No. 21-468

IN THE

Supreme Court of the United States

NATIONAL PORK PRODUCERS COUNCIL & AMERICAN FARM BUREAU FEDERATION,

Petitioners,

v.

KAREN ROSS, IN HER OFFICIAL CAPACITY AS SECRETARY OF THE CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE, ET AL.,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

BRIEF OF *AMICUS CURIAE* DR. LEON BARRINGER IN SUPPORT OF RESPONDENTS

Melanie R. Hallums
Emanuel Powell
ORRICK, HERRINGTON & SUTCLIFFE LLP
1152 15th Street N.W.
Washington, D.C. 20005

Elizabeth R. Moulton
Counsel of Record
ORRICK, HERRINGTON & SUTCLIFFE LLP
405 Howard Street
San Francisco, CA 94105
(415) 773-5700
emoulton@orrick.com

Counsel for Amicus Curiae

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INTEREST OF *AMICUS CURIAE*[1]

Dr. Leon Barringer, DVM, is a large animal veterinarian who specializes in epidemiology, evidence-based population medicine, disease outbreak investigation, and vaccinology. Dr. Barringer's expertise and professional experience touch on all food animal species, including swine. He has a deep understanding of the pork industry and food production process. Dr. Barringer submits this brief to provide the Court with background on the pork industry, particularly with respect to the long-standing practice of segregating and tracing pork from birth to retail sale. In particular, Dr. Barringer submits this brief to explain that producers can segregate and trace pork intended for sale in California from other pork, such that pork sold to other states need not be Prop 12-compliant.

Dr. Barringer earned his Doctor of Veterinary Medicine from the University of California, Davis, and has served in both private practice and as an Associate Professor in the Animal Science Division of West Virginia University's College of Agriculture and Forestry. He later joined Pfizer Animal Health, working as the director of veterinary operations. Dr. Barringer also served as the manager of veterinary operations at Merck Animal Health. At both Pfizer and Merck, Dr. Barringer oversaw the health and welfare of pigs and other food animals. He is a

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[1] The parties have consented to the filing of this *amicus* brief. No counsel for a party authored the brief in whole or in part. No party, counsel for a party, or any person other than Dr. Leon Barringer and his counsel made a monetary contribution intended to fund the preparation or submission of the brief.

member of the American Veterinary Medical Association, the American Association of Bovine Practitioners, the author or co-author of many peer-reviewed papers, and a quoted expert in industry media. Throughout his 30-plus year career as a veterinarian and participant in the meat production industry, Dr. Barringer has worked to ensure a safe, sustainable meat supply while upholding the Veterinarian's Oath to use his scientific knowledge and skills for the benefit of society through the protection of animal health and welfare and the relief of animal suffering.[2]

In addition to his work in animal science, Dr. Barringer enjoyed a distinguished 34-year career in the U.S. Air Force and U.S. Army. While serving, "[o]nce a month, Barringer swap[ped] his cowboy boots for combat boots and hoof[ed] it from his Colorado home to his duty station."[3] Prior to his retirement from the armed forces in 2021, Dr. Barringer was deployed to 25 countries and earned numerous medals and awards for exemplary performance.

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[2] *See* Am. Veterinary Med. Ass'n, Veterinarian's Oath, https://tinyurl.com/3hhz4n9f (last visited Aug. 2, 2022).

[3] Rachael Garneau, *McChord Reservist Shoots Straight from the Hip About New Command*, Northwest Military (Apr. 19, 2013), https://tinyurl.com/4n7jhwnw.

INTRODUCTION AND SUMMARY OF ARGUMENT

Petitioners assert that it is not only "difficult"[4] but also "not currently possible"[5] to trace a cut of pork back to a particular sow housed in a particular way. These assertions are facially implausible. The pork industry has engaged in tracing and segregation, to varying degrees of sophistication, since at least the early 1900s. Segregating and tracing pork allows producers to comply with public health and food safety requirements, respond quickly to disease and foodborne illness outbreaks, meet consumer demand for pork produced in certain ways, and market their products effectively.

Today, tracing and segregation are highly sophisticated and fully adopted in the industry. From Radio Frequency Identification (RFID) ear tags that electronically track detailed information about a pig's history to identification tattoos used to trace pigs throughout the slaughtering process, industrial pork is successfully traced from birth to the finished product.

Tracing and segregation are so robust that the U.S. Department of Agriculture (USDA) has developed verification programs that take advantage of tracing to allow pork producers to make marketing claims like "antibiotic-free" and "source-verified" on their pork products. Significant quantities of pork

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[4] *See, e.g.*, Pet. App. 181a-183a ¶¶128-135; 214a ¶348.

[5] Pet. Br. 16-17 n.7.

products are now marketed and labeled as "crate-free," humanely raised, and other similar marketing claims regarding the way the pig or its mother was raised. In order to make those claims, robust tracing and segregation of pigs and pork are required.

There is no plausible reason that existing tracing and segregation technology and practices cannot be used to segregate Prop 12-compliant pork from other pork in the pipeline, without any substantial burden to interstate commerce.

ARGUMENT

I. Farmers, Packers, Distributors, And Others Work Together To Supply Pork To Consumers.

There are four relevant stages in the life cycle of a market pig.[6]

Gestation is the first stage and includes breeding and pregnancy.[7] Female pigs who have never birthed before are called **gilts**.[8] After delivering for the first time, female pigs are called **sows**.[9] A sow typically has six litters before the sow is sold for eventual

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[6] Pork Checkoff, *Life Cycle of a Market Pig*, https://tinyurl.com/3xyecxk6 (last visited Aug. 2, 2022).

[7] *Id.*

[8] U.S. Dep't of Agric., Hogs & Pork, *Sector at a Glance*, https://tinyurl.com/yckvu5np (last updated Aug. 5, 2021).

