, there is no way that it can soon be produced in large quantities in the United States. Consider that the US farm I mentioned above is the proud owner of a herd of about 50 water buffalo. There are some other farms that are also moving along this path so that as a very rough estimate, there are 6,000 to 8,000 water buffalo in the United States, scattered across between twenty-five and one hundred farms.<sup>22</sup> However, in Italy, there are over 237,000 water buffalos: the scale of the industry cannot really be compared, for the moment at least. But let's return to the product itself. Why is it so appealing? Here is a short narration of the sensory experience associated with the original product:

The good stuff is almost unrealistically soft—it seems like the reason the word “mouthfeel” was invented—with a depth of flavor that makes even the freshest hand-pulled artisanal cow-milk mozzarella taste like glorified string cheese. Buffalo mozzarella is the apotheosis of dairy: the golden mean between yogurt and custard and cottage cheese and heavy cream and ricotta. It lives (along with clouds and mercury and lava and photons and quicksand) on the

---

<sup>21</sup> See generally Paul S. Kindstedt, *Symposium Review: The Mozzarella/Pasta Filata Years: A Tribute to David M. Barbano*, 102 J. DAIRY SCI. 11, 10670 (2019).

<sup>22</sup> The estimate is by the President of the American Water Buffalo Association, quoted in Jenner, *supra* note 19.

mystical border between solid and liquid. Descriptions of it tend toward poetry. “When cut,” the cheesemonger Steven Jenkins has written, “it will weep its own whey with a sweet, beckoning, lactic aroma.”<sup>23</sup>

Perhaps these descriptions have a lyrical overtone, and yet they tell us something about the distinctive nature of the cheese. The craze for mozzarella di bufala campana D.o.p. is not a passing fad. Those who have tasted the original product describe a unique, unforgettable sensory experience.

### **III. BUFFALO MILK, LOCAL SOCIO-ECONOMIC DEVELOPMENT: THE WEB OF INSTITUTIONS AND RULES SUPPORTING THE PRODUCTION OF THE D.O.P. CHEESE.**

The story behind all of this is peculiar. Water buffalos were introduced in southern Italy in late antiquity, probably in the seventh century CE. The origins of the Italian variety of buffalos (the “swamp type”) are in Asia, where they are the best resource to plow fields in regions where monsoons are common and where they are an enormous resource for an economy of subsistence of millions of families. The presence of the water buffalo is well attested in the Italian south in the late middle ages. These sturdy animals were probably first appreciated because of their powerful traction and their meat, in a territory where the soil during the middle ages had large swamps. But, of course, water buffalos produce milk as well. Compared to cows’ milk, this milk has fifty-eight percent more calcium, forty percent more proteins, and forty-three percent less cholesterol. It is pure white and smooth and not as pungent as sheep or goat milk. It also seems easier to digest for many of those with a cow-milk allergy. Each animal’s output is smaller than that of a dairy cow, but because of the higher content of fat, the same amount of milk yields more cheese.

As a product known by that name, mozzarella goes back at least to the sixteenth century. The cheese is mentioned as such in the most famous Italian cookbook of the Renaissance, authored by Bartolomeo Scappi, one of Pope Pius V’s cooks.<sup>24</sup> In the eighteenth century, the Royal house of Naples invested in the production of mozzarella, which subsequently becomes more widespread. By the end of the Second World War, the herds of buffalos, which were grazing in the provinces of Campania, were slaughtered by the German army. The war was taking its toll, and so the production of the cheese

---

<sup>23</sup> Anderson, *supra* note 16.

<sup>24</sup> An English translation of this work is available, see generally TERENCE SCULLY, THE OPERA OF BARTOLOMEO SCAPPI (1570): L’ARTE ET PRUDENZA D’UN MAESTRO CUOCO [THE ART AND CRAFT OF A MASTER COOK] (Luigi Ballerini & Massimo Ciavolella eds., Terence Scully trans., 2008).

dwindled. Eventually, the water buffalo was reintroduced in the region, and the production of mozzarella di bufala was resumed.

