How Cities Are Responding to the Urban Agriculture Movement with Micro-Livestock Ordinances

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I. The Food Movement and Urban Agriculture: The Popularity and Mainstreaming of Urban Animal Husbandry

RAISING LIVESTOCK IS INCREASINGLY BECOMING an urban phenomenon. Books helping people to grow more of their own food in the city, often called "urban homesteading," have blossomed in the past few years. While many of these guides concern vegetable gardens, there are also books targeted to keeping goats on city-sized lots and keeping bees on rooftops and backyard balconies.[1] There are numerous books about raising backyard chickens, including installments in the popular Dummies series—*Raising Chickens for Dummies*.[2] And, many, many books are designed to help people grow more of their own food by creating an urban homestead. *Backyard Homesteading*[3] and *Your Farm in*

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1. *E.g.*, KIM FLOTTUM, THE BACKYARD BEEKEEPER-REVISED AND UPDATED: AN ABSOLUTE BEGINNER'S GUIDE TO KEEPING BEES IN YOUR YARD AND GARDEN (2010); JENNIE PALCHES GRANT, CITY GOATS: THE GOAT JUSTICE LEAGUE'S GUIDE TO BACKYARD GOAT KEEPING (2012).

2. KIMBERLY WILLIS & ROB LUDLOW, RAISING CHICKENS FOR DUMMIES (2009). *See*, *e.g.*, JIM KILPATRICK, BEGINNER'S BACKYARD CHICKENS: THE RIGHT WAY TO CHOOSE THE BEST CHICKEN BREEDS, COOPS AND FEEDS. START RAISING AND CARING FOR CHICKENS LEGALLY IN CITY OR SUBURBS TODAY! (2013); HARVEY USSERY, THE SMALL-SCALE POULTRY FLOCK (2011); GAIL DAMEROW, STOREY'S GUIDE TO RAISING CHICKENS (3d. Ed. 2010).

3. DAVID TOHT, BACKYARD HOMESTEADING: A BACK-TO-BASICS GUIDE TO SELF-SUFFICIENCY (2011). *See, e.g.,* ABIGAIL R. GEHRING, HOMESTEADING: A BACKYARD GUIDE TO GROWING YOUR OWN FOOD, CANNING, KEEPING CHICKENS, GENERATING YOUR OWN ENERGY, CRAFTING, HERBAL MEDICINE, AND MORE (2011); NOVELLA CARPENTER & WILLOW ROSENTHAL, THE ESSENTIAL URBAN FARMER (2011); DEANNA CASWELL & DAISY SISKIN, LITTLE HOUSE IN THE SUBURBS: BACKYARD FARMING AND HOME SKILLS FOR SELF-SUFFICIENT LIVING (2012); THOMAS FOX, URBAN FARMING, SUSTAINABLE CITY LIVING IN YOUR BACKYARD, IN YOUR COMMUNITY, AND IN THE WORLD (2011); GAIL DAMEROW, THE BACKYARD HOMESTEAD GUIDE TO RAISING YOUR OWN FARM ANIMALS (2011); RACHEL KAPLAN & K. RUBY BLUME, URBAN HOMESTEADING, HEIRLOOM SKILLS FOR SUSTAINABLE LIVING (2011); SUNDARI ELIZABETH KRAFT, THE COMPLETE IDIOT'S GUIDE TO BACKYARD HOMESTEADING (2011); CARLEEN MADIGAN, THE BACKYARD HOMESTEAD (2009).

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the City,[4] for example, include guidance on keeping forms of livestock that many urban homesteaders agree can be especially well-suited to city life: chickens, goats, and bees.

The popularity of these books does not exist in a vacuum. They are a reflection of an expanding group of people who want to grow and raise more of their own food, but want to do so without leaving their homes in the city. The growing interest in producing one's own food can be tied to what Michael Pollan has deemed the "food movement."[5] Michael Pollan, an instigator, catalyst, and documentarian of this movement, states that the food movement is about more than just eating:

> What is attracting so many people to the movement today (and young people in particular) is a much less conventional kind of politics, one that is about something more than food. The food movement is also about community, identity, pleasure, and, most notably, about carving out a new social and economic space removed from the influence of big corporations on the one side and government on the other.[6]

Pollan notes that the movement has many facets, from national agricultural issues like advocating for organic food and against genetically modified food, to regional and local issues like increasing availability and access to local food through farmers' markets and community gardens.[7] Although the food movement has many facets, one of the basic tenets of the food movement is dissatisfaction with our current industrialized food system and a desire to increase the connection between eaters and growers of food.[8] There is no closer connection than for the eater and the grower to be the same person.