[9] *Id.*

slaughter.[10] Breeding is either done through artificial insemination or the mating of a gilt, or sow, by a male pig, called a **boar**.[11] Pregnancy lasts for approximately 16 weeks after successful insemination or mating.[12]

During gestation, sows may be housed individually or in group settings. When housed individually, sows are kept in **gestation stalls**, or **gestation crates**, which are pens "designed to encompass the sow's static space requirements – that is, the space occupied by a sow when standing or lying on her sternum."[13] In a gestation crate, a "sow is unable to turn around and simple movements such as standing up or lying down may be difficult if the sow is large."[14] **Group housing** is also used, in which groups of sows are kept in open pens.[15]

Farrowing, which means to give birth, is the second stage.[16] Gilts, or sows, farrow a litter of 10 piglets on average.[17] Farmers place identification markers on piglets shortly after birth. A farmer can use a range of identification methods, from RFID ear tags to ear

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[10] *See* Pet. App. 180a ¶¶ 117-19.

[11] U.S. Dep't of Agric., *Sector at a Glance*, *supra* note 8.

[12] *Id.*

[13] Jeremy N. Marchant-Forde, *Sow Welfare Fact Sheet* 1, U.S. Dep't of Agric. (2010), https://tinyurl.com/6r5zy3sw.

[14] *Id.*

[15] *Id.*

[16] *Life Cycle of a Market Pig*, *supra* note 6.

[17] U.S. Dep't of Agric., *Sector at a Glance*, *supra* note 8.

notching to DNA tracing. These methods are described in more detail below in Section II.

Sows nurse piglets for about three weeks until the piglets are **weaned** (removed from the sow after they can subsist on food besides the sow's milk).[18] Once they are weaned, piglets weigh around 10 pounds.[19] A sow can be bred again shortly after piglets are weaned, allowing for at least two litters per year.[20] Shortly before birth and until the piglets' weaning, many farms house sows in **farrowing crates** that "confer[] similar degrees of confinement to the gestation crate."[21]

Feeding is the third stage. After being weaned, some piglets are moved to feeder operations, also called nursery operations, where they are transferred from their litter to live with other piglets.[22] The piglets are fed a diet sufficient to grow to an average weight of 40 pounds.[23] The feeding stage lasts approximately six to eight weeks.

Finishing is the fourth and final stage. In the finishing stage, pigs consume a significant amount of feed to support their continued growth. Around six months of age, the pigs reach a typical market weight

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[18] *Id.*

[19] *Id.*

[20] *Id.*

[21] Jeremy N. Marchant-Forde, *Swine Welfare Fact Sheet* 1, U.S. Dep't of Agric. (2011), https://tinyurl.com/24ez734e.

[22] *See* U.S. Dep't of Agric., *Sector at a Glance*, *supra* note 8.

[23] *Id.*

of about 280 pounds.[24] At this weight, the "finished" pig is ready for slaughter.[25]

This entire process takes place on **pig farms** and lasts about 38 to 42 weeks (nine to 10 months). Traditionally, pig production occurred on farms that raised pigs from gestation to finishing, also called **Farrow-to-Finish farms**.[26] Today, the majority of pig farmers specialize in raising pigs for specific stages rather than throughout the entire life cycle, including[27]:

- **Farrow-to-Wean farms**: breed pigs and raise piglets until they are weaned (around 10 pounds) and then moved to Feeder farms;
- **Farrow-to-Feeder farms**: breed and raise pigs until they are about 40 pounds, when they are sold to Finishing farms where they will be fed until they reach market weight;
- **Feeder farms**: take weaned pigs (around 10 pounds) from Farrow-to-Wean farms and raise them until they are about 40 pounds and ready to be moved to Finishing farms; and
- **Finishing farms**: take pigs from Farrow-to-Feeder farms and/or Feeder farms at around 40

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[24] *Life Cycle of a Market Pig*, *supra* note 6.

[25] *See* U.S. Dep't of Agric., *Sector at a Glance*, *supra* note 8.

[26] William D. McBride & Nigel Key, U.S. Dep't of Agric., Econ. Rsch. Serv., ERR-158, *U.S. Hog Production From 1992 to 2009: Technology, Restructuring, and Productivity Growth* 5 (2013), https://tinyurl.com/2p9xsnwe.

[27] Farms.com, *Swine Farming*, https://tinyurl.com/2sxhmnee (last visited Aug. 2, 2022).

pounds and raise the pigs until they reach market weight.

After pigs reach market weight, they are typically transported to **packers**, which slaughter, process, and package pork for distribution to retailers, food services, and other buyers. Packers include household names like Smithfield Foods, Hormel Foods, and Tyson Foods.

Upon arriving to the packing plant, pigs are generally placed in pens, given fresh water, and allowed to rest before processing.[28] Given federal regulations requiring most livestock to be unconscious before being processed into meat, pigs are "stunned" to make them unconscious.[29] The most common methods are electrical stunning and gas stunning.[30] With electrical stunning, "an electrical current [is applied] to the head of the pig at a sufficient strength to … cause the pig to become unconscious."[31] For gas stunning, generally pigs are led in small groups to baskets and

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[28] N. Am. Meat Inst., *If Meat Plants Had Glass Walls … What Would Happen?* 3, https://tinyurl.com/3mcsbtkb (last visited Aug. 2, 2022); *see also* Smithfield Foods, *Fresh Pork Production at Smithfield Foods*, YouTube 00:00:36 (May 14, 2013), https://tinyurl.com/2s3pk8ru.

[29] N. Am. Meat Inst., *supra* note 28, at 7.

[30] Lauren Edwards, *Stunning at Slaughter: Is Your Hard Work Going to Waste?*, The Pig Site (May 8, 2018), https://tinyurl.com/36jmdtkw.