We may thus turn to the crucial part of the story because mozzarella di bufala, at this point, has yet to become “mozzarella di bufala campana d.o.p.” This part of the story speaks of the dilemmas encountered when discussing socio-economic developments in the context of small-scale agricultural production and when considering the protection of certain niche industries and crafts in a market that is by now fully integrated nationally and internationally. This market relies on Europe, as far as food specialties are concerned, for obtaining the protected denomination of origin.<sup>25</sup>

To make a long story short, the key observation is that, on national or global markets, organizations of producers can help to promote the development and the welfare of their members by coordinating production units. Thanks to these coordination efforts, these units can overcome several constraints imposed by their small size and eventually access large markets. Cooperation means as well easier access to credit, and more political influence. Nonetheless, cooperation is not easy to get, and economic agents in developing countries and still developing industries often fail to cooperate.<sup>26</sup> So the question is: what is the key to obtain cooperation, and thus overcome problems that otherwise determine stagnation? The literature highlights two crucial factors as paths to success, namely (a) economic incentives and (b) members' participation. They are not mutually exclusive, of course. Economic incentives in the form of rewards and penalties, controlling costs, and more generally establishing a proper system of incentives to foster cooperation are necessary. But a system of incentives works well if one can identify a niche product that trades at a premium over a generic product that is produced on a much larger scale, by anybody, nearly anywhere. The question, therefore, becomes under what conditions will producers find or construct high-profit product niches. Members' participation is an important element in this dynamic. But competitive marketing positions are not usually solely the result of the efforts of the local group of producers, who may find it difficult to open up opportunities for commercial success. Quite often, the local producers have to rely on the expertise of marketing intermediaries, who are external to the group, or on

---

<sup>25</sup> For a critical assessment of this system, see David M. Higgins, BRANDS, GEOGRAPHICAL ORIGIN, AND THE GLOBAL ECONOMY: A HISTORY FROM THE NINETEENTH CENTURY TO THE PRESENT 218, 226–27 (2018).

<sup>26</sup> Tito Bianchi, *With and Without Co-operation: Two Alternative Strategies in the Food-Processing Industry in the Italian South*, 13 ENTREPRENEURSHIP & REG'L DEV. 117, 117–45 (2001) [hereinafter *With and Without Co-operation*]; see also Tito Bianchi, *Leaders and Intermediaries as Economic Development Agents in Producers' Associations*, in GROUP BEHAVIOUR AND DEVELOPMENT: IS THE MARKET DESTROYING COOPERATION? (Judith Heyer et al. eds., 2002) [hereinafter *Leaders and Intermediaries*].

the input of other agents. These intermediaries can assist the group in recognizing the payoffs that cooperation can bring, leveraging their capacities, and acting as catalysts for group efforts by overcoming collective action problems through proper institutional solutions.

In the case of mozzarella di bufala, the material preconditions to establish proper incentives for cooperation among producers was the very substance out of which the cheese is produced: buffalo milk is available in limited quantities, its supply is effectively in the hands of the local producers themselves. By and large, the local producers enjoy a near-monopoly on the production of fresh buffalo milk, the essential ingredient. This is the material basis that explains why, at least, in the case of mozzarella di bufala, the collective action problems that regularly undermine cooperation in similar contexts could be overcome.

Nonetheless, even in such a favorable context, the risk of noncooperation remains real, due to a threat that can easily materialize, namely the adulteration of the milk. The incentives to cheat and to pass off as mozzarella di bufala products that are not entirely made out of fresh buffalo milk are high. Especially in the summer, the quantity of available milk is scarce because buffaloes produce less milk in this season, and its high costs would be passed on to the price of the product, which heavily depends on the cost of the milk. The temptation is clear: namely adding cows' milk to buffalo milk, to produce more when its price is higher, or to use frozen buffalo milk, which can be bought on international markets. This, however, also means lowering the entry barriers to outsiders and may quickly destroy the reputation of the cheese as a high-quality product. The conflict between industry-level incentives and individual incentives is glaring, and it clearly identifies a problem of collective action. There is also an external threat to the cohesion of producers, concentrated in the south of Italy. This is represented by the efforts of large cheese manufacturers, usually located in the north of Italy, to enter this profitable segment of the market by getting access to enough quantities of buffalo milk and by severing the image of the product from its origins in southern Italy.<sup>27</sup> An additional source of worry for the producers is the possibility that other mozzarella products may obtain recognition as quality products and thus compete with the mozzarella di bufala D.o.p. in the top and most lucrative segment of the market.<sup>28</sup>

To tackle this problem, in 1981, a few local buffalo breeders and cheese producers established an association aimed at protecting and promoting mozzarella di bufala, namely the "Consorzio di tutela della mozzarella di

---

<sup>27</sup> *With and Without Co-operation*, *supra* note 26, at 133 (2001); *see also Leaders and Intermediaries*, *supra* note 26.