4. LISA TAYLOR & THE GARDENERS OF SEATTLE TILTH, YOUR FARM IN THE CITY: AN URBAN-DWELLER'S GUIDE TO GROWING FOOD AND RAISING ANIMALS (2011); *see also* KIMBERLY HODGSON, MARCIA CATON CAMPBELL, & MARTIN BAILKEY, URBAN AGRICULTURE: GROWING HEALTHY SUSTAINABLE PLACES (2010); JANINE DE LA SALLE & MARK HOLLAND, AGRICULTURAL URBANISM, HANDBOOK FOR BUILDING SUSTAINABLE FOOD & AGRICULTURAL SYSTEMS IN 21ST CENTURY CITIES (2010).

5. Michael Pollan, *The Food Movement, Rising*, THE NEW YORK REVIEW OF BOOKS, June 10, 2010, http://www.nybooks.com/articles/archives/2010/jun/10/food-movement-rising/?pagination=false; *see also* Rebecca Solnit, *Revolutionary Plots*, ORION MAG., http://www.orionmagazine.org/index.php/articles/article/6918; TANYA DENCKLA COBB, RECLAIMING OUR FOOD: HOW THE GRASSROOTS FOOD MOVEMENT IS CHANGING THE WAY WE EAT (2011); AMY FRANCIS, THE LOCAL FOOD MOVEMENT (2010); MATTHEW REED, REBELS FOR THE SOIL: THE RISE OF THE GLOBAL ORGANIC FOOD AND FARMING MOVEMENT (2010); CARLO PETRINI, TERRA MADRE, FORGING A NEW GLOBAL NETWORK OF SUSTAINABLE FOOD COMMUNITIES (2010); ROBERT GOTTLIEB & ANUPAMA JOSHI, FOOD JUSTICE (2013); SANDOR ELLIX KATZ, THE REVOLUTION WILL NOT BE MICROWAVED: INSIDE AMERICA'S UNDERGROUND FOOD MOVEMENTS (2006).

6. Pollan, *supra* note 5.

7. *Id.*

8. *Id.*

While having a closer connection to their food is a central reason why people seek to raise livestock in the city, other concerns central to the food movement also contribute to the decision to raise livestock in the city. These include the sustainability of our current food system,[9] the cruel and inhumane treatment that many animals being raised for food experience,[10] the safety of eating those animals,[11] and food security.[12]

Much of the dissatisfaction with the industrialized food system concerns the methods we are increasingly using to raise livestock for food. Popular books like Michael Pollan's *The Omnivore's Dilemma*[13] and Eric Schlosser's *Fast Food Nation*,[14] as well as documentaries like *Food, Inc*.,[15] have introduced to a popular audience the conditions under which many animals are raised for meat, milk, and eggs. Pollan, in the *Omnivore's Dilemma*, chronicles how the overproduction of corn has led to a host of environmental and sustainability issues, including the inhumane treatment of livestock.[16] The United States' current agricultural policy has led to growing crops like corn and soy beans in a monoculture environment, heavily dependent on petroleum-based fertilizer, herbicides, and pesticides that are toxic to the local wildlife.[17] Overproduction of corn has led to its use as

9. *See id.; see also infra* note 14.
10. *See infra* note 13.
11. *See infra* notes 13-14.
12. *See infra* note 13.
13. MICHAEL POLLAN, THE OMNIVORE'S DILEMMA: A NATURAL HISTORY OF FOUR MEALS (2007).
14. ERIC SCHLOSSER, FAST FOOD NATION: THE DARK SIDE OF THE ALL-AMERICAN MEAL (2005).
15. FOOD, INC. (Magnolia Pictures et al. 2008).
16. POLLAN, *supra* note 13, at 315-19.
17. *Id.* at 45-47, 214*; see also* John M. Pleasants & Karen S. Oberhauser, *Milkweed Loss in Agricultural Fields because of Herbicide Use: Effect on the Monarch Butterfly Population*, INSECT CONSERVATION AND DIVERSITY (2012); NAT'L HONEYBEE HEALTH STAKEHOLDER CONFERENCE STEERING COMM., U.S. DEP'T OF AGRIC., REPORT ON THE NAT'L STAKEHOLDERS CONFERENCE ON HONEYBEE HEALTH 1, 16 (2012) ("There is a belief among beekeepers and researchers alike that land use patterns have changed to an extent where there is less forage available for honey bee colonies [and] research is beginning to look at ways to diversify the agricultural landscape to increase resource availability for pollinators." Further, "[a]cute and sublethal effects of pesticides on honey bees have been increasingly documented, and are a primary concern." NAT'L HONEYBEE COMM., *supra* note 17, at 6), *available at* http://www.mlmp.org/results/findings/pleasants_and_oberhauser_2012_milkweed_loss_in_ag_fields.pdf; Koen Mondelaers, Joris Aertsens, & Guido van Huylenbroeck, *A Meta-analysis of the Differences in Environmental Impacts between Organic and Conventional Farming*, 111 BRITISH FOOD JOURNAL 1098 (2009); Janne Bengsston, Johan Ahnstrom & Ann-Christian Weibull, *The Effects of Organic Agriculture on Biodiversity and Abundance: a Meta-analysis*, 42 J. OF APPLIED ECOLOGY 262 (2005).