[31] *Id.*

lowered into chambers eventually filled with CO_2 gas that "functions like a permanent anesthesia."[32]

After stunning, pigs are killed from a cut to the throat and hung up from their back legs.[33] The carcasses go through an "exterior cleaning process," their "internal organs are removed", and then "the body cavity is cleaned."[34] Generally, the carcasses are left to rest in a cooler overnight.[35] Following cooling, the pig's carcass moves down the factory line, where body parts are removed to be broken down into primal cuts (e.g., pork leg) and sub-primal cuts (e.g., pork shank, pork foot) for eventual packing and later distribution.[36] Modern processing facilities can process thousands of pigs per day.[37]

Many pig farms are contracted to supply pigs to specific packers.[38] The packer then outlines the "hog

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[32] N. Am. Meat Inst., *supra* note 28, at 7.

[33] Peggy Lowe, *Everything but the Squeal: How the Hog Industry Cuts Food Waste*, NPR (Sept. 29, 2014), https://tinyurl.com/2hp2nf8z.

[34] *Fresh Pork Production at Smithfield Foods*, *supra* note 28, at 00:00:48.

[35] *Id.* at 00:01:50.

[36] *See id. at* 00:01:55*, see also* U.S. Dep't of Agric., Agric. Mktg. Serv., *A User's Guide to USDA's LMR Pork Carcass Cutout* (2022), https://tinyurl.com/4sm54m9v.

[37] Pet. App. 150a ¶ 13.

[38] McBride & Key, *supra* note 26, at 13; *see also* Smithfield Foods*, Hog Production at Smithfield Foods*, YouTube 00:02:10 (Oct. 9, 2013), https://tinyurl.com/45c9ta8s (describing "contract growing" arrangement for Smithfield Foods' hog production).

quantities and qualities," or conditions under which the pigs are raised—what type of food they are given, when certain vaccines are administered, whether the pigs are given growth hormones, and, particularly relevant here, what type of confinement system is used for housing breeding sows.[39] This gives the packer "an assured supply of hogs with known characteristics" for eventual slaughter, processing, and sale, as if they had produced the hogs themselves.[40] Thus, many farmers know in advance—through the terms of their contracts—the conditions under which their pigs must be raised to be marketable to their contracted packer.

Instead of contracting with farmers, some packers operate their own farms. These packers thus self-manage the conditions under which their pigs are raised. In 2019 and 2020, the two largest packers

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[39] McBride & Key, *supra* note 26, at 4, 13. *See, e.g.*, David Jackson & Gary Marx, *Illinois Contract Pig Farmer: Work is Low-Paying, Physically Punishing*, Chicago Trib. (Aug. 8, 2016), https://tinyurl.com/5camehry ("But the animals are the property of larger companies that pay these growers a 'pig space' fee and dictate conditions of care, including supplying the feed and medications."); Jacqui Fatka, *HSUS Files Lawsuit Against Smithfield's Sow Housing Claims*, Nat'l Hog Farmer (Oct. 18, 2021), https://tinyurl.com/2k9494jv ("Smithfield is supporting contract growers through the conversion process [of phasing out gestation crates] by providing guidance and expertise when requested and have seen an increase in the number of farms that have converted or that have expressed interest in converting. Monroe reports that as of the end of 2020, approximately one-third of its contract growers had converted to group housing.").

[40] Ron Plain et al., *The Structure of the U.S. Pork Industry*, Fact Sheet Pork Information Gateway 4 (2001), https://tinyurl.com/4f4vmz7v.

owned almost a third of market pigs produced nationally: Smithfield Foods/WH Group (22%) and Seaboard Foods (8%).[41]

Either way—whether farms are owned by, or in contract with, packers—petitioners' assertion that "sow farmers do not know where any particular pig's meat will be sold" is simply not reflective of today's swine industry.[42] Packers make their specifications and expectations about sow housing conditions and other matters abundantly clear to farmers, who have successfully met those demands for years.

After the packing plant, pork products are distributed to a range of sellers and customers, including grocery stores, restaurants, hotels, schools, and other food service outlets. In some instances, packers contract directly with retailers to provide pork products for later sale.[43] In other contexts, packers sell products to wholesale distribution companies like Sysco, one of North America's largest foodservice distributors. These distributors then sell the products to

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[41] Betsy Freese, *Pork Powerhouses 2020: Backing Up*, Successful Farming (Oct. 7, 2020), https://tinyurl.com/243xhd34.

[42] *See* Pet. Br. 16.

[43] *See, e.g.,* Global Ag Media, *JBS Plants Across North America and Australia Reopen*, The Pig Site (June 3, 2021), https://tinyurl.com/2p8p2xpc ("JBS sells beef and pork under the Swift brand, with retailers like Costco Wholesale Corp carrying its pork loins and tenderloins.").

retailers and other providers for later sale to the consumer.[44]

Throughout the supply chain, tracing and segregation play an important role for both meeting customer demand and providing safe pork products.

II. The Pork Industry Has Long Traced Product From Farm To Retail Sale And Successfully Segregated Supply Chains.

Traceability in the food industry means the creation of "an information trail that follows [a food] product's physical trail."[45] A strong traceability system has the ability to: (1) identify a specific animal product; (2) track an animal product from its origin to the end of the supply chain (i.e., delivery of the product to the consumer); and (3) verify the animal's origin and the production process that got it from its origin to the consumer.[46]

A. The pork industry has traced individual pigs since at least the early 1900s.

Tracing in the pork industry has always involved being able to identify the source of a particular pig. This started with a crude system of ear notches and has evolved into a highly sophisticated system of

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[44] *See* Pig Progress, *Foodservice Distributor Sysco Says No to Sow Stalls* (July 24, 2012), https://tinyurl.com/57vxs75n.

[45] G.C. Smith et al., *Traceability from a US Perspective*, 71 Meat Science 174, 175 (2005), https://tinyurl.com/2nzcskks.

[46] *See id.* at 176-77.

tracing individual pigs from birth through all stages of the production process.