<sup>28</sup> This is why Regione Campania, where most producers are based, at first moved against the recognition of the D.o.p. label "mozzarella di Gioia del colle." *See infra* p. 15 and note 40.

bufala campana.” In 1989, the Consortium obtained the first certification of the product, with the recognition of DOC label, namely a collective label that associates the product with a well-defined geographical area and a certified production method. Four years later, the government assigned to the association the responsibility to establish and enforce production controls. Since then, the Consorzio has been able to sue those using their label illegally. This recognition paved the way to the Europe-wide protection of the product through EU regulations, the latest of which is Article 11 of Regulation (EU) 1151/12 on quality schemes for agricultural products and foodstuffs, which leads to the recognition of the D.o.p. label.<sup>29</sup>

The Consortium initially gathered few members but then started to grow in numbers and influence, especially after the recognition of the DOC label. Today more than eighty cheese producers and approximately the same number of breeders are participating members. Its latest success is the enactment of a recent governmental decree sanctioning the rules that protect the manufacturing of cheese and shield it from the risks of lowering quality by the use of non-buffalo milk in its production.<sup>30</sup> This measure is not free from controversy, however. According to a few producers, it imposes substantial burdens that may force some firms to abandon the association. Before addressing this point, I wish to highlight how the firms that established the Consortium benefitted from the advice, the expertise, and the intellectual input of a scientist based at the University of Naples. According to one researcher, this key figure pushed for the creation of the Consortium and helped in several ways to devise the astute commercial strategy that the Consortium developed to escape the constraints that would have otherwise limited the capacity of each producer.<sup>31</sup> By providing free technical assistance to the producers in exchange for the opportunity of conducting experiments on the farms and by linking local producers to the wider world of researchers and scientists working in the field, he helped to build up the collective dimension that was needed to make the Consortium work. Let me mention the fact that this scientist, Professor Giovanni De Franciscis, was widely active in the International Buffalo Federation. This is an international scientific society that was established in 1985 by Professor Dr. M.R. Shalash, President of the Egyptian Veterinarian Buffalo Association, and the American scientist Professor W. Cripe from the University of Florida, Gainesville. Professor De Franciscis became the President of the Federation in 1994, and in 1997 organized the 5th World Buffalo Congress in Caserta,

---

<sup>29</sup> See Reg. 1151/2012, art. 11, *supra* note 4, at 10. This Regulation repealed and replaced Council Regulation 510/06, 2006 O.J. (L 93) 12, which in turn had repealed and replaced Council Regulation 2081/92, 1992 O.J. (L 208) 1.

<sup>30</sup> Decreto Ministeriale 10 aprile 2013, in G.U. Apr. 24, 2013, n. 96 (It.).

<sup>31</sup> *With and Without Co-operation*, *supra* note 26, at 137–38.

Italy, together with his colleague Professor Antonio Borghese, currently General Secretary of the Federation.<sup>32</sup> Professor De Franciscis is still remembered on the web site of this association as a leading figure who vigorously worked to enhance its reputation and importance of the association. Among the farmers who pursued the constitution of the Consortium, there were leading figures as well. One of them, Alfredo Diana, had an interesting political career. He became the Minister of Agriculture for the Ciampi government and eventually signed the decree which recognized Mozzarella di bufala campana as a DOC product, thus paving the way for its commercial success.

The fact the Consortium exists does not mean, of course, that it has an easy time managing the Consortium's core business. Defending the status of this iconic cheese, which is liable to be undermined by various risks, is not a simple task at all. There have been ups and downs. The Consortium itself was suspended from some of its activities in 2010 by the Ministry of Agriculture. It was alleged to have failed to enforce controls and that its president was involved in the adulteration of cheese manufacturing by using cow's milk in its production. Especially in the past, events linked to serious environmental problems affecting the area of production, and a lack of controls, have been a threat to the success of the product.