feed for livestock, even though some livestock—including cows—are not meant to eat corn.[18] Such an unnatural food source may fatten them up quicker, but also makes them more susceptible to illness and disease.[19]

The abundance of corn, moreover, has led to keeping livestock in Controlled Animal Feeding Operations (CAFOs), where many animals are kept in tight quarters for their entire, short lives.[20] For instance, hens may be kept in battery cages with up to six chickens in a 12 by 18 inch cage with no access to sunlight or fresh air.[21] Because so many animals are kept in close quarters, many of them are fed antibiotics as a preventative measure to keep them from getting sick.[22] People can then become exposed to these antibiotics, and the antibiotic resistant bacteria, from eating chickens raised this way.[23]

In his book, *Fast Food Nation*, Eric Schlosser has documented abuses in how animals are slaughtered, showing that animals are slaughtered even when they are sick or unsuitable for consumption.[24] He has also shown that many jobs in the meatpacking industry have gone from being respectable, middle-class jobs to dangerous, minimum-wage jobs.[25] And Pollan has documented that the industrialization of our food system is unsustainable because it is so dependent on fossil fuels to grow, harvest, and transport food.[26]

Other concerns with the current food system stem from food security issues. Because our current food system is based on importing foods from faraway places,[27] there is a concern that if an extreme

18. POLLAN, *supra* note 13, at 65-85.
19. *Id.* at 70-79.
20. *Id.* at 68.
21. *Id.* at 321. *But see* Stephanie Strom, *Wishing They All Could Be California Hens*, N.Y. TIMES, Mar. 3, 2014 (explaining California legislation requiring larger cage requirements of 116 in^2 from the industry standard 67 in^2 for all vendors that wish to sell in state), *available at* http://www.nytimes.com/2014/03/04/business/theyre-going-to-wish-they-all-could-be-california-hens.html?_r=0.
22. POLLAN, *supra* note 13, at 78.
23. *See generally, e.g.,* Doug Gurian-Sherman, CAFOS UNCOVERED, THE UNTOLD COSTS OF CONFINED ANIMAL FEEDING OPERATIONS, UNION OF CONCERNED SCIENTISTS 5, 60-61 (Apr. 2008), *available at* http://www.ucsusa.org/assets/documents/food_and_agriculture/cafos-uncovered.pdf.
24. SCHLOSSER, *supra* note 14, at 170-201.
25. *See id.* at 178-90.
26. Pollan, *supra* note 5.
27. *E.g.*, JENNIFER COCKRALL-KING, FOOD AND THE CITY: URBAN AGRICULTURE AND THE NEW FOOD REVOLUTION 49-52 (2012); *Emergency Preparedness and Response*, CENTERS FOR DISEASE CONTROL (Dec. 4, 2014), http://emergency.cdc.gov/preparedness/kit/disasters/ ("If a disaster strikes your community, you may not have access to food, water, or electricity for some time"); *see also* EVAN D.G. FRASER & ANDREW RIMAS, EMPIRES OF FOOD: FEAST FAMINE AND THE RISE AND FALL OF CIVILIZATIONS

weather event or an act of terrorism disrupted the transportation system many cities would quickly run out of food.[28] Grocery stores operate on thin profit margins[29] and, through intelligent and exact calculations, do not seek to keep more food on hand than generally will be sold before it perishes.[30] Because of the way our current food system is structured, there is no more than a three- to four- day food supply in many cities at any one time.[31] In the case of a food supply disruption, there is concern that conditions could quickly lead to widespread famine.[32] Having one's own food source—even if it is only supplemental—can be viewed as a hedge against this possibility.

Another aspect of food security is retaining the diversity of our food sources. The conventional food system has turned livestock into a commodity—it often uses just one or only a few breeds of animal.[33] These animals have been bred to fatten quickly, give the most milk, or lay the most eggs—often at the expense of the health of the animal.[34] Other breeds are simply ignored. Thus, if a certain popular breed of animal (or vegetable or fruit for that matter) becomes susceptible to a certain disease, because of the similarity of the genetic background, the entire breed could be wiped out.[35] Retaining a broad diversity of animal breeds can keep the food system more secure by making sure that other breeds still exist if one were to be decimated or even become extinct due to genetic susceptibility.[36] It is the proverbial

(2010) (arguing that our global food supply system is harming the sustainability of our food supply and that we must return to more regional food-sheds to avoid the collapse of the industrial food empire).