One of the earliest systems of tracing was **ear notching**. Ear notching is a system of incisions on both ears of a pig, usually done soon after birth. Ear notching provides a "permanent method of pig identification" from birth to slaughter.[47] The Universal Ear-Notching System dates back to at least the early 1900s.[48] Through ear notching, a farmer can identify both specific pig litters as well as the individual pigs within a litter.[49]

Farmers also use **tags** to identify pigs. Tags are plastic or metal discs applied to pigs' backs or ears. These tags allow for the identification of specific animals through USDA-approved identification numbers, including identification of animal-specific data, such as the conditions in which the animal was bred and raised.

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[47] Matthew Newman, *I'm All Ears – Understanding the Universal Ear-Notching System for Swine*, Rutgers 4-H Animal Science Resource Blog (July 14, 2019), https://tinyurl.com/22mr372t.

[48] *Id.*; *see also* F. Madec, et al., *Traceability in the Pig Production Chain*, 20(2) Rev. Sci. Tech. 523, 534 (2001), https://tinyurl.com/eetmbuws.

[49] Newman, *supra* note 47.

Here is an example of an ear tag[50]:

While ear notching and basic plastic tags are still in use, larger farms as well as those producing pigs for specialty markets have adopted newer technology for tracking pigs.

Radio Frequency Identification (RFID) technology allows a farmer to attach an electronic ear tag to a pig that can "store and track information through a database using a readable scanner."[51]

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[50] National Swine Registry, *Official Swine Ear Tags*, https://tinyurl.com/y53zmkmc (last visited Aug. 2, 2022).

[51] *Id.*; *see also* Brian Strobel, *RFID Improves Production of Breeding Sows* 8-12, Resource (July/Aug. 2021), https://tinyurl.com/3zfc7k8e.

Here is an example of RFID ear tags applied to young piglets[52]:

One of the most common uses of electronic ear tags is for managing the feeding of sows.[53] Farmers input information about specific pigs, including medical or housing information, using mobile or computer

[52] Emmy Koeleman, *Extra B Vitamins Profits Pig Performance*, All About Feed (Apr. 9, 2017), https://tinyurl.com/ystftr43.

[53] Aerin Einstein-Curtis, *Electronic Feeding Systems Limit Feed Waste, Localize Sow Nutrition*, FeedNavigator (Nov. 21, 2019), https://tinyurl.com/yc2shrtz; *see also* Pet. App. 272a ("[E]ach sow is given an electronic tag that records how much feed she needs based on her stage of pregnancy and her body condition. The sow will walk into what looks like a stall to receive her feed, and a hydraulic gate will close behind her. Reading her tag number, the system will meter the proper amount of food for the sow ….").

applications.[54] Sows enter a feeding station with an antenna that "reads" the electronic ear tag.[55] Based on preset instructions captured from the ear tag for each individual sow, a certain amount of food is provided for the sow to eat.[56] After the sow exits the feeding station, another sow is allowed to enter.[57]

RFID tags can be updated throughout a pig's life with extremely detailed information about the pig. For example, "identification tags … provide each animal's farrowing data."[58] RFID ear tags also allow farms to store information such as the pig's "father, mother, date of birth and weight, … performance and vaccinations."[59] Given RFID tags' ability to track and maintain such detailed information across a pig's life cycle and the slaughter process, it is a well-accepted industry practice to use RFID tags to trace and segregate pigs raised for specialty markets, such as pork products certified to have never received food additives or to never have been housed in gestation or farrowing crates.

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[54] *See, e.g.,* Allflex, *User Manual, RS420NFC Portable Stick Reader with NFC Feature* 8, https://tinyurl.com/yejwze46 (last visited Aug. 2, 2022).

[55] Illinois Pork Producers Ass'n, *Inside A Pig Barn – Electronic Sow Feeders*, YouTube 00:01:25 (June 12, 2017), https://tinyurl.com/352kw8v6.

[56] *Id.*

[57] *Id.*

[58] Pet. App. 304a.

[59] Roxell*, Market Trend: RFID Chip Revolutionizes the Pig Sector* (Nov. 2, 2020), https://tinyurl.com/2huw5ffw.

Tattoos are also placed on pigs soon after birth and provide another permanent system of identification throughout the pig's life cycle.[60]

Even more advanced technology is used to trace individual pigs. **Biometrics**, such as DNA fingerprinting, use an animal's own DNA code or other biological marker to identify the specific animal and the products derived from it, allowing "meat to be traced with 100% precision" without the need for extensive documentation throughout the supply chain.[61] Some pork producers and retailers have also adopted **blockchain technology** to "provide real-time traceability throughout the supply chain."[62] Blockchain "stores transactional information," so that every step in the supply chain for pork production can be captured in a trusted and unalterable record for later verification and tracking.[63]

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[60] Palmer J. Holden & M.E. Ensminger, *Swine Science* 364 (7th ed. 2005).

[61] Smith, *supra* note 45, at 178.

[62] JD.com, *Walmart, JD.com, IBM and Tsinghua University Launch a Blockchain Food Safety Alliance in China* (Dec. 14, 2017), https://tinyurl.com/5hbmad8b.

[63] Mireille van Hilten, Guido Ongena, & Pascal Ravesteijn, *Blockchain for Organic Food Traceability: Case Studies on Drivers and Challenges*, Frontiers in Blockchain (Sept. 30, 2020), https://tinyurl.com/zwstbvcx.