Like every product that has become a high-quality brand, the Consortium must defend their cheese from all attempts at evoking the copyrighted label by producers not entitled to do so. One of the most recent, possibly curious, cases of label evocation is linked to a Tokyo-based cheese factory producing cow's milk mozzarella marketed under the label "Mu Mu Mozzarella Tokyo Dop," which, together with the buffalo head company logo, manifestly brings to mind mozzarella di bufala campana D.o.p. This rapidly became the subject of a written question of a member of the European Parliament to the Commission in 2019. The Commission replied that the Italian denomination is protected in Japan and that it will take action under the international trade agreement between the EU and Japan, which provides for administrative remedies in similar cases.<sup>33</sup>

The vital problem is, of course, to obtain compliance by the members of the Consortium as far as all the rules concerning the methods of production

---

<sup>32</sup> *Id.* Prof Antonio Borghese edited an important scientific publication for the Food and Agriculture Organization of the United Nations on buffalos, covering buffalo milk and dairy products: BUFFALO PRODUCTION AND RESEARCH. REU TECHNICAL SERIES (2005).

<sup>33</sup> Parliamentary Question for Written Answer E-001489-19, *Case of 'Evocation' Involving Mozzarella di Bufala Campana PDO*, EUR. PARLIAMENT (Mar. 25, 2019), [https://www.europarl.europa.eu/doceo/document/E-8-2019-001489\\_EN.html](https://www.europarl.europa.eu/doceo/document/E-8-2019-001489_EN.html). The EU-Japan Economic Partnership Agreement (EPA) ensures the protection in the territory of Japan of the EU geographical indications (GIs) listed in its Annex 14-B. The Italian GI 'Mozzarella di Bufala Campana' is listed in Annex 14-B and thus protected in Japan under the EPA since 1 February 2019.

and the quality of the product are concerned. This cannot simply be taken for granted, hence the possible application of fines to the non-conforming members, with the ultimate sanction being expulsion from the collective organization. Surely, the alignment of industry-level interests and the interest of individual firms is not automatic, not even today. Since the Consortium was established, huge efforts have been made to enhance compliance by adopting several measures, partly established by the Consortium itself, partly by public authorities. Public authorities have recently adopted a comprehensive scheme to track and trace the production of the milk for each buffalo, the destination of the product, and the amount of cheese produced each day.<sup>34</sup> Checks on the quality of the product have been improved by elaborating different testing methods that allow for the discovery of fraud. The number of controls effectuated is by now substantial. The Consortium is an important player in the field, and the efforts to discipline noncomplying members are significant.

One way to control what is going on in practice is to separate the production of mozzarella di bufala campana D.o.p. from the production of other dairy products that are not subject to the same rules and regulations. This can be done by physically delimiting the spaces in which buffalo milk originating from farms that belong to the Consortium are to be processed. This measure is now a regulatory norm because the Ministry has adopted a decree that imposes such physical separation on the basis of new legislation enacted in 2014.<sup>35</sup> This new enactment is at the origins of the litigation on which the European Court of Justice ruled in 2019, in Case C-569/18, on a reference for a preliminary ruling by the Italian Consiglio di Stato.<sup>36</sup> The ECJ recognized that the measure could be upheld because Regulation No. 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs, and the product specification for “Mozzarella di Bufala Campana” does not preclude national rules, such as those at issue in the main proceedings, that provide

---

<sup>34</sup> See generally Decreto ministeriale 9 settembre 2014, in G.U. Sept. 20, 2014, n. 219 (It.).

<sup>35</sup> See generally *id.*; see also Case C-569/18, *Caseificio Cirigliana Srl v. Ministero delle Politiche agricole*, ECLI:EU:C:2019:873, ¶ 2 (Oct. 17, 2019) (“‘Misure per la sicurezza alimentare e la produzione della Mozzarella di Bufala Campana DOP’ [“Food safety measures and the production of Mozzarella di Bufala Campana DOP”] (Ministerial Decree No 76262/2014 of 9 September 2014 establishing ‘Detailed rules for the implementation of the provisions of Article 4 of Decree-Law No 91 of 24 June 2014: ‘measures on food safety and production of PDO “Mozzarella di Bufala Campana”’) of 9 September 2014 (GURI No 219, 20 September 2014, p. 8) (‘Ministerial Decree No 76262/2014’)”).