28. COCKRALL-KING, *supra* note 27, at 29-31.

29. *Id.* at 30.

30. *Id.*

31. *Id.*

32. *See* Siddharta Mahanta, *Column: A Year After Sandy, food and fuel supplies are as vulnerable as ever,* CHICAGO TRIBUNE (Oct. 28, 2013), http://articles.chicagotribune.com/2013-10-28/news/sns-rt-us-column-sandy-20131028_1_hurricane-sandy-food-stores-gas-stations. *But see* Marcus Wohlsen, *How Store Shelves Stay Stocked Even After a Sandy-Sized Disaster*, WIRED (Nov. 1, 2012) (arguing that the data-driven supply chains have adapted and are able to take proactive steps to prevent any major food shortage from ever occurring), http://www.wired.com/2012/11/sandy-supply-chain-impact/.

33. *State of Food and Agriculture 2009*: *Livestock in the Balance*, FOOD AND AGRIC. ORG. OF THE UNITED NATIONS, 5-8 (2010), http://www.fao.org/docrep/012/i0680e/i0680e.pdf.

34. *Id. See also The State of the World's Animal Genetic Resources for Food and Agriculture*, FOOD AND AGRIC. ORG. OF THE UNITED NATIONS, 56, 69 (2007), ftp://ftp.fao.org/docrep/fao/010/a1250e/a1250e.pdf.

35. *State of Food and Agriculture*, *supra* note 33, at 5*; see also* D. R. Notter, *The importance of genetic diversity in livestock populations of the future*, 77 J. ANIMAL SCI., 61-69 (1999).

36. *State of Food and Agriculture*, *supra* note 33 at 5, 7-8.

hedge against our current food system's decision to put all of its eggs in one basket, so to speak.

An additional central aspect of the food movement is a spiritual one—simply seeking a closer connection to the food we eat. It is a rejection of a mechanical view of life, thinking of food as a mere fuel for an engine, and instead embracing the connections between our physical health and mental well-being and the health and well-being of the plants and animals we eat. The international Slow Food movement is a prime example of this way of thinking. The Slow Food movement began in Italy as a protest against opening a McDonald's restaurant in Rome,[37] but quickly grew to an international movement for slowing down and finding meaning in and appreciation for our food.[38] It also asserts that in appreciating our food and caring about where it comes from, we preserve and strengthen our communities.[39]

Some political scholars view the food movement as no less than the means to strengthen civil society.[40] In her book, *A Taste for Civilization, Food, Politics, and Civil Society*, Janet Flammang asserts that the values of the food movement, placing appreciation for the way our food is grown, prepared, and shared at the center of our lives, is necessary to reverse the decline in civility.[41] She asserts that as our culture has increasingly viewed food as a convenience, devalued food work by industrializing it, and abandoned mealtime rituals of sitting together as a family, we have concomitantly lost the "foundation for a proper education of the values, of civility, the importance of the common good, and what it means to be a good citizen."[42] This is true in both the family unit and on a community level.

And much of the food movement is concerned with building community. This is not confined to community gardens—which are centrally about community.[43] Many groups dedicated to urban livestock

37. Pollan, *supra* note 5; *see also Our History*, SLOW FOOD, http://www.slowfood.com/international/7/our-history (last visited Feb. 25, 2015).

38. Pollan, *supra* note 5. *See generally* CARLO PETRINI, SLOW FOOD NATION: WHY OUR FOOD SHOULD BE GOOD, CLEAN, AND FAIR (2013).

39. *See generally* PETRINI, *supra* note 38.

40. *See generally, e.g.*, JANET A. FLAMMANG, A TASTE FOR CIVILIZATION: FOOD, POLITICS, AND CIVIL SOCIETY (2009).

41. *See generally id.*

42. *Id.* at back cover.

43. Community gardens are parcels of land that are collectively gardened and maintained by a number of people. Founded in 1985, Denver Urban Gardens supports Denver residents in growing their own sustainable, food-producing community gardens in various neighborhoods across the Denver area. *Mission and History*, DENVER URBAN GARDENS, http://dug.org/mission-and-history (last visited Feb. 25, 2015).

exist, both on the national and local level.[44] These groups provide much needed support for people who are new to raising livestock. Also, small livestock, like chickens, goats, and bees, require community to be successful. The community helps it members to procure animals, to breed the animals, to solve problems or illnesses, and to help with ways to take on animals that are not wanted—like extra chicks, goat kids, or a departing swarm of bees. Once developed, a community can help to sustain a healthy and diverse population of animals that are well-suited to city life.