B. Tracing and segregation also occur once pigs are ready for slaughter and turned into pork for retail sale.

When pigs arrive at a slaughterhouse, packers continue to identify and trace "group[s] or individual animals with their meat products."[64] Tattoos—which remain on a carcass during the entire slaughtering process—are commonly used. These tattoos correspond to a coding system that allows the packing plant to identify the origin of an individual pig or carcass throughout the production and slaughter process.[65] Using tattoos, every pig that will be slaughtered can "be traced back through the entire system," from farm to "the finished product."[66]

The production of premium pork products also offers an example of existing segregation and tracing methods. When meat will be labeled "certified organic," for example, packers use a range of approaches to segregate the meat from non-organic products. These techniques include: isolating incoming animals in separate pens for processing; sequencing slaughtering and processing of animals at specified times of day or during the week separate from other animals; and using ear tags to track

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[64] Elise Golan et al., U.S. Dep't of Agric., Econ. Rsch. Serv., AER 830, *Traceability in the U.S. Food Supply: Economic Theory and Industry Studies* 32 (2004), https://tinyurl.com/bdcpdrsz.

[65] *Fresh Pork Production at Smithfield Foods*, *supra* note 28, at 00:00:15.

[66] *Id.*; Elizabeth Cox, *Lessons About Proposition 12 from Recent Pork Producer Visits*, Cal. Dep't of Food & Agric. 3 (July 2022), https://tinyurl.com/4bn9af64.

incoming animals and segregate them.[67] Throughout processing, record keeping allows for continued tracing of each individual animal, such as on carcass trolleys or on barcodes where meat is placed in bins for movement through the packing plant.[68] Through these systems, individual pigs can be identified from their arrival to the packing plant to the packing of their meat products for eventual sale.

Segregation and tracing within a packing facility are especially accessible in the pork industry given the vertical coordination of farms, contractors, and producers. Pig farms make agreements with contractors, who are often packers, to supply particular types of pigs for specific uses and markets.[69] Because packers can schedule in advance what types of pigs are arriving at their facilities at any given time, "the batches of the products produced from segregated carcasses are segregated throughout the production chain."[70]

III. The Traceability And Segregation Of Pork Product Meet Critical Needs Of Pork Producers And Consumers.

The segregation and tracing described above allow producers to comply with public health and food

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[67] Niche Meat Processor Assistance Network, *Certified Organic*, https://tinyurl.com/4ffv5cu6 (last visited Aug. 2, 2022).

[68] *See id.; see also* Golan, *supra* note 64, at 32.

[69] Madec, *supra* note 48, at 534.

[70] *Id.* at 534-35.

safety requirements, meet consumer demand, and market their products accurately.

Tracing and segregation are necessary for a rapid response to disease outbreaks. "Pigs are susceptible to many different diseases."[71] Thus, pork is a common source for foodborne-related disease outbreaks in the United States.[72] Both the USDA and the National Pork Board mandate careful tracing of pigs to prevent and mitigate disease outbreaks. As the USDA explained, "[a] comprehensive animal disease traceability system is [the pork industry's] best protection against a devastating disease outbreak."[73] The USDA has therefore "committed to implementing a modern system that tracks animals from birth to slaughter using affordable technology that allows for quick tracing of sick and exposed animals to stop disease spread."[74] Since 2013, the USDA has required that any pig sent over state lines must be traceable to a specific farm or other livestock facility where it originated.[75]

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[71] Pork Checkoff, PQA Plus, *Education Handbook* 7 (2022), https://tinyurl.com/yw6s2rnb.

[72] Elizabeth Pratt, *Why Are Disease Outbreaks from Pork Products on the Rise?*, Healthline (Oct. 11, 2017), https://tinyurl.com/6tn5shvp.

[73] U.S. Dep't of Agric., Animal & Plant Health Inspection Serv., *Animal Disease Traceability* (June 14, 2022), https://tinyurl.com/mtecbjvy.

[74] *Id.*

[75] 9 C.F.R. §§ 86.2-.5, *id.* § 71.19.

Just this year, the National Pork Board announced a national tracing strategy to prevent and prepare for foreign animal disease. Key to the strategy will be adopting AgView, "a free, pig contact-tracing platform developed for producers."[76] Using the AgView application, pork producers provide information on the type of farm they have, the number of pigs, where pigs are located, animal movements in-state and out-of-state, and lab results from foreign animal disease testing.[77] As the National Pork Board's Acting Chief Veterinarian explained, AgView "makes disease traceback and pig movement data available to the USDA and state animal health officials on day one of a [foreign animal disease] outbreak."[78] He stated that, "[f]or the U.S. pork industry, AgView is the path to protection for America's pig farms that will help navigate uncertainty in the event of a crisis."[79]

Tracing and segregation are necessary to meet consumer demands. Growing consumer demand for premium pork products, such as "crate-free, beta-agonist-free, organic, and antibiotic-free" meat, has led pork producers to evolve their production

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[76] Jennifer Shike, *National Pork Board CEO Addresses 2022 Priorities*, Farm Journal (Jan. 4, 2022), https://tinyurl.com/yabpefy5.

[77] AgView, *Frequently Asked Questions*, https://tinyurl.com/3dvsxvsz (last visited Aug. 2, 2022).

[78] Jennifer Shike, *Why the U.S. Pork Industry Won't Forget 2021*, Farm Journal (Dec. 15, 2021), https://tinyurl.com/yc73zxja.

[79] *Id.*

practices.[80] "[F]armers and processors have already been tracing product from sow farm to end-product for years in order to market and sell premium pork products (such as 'crate-free' pork)."[81]

The USDA's Process Verified Program is the leading certification system for marketing this premium pork. The Process Verified Program has stringent requirements for segregating and tracing pork. For example, packers may wish to market pork products as "Never Fed Beta Agonists." Beta Agonists are a class of feed additives that "increase [the] growth rate] of [pigs]," and some consumers will pay more for meat from pigs who have not been fed these additives.[82] In order to label the pork as "Never Fed Beta Agonists," packers must ensure that farmers segregate "live animals that have been fed beta agonists from those that have not" and create a documented product identification system.[83] In this way, "Never Fed Beta Agonists" pork products are "traceable throughout production" from farm to sale.[84] USDA's Process Verified Program also requires the creation of verification

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[80] *See* U.S. Dep't of Agric., Agric. Mktg. Serv., *Livestock Mandatory Reporting: Report to Congress* 17 (2018), https://tinyurl.com/2p8awn7w.