<sup>36</sup> *Caseificio Cirigliana*, ECLI:EU:C:2019:873, ¶ 2. On the request for a preliminary ruling formulated by the Consiglio di Stato, with the ordinanza, 22 August 2018, n. 5003, see Valeria Capuano, *La Mozzarella di Bufala Campana alla Corte di giustizia: tra obbligo di rinvio ed eccesso di zelo* [Mozzarella di Bufala Campana at the Court of Justice: the obligation to follow the preliminary reference procedure and an excess of zeal], *IL DIRITTO DELL'UNIONE EUROPEA* (Feb. 28, 2019), [http://www.dirittounioneuropea.eu/Tool/Evidenza/Single/view\\_html?id\\_evidenza=134](http://www.dirittounioneuropea.eu/Tool/Evidenza/Single/view_html?id_evidenza=134).

that mozzarella di bufala campana D.o.p. must be produced in areas exclusively designated for the production of that cheese. These rules can prohibit within certain premises the holding and storage of milk originating from farms that are not subject to the monitoring system for the mozzarella di bufala campana D.o.p. The Court clarified that this ruling leaves open to the referring Court to decide whether the recently enacted rules that establish such prohibition are a necessary and proportionate means of safeguarding the quality of that product or ensuring that the specification for that D.o.p. is monitored. It is highly likely that the referring Court shall find the prohibition to be necessary and proportionate to safeguard the quality of the product. Nonetheless, one may wonder what exactly is at stake here.

To cast some light on this, one should keep in mind that the challenge to the national measure before the ECJ was instituted to defend a practice that has been going on for years, and that would allegedly be beneficial to some producers. That is, specifically, the possibility of producing buffalo mozzarella with buffalo milk that is not traceable to the geographical area protected by the Consortium or that may not be labelled as D.o.p.<sup>37</sup> For each kilo of mozzarella di bufala campana D.o.p. that is produced, a percentage of the profit goes to the Consortium. If you do not intend to pay this fee, you are free to produce—as it has happened up until now—in the same physical space a different product with a different kind of milk. The fact that in the same production unit one can bring in and process different ingredients poses various risks, however, including the obvious risk of adulteration that materializes when buffalo milk is mixed with cow's milk. The new rules adopted for the production of mozzarella di bufala campana D.o.p. the same solution which is already in place for parmigiano reggiano, thus restricting in an effective way the possibility of using non-Consortium milk to produce the cheese.<sup>38</sup> Once more, the Court of Justice has been called upon to decide a dispute internal to the industry. There are effective criminal sanctions for the violations of these rules, so the stakes in this litigation are high. Meanwhile, on the other hand, the Consortium advanced proposals to relax some of the rules governing the production of mozzarella di bufala campana D.o.p. These proposals would have allowed the use and the conservation of frozen products to produce the cheese under conditions more favorable to the producers, at least for a line of products.<sup>39</sup> Producers could have used frozen

---

<sup>37</sup> For an analysis of the level of homogeneity of the producers' interests, see generally Enrico Bonetti, *The Effectiveness of Meta-Brands in the Typical Product Industry: Mozzarella Cheese*, 106 BRITISH FOOD J. 746 (2004).

<sup>38</sup> Vincenzo Oliviero, *The Ex Director: The Consorzio Della Mozzarella Has Done Everything Wrong*, LUCIANO PIGNATARO WINE & FOOD BLOG (Apr. 19, 2013), <https://www.lucianopignataro.it/a/lex-direttore-il-consorzio-della-mozzarella-ha-sbagliato-tutto/58935/>.

<sup>39</sup> Audizione del Presidente del Consorzio di tutela della mozzarella di bufala campana, Raimondo Domenico, Italian Parliament, Camera dei Deputati, XVII Legislatura, Commissione parlamentare di

milk stocks to meet increasing demand in certain periods of the year, and the transportation of the product would have been facilitated as well. This change would have altered a current feature of the product, that is, its production with fresh buffalo milk within 60 hours from the milking of the buffalo. A label would have distinguished fresh mozzarella and mozzarella produced with frozen milk, but, of course, this new idea sounded anathema to the lovers of the real thing. The opposition of the Ministry to a change that would have altered a fundamental feature of the business put an end to the proposal.<sup>40</sup> It is difficult not to consider this a consequence of media attention to the issue. We will, as a result, not have frozen buffalo mozzarella. On the other hand, the Consortium managed to strike an agreement for the protection of the product in the US market. The Food and Drug Administration and the Consortium for Common Food Names agreed with the Consorzio di Tutela that mozzarella di bufala campana D.o.p. is a denomination that shall be protected in the US, a positive turn for the Made in Italy in this sector: a sector that is especially important for a large part of Southern Italy.