II. Micro-Livestock and Micro-Livestock Communities

While there are many different kinds of micro-livestock,[45] this article concentrates mostly on chickens, goats, and bees because these animals co-exist well in urban areas, have had a critical mass of urban dwellers organizing for their legalization within urban areas, and yet such legalization is often controversial.

While there is no universally agreed-upon definition of micro-livestock, in general, any small livestock is considered to be micro-livestock. This includes livestock that are naturally small—such as chickens, ducks, quail, and rabbits.[46] The term also includes breeds of livestock that are smaller than the size of an average breed—such as bantam chickens, Nigerian Dwarf goats, and Navajo sheep.[47] Micro-breeds are often half the size, or even smaller, of modern breeds that have been bred to grow quickly and as large as possible. Contrary

44. *See infra*, Section II.

45. Rabbits are micro-livestock, but they have caused less controversy and will not be discussed in this article. Perhaps because they are more accepted as pets, they were never made illegal in many cities. There are exceptions, however; rabbit owners have recently taken issue with ordinances in Houston, Texas, and East Peoria, Illinois that categorized rabbits as illegal livestock. *See* HOUS., TEX., CODE OF ORDINANCES § 6-32 (1968); *See* EAST PEORIA, ILL., CODE OF ORDINANCES § 10-2-3.23(a) (2012).

Very small pigs, like the pot-bellied pig, have also been accepted by many cities because they are seen as a non-productive pet; that is, they are not being raised for bacon, and, thus, not in the same category as livestock. *See* PHX., ARIZ., CODE § 8-8(b) (2010); *see also Is a Pig Right for You?*, PIG PLACEMENT NETWORK, http://www.pigplacement network.org/adopt/is-a-pig-right-for-you/ (last visited Feb. 25, 2015).

There have also been attempts to exempt miniature horses from statutes that make livestock illegal because they are especially useful guide animals for the blind and disabled. *See* THE GUIDE HORSE FOUNDATION, http://www.guidehorse.com (last visited Feb. 25, 2015).

Other animals, like miniature hogs, cows, or sheep may also be suitable for city life under the right circumstances, but fewer people are advocating for them.

46. *See, e.g.,* BD. ON SCI. & TECH. FOR INT'L DEV., MICROLIVESTOCK: LITTLE-KNOWN SMALL ANIMALS WITH A PROMISING ECONOMIC FUTURE 1 (Nat'l Academy Press 1991).

47. *See id.* at 1, 40, 50, 80, 155.

to controversies looming around legalization of micro-livestock in the United States, many international organizations have long championed the suitability of these smaller breeds for city life because they require far less food and water, and can be especially hardy.[48] Small size, moreover, makes them ideal for small, urban lots located inside a larger supportive community.

Communities are essential to the urban homesteading movement. Many community-based organizations with missions to support this movement started out as a group of people who wanted to raise chickens, goats, bees, or had already been doing so for years (or even generations), but were barred from doing so by municipal ordinances.[49] They organized to legalize their animals. One of the leading examples is a Madison, Wisconsin group called Mad City Chickens.[50] That group started out as several people who either already kept chickens illegally, or who wanted to keep chickens in the city.[51] The members who kept chickens illegally, the self-described "Poultry Underground," were generally law-abiding

48. *See id.* at 12*; see also Pastoralism in the New Millennium: Maintaining Livestock Biodiversity*, FOOD & AGRIC. ORG. OF THE UNITED NATIONS, (2001), *http://www.fao.org/docrep/005/y2647e/y2647e11.htm.*

49. There are numerous examples of established national groups:

BackyardChickens.com and UrbanChickens.org provide a forum for people to talk about their chickens, discuss what breeds are best for children, and address issues concerning behavior, illness, or egg-laying that commonly concern chicken owners. *See* BACKYARD CHICKENS, www.backyardchickens.com/f/ (last visited Feb. 25, 2015); URBAN CHICKENS, www.urbanchickens.org (last visited Feb. 25, 2015).

Newer web-based groups like the Back Yard Bee Keeper's Association provide help and support on raising honeybees. *See* BACK YARD BEEKEEPERS ASSOCIATION, www.backyardbeekeepers.com (last visited Feb. 25, 2015). In addition, numerous community-based groups provide regular meeting and hands-on classes and support for would-be urban homesteaders. One example is the Philadelphia Beekeeper's Guild. It was formed in 2009 to "encourage and promote urban beekeeping through fellowship and education, and to raise awareness of the importance of bees to our environment" and offers monthly meetings to talk about beekeeping and classes, workshops, and hive crawls—so that members can visit others' beehives. THE PHILADELPHIA BEEKEEPERS GUILD, www.phillybeekeepers.org (last visited Feb. 25, 2015).