[81] Cox, *supra* note 66.

[82] Lindsay Chicester, Heather DePra, & Galen Erickson, *Beta-agonists: What Are They and Should I Be Concerned?*, Univ. of Nebraska-Lincoln BeefWatch (Oct. 1, 2013), https://tinyurl.com/3awcnv4y.

[83] U.S. Dep't of Agric., Agric. Mktg. Serv., *Quality Systems Verification Program (QSVP) Never Fed Beta Agonists Program* 2-3 (2019), https://tinyurl.com/yckkk34y.

[84] *Id*. at 3.

testing to confirm that beta agonists were never provided.[85]

Only after following the established guidelines may packers "use the USDA PVP [Process Verified Program] shield in accordance with Program requirements and market themselves as 'USDA Process Verified.'"[86] The Process Verified shield looks like this:

Many of the largest pork producers participate in the Process Verified Program, including Clemens Food Group, JBS, Seaboard Foods, Smithfield, and Tyson Fresh Meats.[87] For example, Smithfield, the largest pork producer in the country, may market its pork with the USDA Processed Verified shield and claim that "All Pigs are Traceable to Farm of

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[85] *Id.* at 2.

[86] U.S. Dep't of Agric., Agric. Mktg. Serv., *Process Verified Program,* https://tinyurl.com/ycxmjjyj (last visited Aug. 2, 2022).

[87] *See* U.S. Dep't of Agric., Agric. Mktg. Serv., *PVP Directory*, https://tinyurl.com/3wdv8hn4 (last visited Aug. 2, 2022).

Origin."[88] It advertises that its pork is "USDA Process Verified" on its website and on some of its labels:[89]

Seaboard Foods satisfied the USDA's requirements for "Source Verification – Pork products can be traced back to source farms through a source verification system."[90]

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[88] U.S. Dep't of Agric., *Official Listing of Approved USDA Process Verified Programs* 55 (2022), https://tinyurl.com/npwfer5b.

[89] Smithfield, *Why Smithfield?*, https://tinyurl.com/385rpx2d (last visited Aug. 2, 2022); *see also* Robin-Wright.com, *Balsamic Pork Tenderloin with Roasted Brussels Sprouts and Shallots and Mashed Potatoes* (Nov. 18, 2015), https://tinyurl.com/5n8bb59n.

[90] U.S. Dep't of Agric., Agric. Mktg. Serv., *Seaboard Foods Process Verified Program*, https://tinyurl.com/4pmkpwmb (last visited Aug. 2, 2022).

Seaboard Foods also markets its pork with the USDA Process Verified shield:[91]

The USDA's Process Verified Program is just one program geared toward certifying marketing claims. Under the Federal Meat Inspection Act, the Food Safety and Inspection Service (FSIS) must approve product labels with animal-raising claims before they are sold to ensure that they are truthful and not misleading.[92] These include animal welfare and

[91] BBQ All Stars, *Prairie Fresh USA Prime® Pork Butts*, https://tinyurl.com/52yc5k6h (last visited Aug. 2, 2022) (picture enlarged for readability).

[92] *See* 21 U.S.C. § 607(d); 9 C.F.R. § 412.1(c)(3) & (e).

environmental claims, such as "Humanely Raised, Sustainably Farmed, and Raised with Environmental Stewardship."[93]

For example, the agency requires that pork producers verify claims regarding the "environment in which [pigs] were raised during their lifespan," such as a claim that a pork product is "Crate Free,"[94] like this example from Perdue Farms' Coleman Natural Foods:[95]

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[93] U.S. Dep't of Agric., Food Safety and Inspection Serv., *Labeling Guideline on Documentation Needed to Substantiate Animal Raising Claims for Label Submissions* 7 (2019), https://tinyurl.com/bdfrdyav.

[94] *Id.* at 10.

[95] Perdue Farms, *Crate-Free Pork: What Crate-Free Means*, Pinterest, https://tinyurl.com/23nbpsxh.

"Crate free" pork generally means that neither the pig, nor its parents, were housed in gestation crates or farrowing crates.[96] FSIS will only approve a crate-free label after the producer provides documentation describing the controls it uses to ensure animals are raised according to this claim, including "the product tracing and segregation mechanism from time of slaughter or further processing through packaging and wholesale or retail distribution" and "a written description of the identification, control, and segregation of non-conforming animals/product."[97] Here is an example of crate-free pork sausage from Perdue Farms' Coleman Natural Foods ®[98]:

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[96] Animal Welfare Institute, *A Consumer's Guide to Food Labels and Animal Welfare*, https://tinyurl.com/3eyazd4f (last visited Aug. 2, 2022).

[97] *Labeling Guideline*, *supra* note 93, at 10-11.

[98] Coleman Natural Foods, *Uncured Smoked Polish Kielbasa,* https://tinyurl.com/3npctv7k (last visited Aug. 2, 2022) (picture enlarged for readability).

"Crate-Free" is just one claim that must be approved by the FSIS. Others include living- and raising-conditions claims like Free Range, Not Confined, Free Roaming, Pasture Fed, Pasture Grown, Meadow Raised, and Pasture Raised.[99] Labeling meat with any of those claims requires tracing and segregation from the farm of origin to the point of sale.

Tracing and segregation are necessary to meet retailer demands. Numerous large food companies, retailers, and packers have also insisted that producers adhere to strict segregation and tracing protocols to ensure that they are making accurate claims to consumers about the pork they are sourcing.