#### IV. MOZZARELLA PLURALISM

The territory where mozzarella di bufala campana D.o.p. is produced is an area that has several scenic landscapes so that mozzarella di bufala tourism now contributes to the economy of the region. But the great success of this product inevitably attracted attention elsewhere and inspired others. Other areas of Italy have distinctive landscapes and productions as well, including mozzarella, albeit not mozzarella produced with buffalo milk. A competing product is thus on the rise: “mozzarella di Gioia del Colle,” a product originally from a locality in Apulia, that is aptly described in the application for D.o.p. status to the EU.<sup>41</sup> This is the second specialty product of the South that could aspire for recognition in the D.o.p. system, and after a relatively

---

inchiesta sui fenomeni della contraffazione, della pirateria in campo commerciale e del commercio abusivo [Hearing of the President of the Consortium for the protection of buffalo mozzarella from Campania, Raimondo Domenico, Italian Parliament, Chamber of Deputies, XVII Legislature, Parliamentary Commission of Inquiry into the phenomena of counterfeiting, piracy in the commercial field and abusive trade, Sitting no. 30 on Thursday 16 July 2015].

<sup>40</sup> Domenico Raimondo, “No” alla mozzarella di bufala Dop congelata: bocciata la proposta del consorzio [“No” to Frozen DOP Buffalo Mozzarella: the Consortium’s Proposal was Rejected], CRONACHE DI GUSTO (Dec. 27, 2019), <https://www.cronachedigusto.it/archiviodal-05042011/il-caso/qnoq-alla-mozzarella-di-bufala-dop-congelata-bocciata-la-proposta-del-consorzio>.

<sup>41</sup> Commission Publication of an Application for Registration of a Name, 2019 O.J. (C 356) 9. At the national level this was preceded by an interim protective measure, Decreto ministeriale 21 febbraio 2018, in G.U. Mar. 19, 2018, n. 65 (It.) (“Protezione transitoria, accordata a livello nazionale, alla denominazione «Mozzarella di Gioia del Colle», per la quale e’ stata inviata istanza alla Commissione europea per la registrazione come denominazione di origine protetta” [Interim Protection, Granted at National Level, to the Designation “Mozzarella di Gioia del Colle,” for which an Application has been sent to the European Commission for Registration as a Protection Designation of Origin]).

short period, recognition arrived in 2019. For a moment, we risked a mozzarella war because the Campania Region at first opposed the recognition of the new D.o.p. label.<sup>42</sup> Now that the EU has established that the product deserves protection as well, that risk is over, and thus we can enjoy mozzarella pluralism. Mozzarella di Gioia del Colle is a rather different product, but perhaps this is a story for another time:

This mozzarella, unlike the buffalo mozzarella, has a more compact and elastic consistency, without limitations regarding shape or size, it goes from the knot to the braid, passing through the classic sphere. The color . . . is usually an ivory white that can tend to a yellow veil. The skin is very thin, unlike the buffalo mozzarella, because the milk is cow's milk and the salting does not occur by immersion of the mozzarella in brine (as per Campania tradition), but first, in the spinning. The taste is markedly sweet, and pleasantly acidulous, while the aromas clearly show fresh lactic notes, butter, field vegetables and clean animal, with a characteristic finish of yeasts and fermented, typical of natural fermentation artisanal products. A product both rustic and complex.<sup>43</sup>

## V. A CONCLUSION

To conclude, my hope is that this success story shall not lead those who may claim credit for it to turn a blind eye to the conditions of those unsung heroes that are contributing with their work to the success of a world-famous Italian delicacy. They are all too often in the same position as the poor Italian immigrants that arrived by the millions in the US in the nineteenth century and the early twentieth century. The immigrants that work in buffalo ranches are taking up the humblest of jobs to create much of the wealth associated

---

<sup>42</sup> See Press Release n. 356, Regione Campania, Mozzarella di Gioia del Colle, la Regione Campania si Oppone Formalmente al Riconoscimento della dop [Gioia del Colle Mozzarella, the Campania Region Formally Opposes the Recognition of the Dop] (Sept. 27, 2017), <http://regione.campania.it/regione/it/news/comunicati-2017-erp7/27-09-2017-comunicato-n-356-mozzarella-di-gioia-del-colle-la-regione-campania-si-oppone-formalmente-al-riconoscimento-della-dop?page=1>.