The Austin and Central Texas Backyard Poultry Meetup Group, also founded in 2009, offers regular meetings, classes, and an annual chicken coop tour (a popular event in many cities across the country—whether keeping chickens is legal or not). *See* THE AUSTIN AND CENTRAL TEXAS BACKYARD POULTRY MEETUP, http://www.meetup.com/AustinBackyardPoultry/ (last visited Feb. 25, 2015).

50. MadCityChickens.com provides information and support for others who are seeking to change their city's ordinances. *See* MAD CITY CHICKENS, www.madcitychickens.com (last visited Feb. 25, 2015). A documentary of the group's efforts to change the law, also called *Mad City Chickens*, shows the group's successful lobbying efforts, but also helps others with lobbying their local government by providing information about backyard chickens, in an entertaining way, that educates the public, dispels common myths, and alleviates fears. *Mad City Chickens: The Return of the Urban Backyard Chicken!* (Tashai Lovington & Robert Lughai 2008).

51. MAD CITY CHICKENS, *supra* note 50.

citizens who did not like breaking the law, but did not see how raising chickens in a way that did not bother their neighbors or cause any problems should be deemed illegal.[52] To convince their city council members that chickens were compatible with the city, they sought the help of experts and seasoned chicken-owners to educate them and other city residents about chickens.[53] They showed that, despite common misconceptions, well-kept hens do not smell, are not noisy, and do not need a rooster to lay eggs.[54] In 2004, in response to the group's lobbying efforts, Madison amended its zoning ordinance to allow chickens[55] and later, in 2012, to allow bees.[56] Mad City Chickens now is a legal, active group providing support for backyard chicken keepers.

The New York City Beekeepers Association's story follows a similar arc. In that case, a group of people who, again, either already kept bees (illegally) or who wished to keep bees, sought to change New York City's ordinance outlawing bees as dangerous animals.[57] The Association worked to educate city-dwellers about bees' compatibility with the city, making sure that people understood the difference between an aggressive wasp (which does not produce honey, is often attracted to human food, can sting multiple times, and has an extremely limited role in pollination) and the more gentle honeybee (which has no interest in human food, will sting only if threatened, will die after stinging, and is vitally necessary to pollinate much of the food we depend upon).[58] In response to the successful organizing and lobbying of the organization, New York City changed its ordinance in 2010 to legalize keeping honeybees.[59]

The Goat Justice League has a similar story, but starts with one woman, Jennie Grant, who kept three animals—chickens, bees, and goats—on her property in Seattle, Washington.[60] In Seattle, like

52. *Id.*
53. *Id.*
54. *Id.*
55. *See* MADISON, WIS., ZONING CODE § 28.151 (2004).
56. *See id.* (2012).
57. *See* N.Y.C. BEEKEEPER'S ASSOC., http://www.bees.nyc/about-us/ (last visited Feb. 25, 2015)*; see also* Mireya Navarro, *Bees in the City: New York May Let the Bees Come Out of Hiding*, N.Y. TIMES (Mar. 14, 2010), http://www.nytimes.com/2010/03/15/science/earth/15bees.html*;* Mireya Navarro, *Bring on the Bees*, N.Y. TIMES (Mar. 16, 2010), http://cityroom.blogs.nytimes.com/2010/03/16/bring-on-the-bees/?ref=earth; Hugh Raffles, *Sweet Honey on the Block*, N.Y. TIMES (Jul. 6, 2010), http://www.nytimes.com/2010/07/07/opinion/07Raffles.html.
58. *Prevention and Control: Bees and Wasps*, ILL. DEPT. OF PUB. HEALTH, http://www.idph.state.il.us/envhealth/pcbees.htm (last visited Feb. 25, 2015).
59. N.Y.C., N.Y., HEALTH CODE § 161.01(b)(12) (2010); Raffles, *supra* note 57.
60. Jennie P. Grant, *About the League*, GOAT JUSTICE LEAGUE, http://goatjusticeleague.org/?page_id=70 (last visited Feb 25, 2015).

many other cities, both the chickens and bees were already legal, but not the goats. Grant told a member of city council about her goats and showed him that others supported legalizing goats as well.[61] She also educated city leaders and citizens about why goats are good city animals, explaining that female goats do not smell, are less noisy than most dogs, and more respectful of others' property than most cats.[62] Grant also explained that a lactating goat can produce up to three gallon of milk per day.[63] One city council member advocated on her behalf, and Seattle legalized miniature goats in 2007.[64]

The story of these, and countless other groups, shows that many people are already keeping micro-livestock in cities, whether or not they are legal. It also shows that once citizens and city leaders are educated about these animals and how and when they can co-exist in cities, they often will legalize the keeping of these animals. This, however, takes organizing and lobbying efforts by groups of animal and food enthusiasts who are often inexperienced in approaching and working with local governments. This article, thus, is meant to be a guide for municipal leaders in cities and suburbs who are approached about legalizing micro-livestock.