There are many examples. Target committed to eliminating gestation-crated pork from its supply chain in 2012.[100] The company projects that by September 2022, the majority of all fresh pork sold at Target will be produced from open pen gestation systems.[101] Marriott International has encouraged its suppliers to "grow their supply of gestation crate-free and group-housed pork," and as of year-end 2019 "8.4% of pork purchased by hotels in the U.S., Canada, [the Caribbean, and Latin America] was classified as either gestation crate-free or group-housed."[102]

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[99] *Labeling Guideline, supra* note 93, at 10.

[100] Target, *Food Animal Welfare Commitments*, https://tinyurl.com/2p8fxmxe (last visited Aug. 2, 2022).

[101] *Id.*

[102] Marriott International, *2020 Serve 360 Report: Sustainability and Social Impact at Marriott International* 25, 54 (2020), https://tinyurl.com/yvecabys.

In 2012, Sodexo announced that it would phase out the use of gestation crates among its pork suppliers by 2022, and required increased tracing throughout its supply chain.[103] By May 31, 2020, "24% of [Sodexo's] pork came from traceable reduced crate supply chains, and a small amount from completely crate-free operations."[104] Restaurant Brands International Inc. (RBI), which owns Burger King, has eliminated the use of gestation crates in its European and African markets, and expects gestation crates will be removed from its U.S., Canada, Australia, and New Zealand markets in the near future.[105] Whole Foods has "prohibited the use of gestation and farrowing crates by all of [its] pork suppliers since 2003."[106] The Cheesecake Factory expects to transition "75% of [its] pork supply to crate-free by the end of 2022."[107] Chipotle refuses to serve pork from suppliers that use gestation crates,[108] and recently announced an

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[103] Sodexo, *Update on Animal Welfare in Our Responsible Sourcing Strategy* (Dec. 31, 2020), https://tinyurl.com/2p8de5h6.

[104] *Id.*

[105] Restaurant Brands International Inc., *Animal Health & Welfare*, https://tinyurl.com/5n7s8w55 (last visited Aug. 2, 2022).

[106] Frances Flower, *No Gestation Crates for Our Pigs*, Whole Foods Market (Mar. 22, 2012), https://tinyurl.com/4fjarm9u.

[107] The Cheesecake Factory, *2021 Corporate Social Responsibility Report* 35, https://tinyurl.com/bdhdzvra (last visited Aug. 2, 2022).

[108] Candice Choi, *Chipotle: No Pork at a Third of Restaurants*, Associated Press (Jan. 13, 2015), https://tinyurl.com/mttm3ntz.

investment in RFID technology to better trace source ingredients.[109]

All of these examples show that segregation and tracing are a reality in the modern pork market.

IV. The Pork Industry Can Use Existing Tracing And Segregation Methods To Supply Prop 12-Compliant Pork.

Existing animal identification systems—such as RFID ear tagging—can be used to identify specific pigs and store information on whether the pig's mother was housed in a manner consistent with Prop 12.

As described above, ear tags are already used to identify individual pigs, their health history, feeding history, and interstate movement.[110] These tags already capture information relevant to specialty products like "grass-fed" or "hormone free," as well as information about humane farming practices, like a pig's mother's housing, for "crate-free" pork.[111]

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[109] Chipotle*, Chipotle Tests RFID Technology for Traceability* (Mar. 31, 2022), https://tinyurl.com/226sj2x3.

[110] *See* U.S. Dep't of Agric., Animal and Plant Health Inspection Serv., *Official Eartags: National Uniform Eartagging System* (June 25, 2018), https://tinyurl.com/5czt7c3x.

[111] *See* Greg Krahn, *Precision Technology's Role in R&D*, Nat'l Hog Farmer (Apr. 1, 2021), https://tinyurl.com/yc6f45yd ("Through tracking and verification, improvements in swine welfare can be made and will meet future pork production stakeholders and consumer expectations. Development and implementation of these technologies improves the transparency

Tracking Prop 12-compliant pork using RFID ear tags, and even other lower-tech tracing methods like tattoos, would be an exceedingly minor adjustment to the data already tracked by the pork industry, and would not be a substantial burden on interstate commerce.

Once data on Prop 12 compliance is associated with a particular pig, it is entirely possible to segregate that pig from others. Many pig farmers already segregate pigs under contracts with packers and others to meet the needs of specific market segments.[112] These same approaches will allow farmers to separate and trace Prop 12-compliant litters.[113]

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and overall sustainable future of animal agriculture."); *see also* Joel L. Greene, Cong. Rsch. Serv., R40832, *Animal Identification and Traceability: Overview and Issues* 7 (2010), https://tinyurl.com/ye75d6b5 ("When consumers seek meat, eggs, or milk from animals raised according to specified organic, humane treatment, or environmental standards, ID and traceability can help firms verify production methods.").

[112] Madec, *supra* note 48, at 534 ("A growing number of pork producer networks…have, as a rule, a partnership with the slaughter/processing company that separates the pigs for the [program] in question by groups.").

[113] Petitioners are incorrect in suggesting that tracing Prop 12-compliant pork "would involve knowing" how each breeding sow "was housed at all times," throughout its entire life. Pet. Br. 16-17 n.7. While current technology would surely allow for processing and storage of that information, pork is compliant with Prop 12 if it is derived from the offspring of sows that were provided sufficient space during a specific production cycle. Cal. Dep't of Food & Agric. Animal Health & Food Safety Servs., Proposed Regulations Animal Confinement 35 (May 28, 2021),

Similarly, packers' existing processes of identifying groups and individual pigs for slaughter—including carcass tagging, tattoos, and trolley tracking—can be leveraged to both trace and segregate Prop 12-compliant meat products at the packing facility. Today, packing facilities already have processes to associate ear tags and other physical identifiers, like tattoos, from slaughter to the packaging of the finished product, allowing tracing even for particular cuts of pork.