<sup>43</sup> Stefano Pesce, *Ok da Bruxelles: la Mozzarella di Gioia del Colle diventa DOP* [Ok from Brussels: The Mozzarella of Gioia del Colle Becomes DOP], LA REPUBBLICA (Oct. 22, 2019), [https://www.repubblica.it/dossier/sapori/guide-espresso/2019/10/22/news/ok\\_da\\_bruelles\\_la\\_mozzarella\\_di\\_gioia\\_del\\_colle\\_diventa\\_dop-239183419/](https://www.repubblica.it/dossier/sapori/guide-espresso/2019/10/22/news/ok_da_bruelles_la_mozzarella_di_gioia_del_colle_diventa_dop-239183419/).

with this famous product.<sup>44</sup> Today, corporate social responsibility and sustainable production are no longer empty words. Therefore, the time is ripe to call upon the agri-food industry to respond to the challenge posed by the harsh socio-economic conditions of these workers, to fully incorporate environmental and animal welfare concerns in their policies, and to further combat criminal penetration in the sector. A failure to respond to that call can only lead one to think that the taste of that wonderful, beloved product is rather bitter in the end.

While these lines were written, an unexpected turn of events began to change the situation of the irregular workforce employed in the agri-food sector in Italy. The COVID-19 pandemic that hit Italy in the first months of 2020 brought with it a sudden shortage of rural workers and raised serious concerns about the possibility of combating the pandemic in the presence of large numbers of irregular migrant workers often living in makeshift encampments, slums, or precarious shelters, without basic protections against COVID-19, and without dignity. Trade unions, NGOs, and workers themselves thus launched a new campaign for the regularization of undocumented migrants and irregular workers. This built up momentum for a first social justice measure that would also allow migrants to have access to healthcare provided for by the national health service. The Italian government thus approved a regularization program with the Decree of May 13, 2020, for a post-pandemic economic relaunch.<sup>45</sup> The shortcomings of this urgent and partial measure are severe,<sup>46</sup> as the strikes of the workers who are the potential beneficiaries of it show. In many ways, this is really too little, too late.<sup>47</sup> And yet, it is also the first sign of recognition for all those vulnerable workers employed in this sector whose well-being has been systematically threatened or harmed by the lack of any legal protection.

---

<sup>44</sup> For an up-to-date analysis of the conditions of rural workers in Italy with a focus on migrants and undocumented workers, see generally *Rapporto di Ricerca: Migrazioni, Agricoltura e Ruralità: politiche e Percorsi per lo Sviluppo dei Territori* [Research Report: Migration, Agriculture and Rurality: Policies and Paths for the Development of Territories], RETERURALENAZIONALE, Mar. 2020, <https://www.reterurale.it/flex/cm/pages/ServeAttachment.php/L/IT/D/1%252F2%252Fb%252FD.c1d46032c4fc1d2b236c/P/BLOB%3AID%3D21203/E/pdf>; see also Press Release, Hilal Elver, Office of the High Commissioner for Human Rights, Statement by Ms. Hilal Elver, United Nations Special Rapporteur on the Right to Food, on her Visit to Italy, 20-31 January 2020 (Jan. 31, 2020), <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25512&LangID=E>.

<sup>45</sup> Decreto Legge 19 maggio 2020, n. 34, in G.U. May 19, 2020, n. 128, Supplemento Ordinario n. 21 (It.).

<sup>46</sup> Letizia Palumbo, *The Italian Plan for Regularisation: Real Progress for Migrants' Rights?*, MIGRATION POL'Y CTR.: MPC BLOG (June 8, 2020), <https://blogs.eui.eu/migrationpolicycentre/italian-plan-regularisation-real-progress-migrants-rights/>.

<sup>47</sup> Tommaso Ferrando & Alagie Jingkang, *Too Late, Too Little and for the Wrong Reasons*, SUSTAINABLE GLOB. SOC'Y: POL'YS & P'SHIPS (May 21, 2020), <https://blog.uantwerpen.be/sustainable-global-society/italy-migrant-farm-workers-strike/>.