III. A Very Short History of Urban Micro-Livestock

Hens never disappeared from cities completely and were once not only accepted, but encouraged, as part of city life. During World War I's victory garden campaign, when the United States government urged American citizens to grow more of their own food to support the war, the government encouraged people to keep and raise chickens.[65] The USDA issued posters with instructions like, "Uncle Sam Expects You to Keep Hens and Raise Chickens."[66] These posters extolled the benefits and ease of raising chickens, instructing that, "even the

61. *Id.*

62. Jennie P. Grant, *Legalizing Goats*, GOAT JUSTICE LEAGUE, http://goatjusticeleague.org/?page_id=137 (last visited Feb. 25, 2015). *But see* ROBERT M. FOGELSON, BOURGEOIS NIGHTMARES: SUBURBIA 1870-1930 at 175-76 (2005).

63. *See* Caitlyn Menne, *Choosing a Dairy Goat Breed*, MOTHER EARTH NEWS (Feb. 10, 2012 11:51 AM), http://www.motherearthnews.com/homesteading-and-livestock/choosing-a-dairy-goat-breed.aspx#axzz2wA0DwFEa.

64. SEATTLE, WASH. MUN. CODE § 23.42.052(f)*; see also* Grant, *supra* note 60 (providing information on Seattle's miniature goat ordinance).

65. *See* Scott Doyon, *Backyard Chickens: WWI Solution to Almost Everything*, BETTER CITIES & TOWNS BLOG (Nov. 4, 2011), http://bettercities.net/news-opinion/blogs/scott-doyon/15562/backyard-chickens-wwi-era-solution-almost-everything (illustrated by Figure 1 *infra*).

66. Doyon, *supra* note 65.

Figure 1

smallest back yard has room for a flock large enough to supply the house with eggs."[67] It was also common to see other livestock in the city, including larger livestock like cows.[68]

As it became cheaper and more convenient to buy food from a grocery store, it became less common to see livestock in the city. While many people believe that livestock became illegal because livestock caused a nuisance,[69] there is little evidence that this was the case[70]—especially where just a few animals were kept.[71] Instead, removal of livestock from cities was, in part, a way for cities to usurp agricultural land and convert it to urban uses and, in part, a class-based phenomenon.[72] Seeking to remove animals that were productive—animals kept for food purposes—was a way to exclude the poor and lower classes.[73] Animals that came to be viewed as unproductive, such as dogs and cats, cost money to keep, and thus did not have the same association with the poor. By legislating against behavior that was associated with poverty, thereby making it impossible for those people to keep animals to supplement their food supply or income, the city could present itself as a more prosperous area that might attract more wealthy residents.[74]

This prejudice remains. An often-heard refrain in public debates over legalizing livestock is that "[livestock] do not belong in the city," with no further explanation.[75] This also explains why concerns

67. *Id.*

68. *E.g.*, Frederick L. Brown, Cows in the Common, Dogs on the Lawn: A History of Animals in Seattle, at 91 (May 28, 2010) (stating that in the late 1800's it was not unusual to see livestock like cows and horses residing within cities like Seattle) (unpublished Ph.D. dissertation, University of Washington), *available at* https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/16266/Brown%20Dissertation.pdf?sequence=1; Tom Philpott, *The History of Urban Agriculture Should Inspire its Future*, GRIST (Aug. 4, 2010) (demonstrating that inner city dairy farms provided most of New York City's milk in the mid-19th century), http://grist.org/article/food-the-history-of-urban-agriculture-should-inspire-its-future/full/.

69. *See* FOGELSON, *supra* note 62, at 169.

70. *Id.* at 168-81.

71. *Id.*

72. *Id.* at 179.

73. *Id.*

74. *Id.* at 169*; see also* MARK HOLLAND & JANINE DE LA SALLE, AGRICULTURAL URBANISM: HANDBOOK FOR BUILDING SUSTAINABLE FOOD & AGRICULTURE SYSTEMS IN 21ST CENTURY CITIES 22-23 (2010); Andrew R. Highsmith, Demolition Means Progress, Race, Class, and the American Dream in Flint, Michigan, 62 (2009) (linking the restriction of animals in subdivisions to racial restrictions) (unpublished Ph.D. dissertation, University of Michigan), *available at* http://deepblue.lib.umich.edu/bitstream/handle/2027.42/62230/ahighsmi_1.pdf?sequence=1.