All stakeholders in the supply chain can thus capture and track Prop 12-compliant pork throughout a pig's life cycle. Indeed, it is possible through tattoos used in packing plants for producers to identify from a single cut of meat all available data about that product, including the breeding farm where the pig was born and the housing system used for sows at that farm.[114]

Newer technological advances like blockchain technology offer even more possibilities for efficiently identifying and tracking individual pigs and pork products. Walmart's recent blockchain pilot illustrates how Prop 12-compliant pork could be traced across the supply chain. In partnership with IBM, Walmart announced a project in October 2016 to "trace pork sold in its China stores" and "the origin of mangos sold in Walmart's US stores" using

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https://tinyurl.com/4zdp4jsb; *see id.* at 33 ("A new production cycle for sows begins when each litter of piglets is weaned.").

[114] *See, e.g., Fresh Pork Production at Smithfield Foods*, *supra* note 28, at 00:00:15.

blockchain technology.[115] In 2011, China experienced "massive pork mislabeling," where pork products labeled "organic" actually were just regular pork.[116] The blockchain pilot created a web-based interface to track barcodes and labels that were uploaded to the system by suppliers at different stages in the supply chain.[117] The new system allowed Walmart to trace "[i]nformation about farm origination, batch numbers, processing data, soil quality and fertilizers, and even storage temperatures and shipping details" that could "be uploaded on an e-certificate and linked to the product package via a QR code."[118] The pilot also "reduced time for tracking mango origins from seven days to 2.2 seconds."[119] Wendy's is also "test[ing] the use of blockchain technology to track and trace some of [its] Applewood Smoked Bacon through every step of the supply chain."[120]

It is therefore not surprising that major pork producers, including some of the country's largest

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[115] Hyperledger, *How Walmart Brought Unprecedented Transparency to the Food Supply Chain with Hyperledger Fabric* 4 (2019), https://tinyurl.com/yckjfewk.

[116] Reshma Kamath, *Food Traceability on Blockchain: Walmart's Pork and Mango Pilots with IBM*, 1 J. Brit. Blockchain Ass'n 47, 47 (June 12, 2018), https://tinyurl.com/2n7jjy94.

[117] Hyperledger, *supra* note 115, at 5; *see also* Melanie Lee, *Wal-Mart's Pork Scandal Highlights Struggles in China*, Reuters (Oct. 14, 2011), https://tinyurl.com/2fzjcxuk.

[118] Kamath, *supra* note 116, at 49.

[119] *Id.* at 47.

[120] Wendy's, *2020 Corporate Responsibility Report* 15 (2021), https://tinyurl.com/y5f4tddy.

packers, have already explained that existing traceability systems can be used to produce and supply Prop 12-compliant pork. Hormel Foods confirmed it "is currently working with its supply chain to implement internal processes for segregation" of Prop 12-compliant pork.[121] The company expects "a full range of compliant products to be available in both retail and foodservice."[122] Perdue Farms' Sioux-Preme Packing Company "has prepared its packing facilities to segregate California compliant pork to the extent any of its producers require packing for California bound pork after January 1, 2022."[123] JBS, Premium Iowa Pork, and Smithfield have "demonstrated their commitment to production of Prop 12-compliant pork," including through the use of segregation and tracing.[124]

Numerous other pork producers and processors have also said that their existing systems will allow them to trace and segregate Prop 12-compliant pork in some fashion, including: Clemens Food

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[121] Hormel Foods, *Hogs*, https://tinyurl.com/ycy39pd5 (last visited Aug. 2, 2022).

[122] *Id.*

[123] Memorandum of *Amicus Curiae* Perdue Premium Meat Co. at 9, *Iowa Pork Producers Ass'n v. Bonta*, No. 3:21-cv-3018 (N.D. Iowa Aug. 4, 2021), ECF No. 57.

[124] Cox, *supra* note 66, at 1-2.

Group/Hatfield,[125] Coleman,[126] duBreton,[127] Tyson Foods,[128] North Country Smokehouse,[129] Seaboard,[130] and Vande Rose Farms.[131]

Given existing technologies and processes, pork producers and others throughout the supply chain can trace and segregate Prop 12-compliant pork without any substantial burden or expense.

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[125] Hatfield, *A Higher Standard of Animal Care*, https://tinyurl.com/yc3vf58v (last visited Aug. 2, 2022).

[126] Coleman Natural Foods, *Frequently Asked Questions: Claims & Certifications: Is Coleman Natural Pork Proposition 12 and Question 3 Compliant?*, https://tinyurl.com/mryt4xxy (last visited Aug. 2, 2022).

[127] Swineweb, *New Hampshire's North Country Smokehouse: Making Prop 12 Compliant Pork Accessible* (Sept. 21, 2021), https://tinyurl.com/ye2y4hth.

[128] *See* Tyson Foods, *Third Quarter 2021 Earnings* 15 (2021), https://tinyurl.com/3wby2y5s.

[129] North Country Smokehouse*, Prop 12 Compliant Bacon for Foodservice Professionals*, https://tinyurl.com/npp2kyj2 (last visited Aug. 2, 2022).

[130] Tom Polansek, *U.S. Pork Producer to Resume Shipments to California After Farm Animal Law Delayed*, Reuters (Feb. 8, 2022), https://tinyurl.com/bde2mayy ("Seaboard said it is converting some farms to comply with the law and expects to have pork for sale to California this year that complies with Proposition 12.").

[131] Vande Rose Farms, LinkedIn, https://tinyurl.com/5n8ptnfb (last visited Aug. 2, 2022).

CONCLUSION

For the foregoing reasons, this Court should affirm the judgment of the court of appeals.

Respectfully submitted,

Melanie R. Hallums
Emanuel Powell
ORRICK, HERRINGTON & SUTCLIFFE LLP
1152 15th Street N.W.
Washington, D.C. 20005

Elizabeth R. Moulton
Counsel of Record
ORRICK, HERRINGTON & SUTCLIFFE LLP
405 Howard Street
San Francisco, CA 94105
(415) 773-5700
emoulton@orrick.com

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