75. Jaime Bouvier, *The Symbolic Garden*, 65 ME. L. REV. 426, 437 (2013); Barry Y. Orbach & Frances R. Sjoberg, *Excessive Speech, Civility Norms, and the Clucking Theorem*, 44 CONN. L. REV. 1, 291 (2011) (stating that an Alderman in Chicago was

with noise, odor, or disease are often used to justify keeping out productive animals, even when evidence shows that non-productive animals like dogs and cats cause these same problems to an equal or even greater degree.[76] And, it is often openly expressed that allowing such animals will lower property values.[77]

This desire to exclude the poor, still seen in many zoning ordinances by way of large minimum lot-sizes or exclusion of multi-family dwellings, is a reason why ordinances making livestock illegal are often found in suburbs and even exurbs where the lot-sizes are especially conducive to raising animals and provide plenty of buffer from any perceived nuisance.[78] It is also a reason why changing the regulations in such suburbs is often especially contentious.[79]

For example, Beachwood, Ohio, a relatively wealthy suburb of Cleveland, recently allowed up to two goats on properties of 1.1 acres or more.[80] The ordinance was apparently designed for one particular family and, by way of the ordinance's framing, could only affect 12 other properties in the suburb; a councilman, however, felt the need to respond to criticism by saying, "the city will not go down in stature because someone has two goats on their property."[81] The councilman's comment that one resident keeping goats on her property could reflect on something as large and amorphous as the perception or reputation of the suburb, reflects the anxiety that

seeking to ban chickens in part because, "[a]ll things considered, I think chickens should be raised on a farm."); Barak Y. Orbach & Frances R. Sjoberg, *Debating Over Backyard Chickens*, 19 (Ariz. Legal Studies, Working Paper No. 11-02, 2012) (listing conflicts in dozens of cities where people were seeking to change ordinances to either legalize or ban raising chickens in the city (citing one mayor from Franklinton Louisiana as stating the "city has changed and grown so much since the original ordinance. We are trying to look to the future. You can't raise animals or livestock (in the city)")); Patricia Salkin, *Feeding the Locavores, One Chicken at a Time: Regulating Backyard Chickens*, 1 (Zoning and Planning, Working Paper, No. 3, 2011) (describing criticism of efforts to allow chickens in neighborhoods as including "worry that property values will plummet, that chickens will create foul odors and noise, and that they will attract coyotes, foxes, and other pests."); Jerry Kaufman & Martin Bailkey, *Farming Inside Cities*, 62 (Lincoln Inst. of Land Policy, Working Paper, 2000).

76. FOGELSON, *supra* note 62, at 175; Jaime Bouvier, *Illegal Fowl*, 42 ENV. L. INST. 10889, 10894-95 (2012).

77. Bouvier, *Illegal Fowl*, *supra* note 76, at 10895 (asserting that, if anything, allowing for chickens should raise property values because the studies that exist show that urban agricultural uses and accommodating pets raises property values).

78. FOGELSON, *supra* note 62, at 180.

79. *Id.* at 177.

80. BEACHWOOD, OHIO, CODE § 1155.05(a)(1), (f)(1) (2012).

81. Matt DeFaveri, *Beachwood Council Approves Goat Ordinance*, CLEVELAND JEWISH NEWS (May 22, 2012), http://www.clevelandjewishnews.com/news/local/article_00b13d1e-a42f-11e1-a0d6-0019bb2963f4.html.

many cities face when residents petition to keep productive animals on their property.[82]

Now that raising livestock is becoming an activity that people seek out not for subsistence but for many of the reasons provided in this article, the association between raising productive animals and poverty is no longer relevant.[83] Raising micro-livestock has instead become an activity that many young, educated, middle-class people seek out.[84] Ordinances that legalize such activity can actually attract a subset of the population that many communities view as desirable.[85]

IV. Federal and State Law Considerations

When considering amending an ordinance to regulate livestock, local governments should be aware of the federal and state laws that already regulate urban farming and may preempt the local government's ability to regulate. Federal law regulates the sale, processing, labeling, and transportation of chickens, eggs, and other meats.[86] The FDA requires that all milk be pasteurized, including goat milk.[87] The FDA regulates nutrition and information labeling, and prohibits misbranding and adulteration of honey.[88] The USDA regulates the importation of

82. *See* Brittany Edelman, *Beachwood Residents May Apply for a Permit to Raise Goats, Sheep or Both on Larger Lots*, CLEVELAND.COM (June 7, 2012) (explaining how the ordinance should alleviate residents' concerns), http://www.cleveland.com/beachwood/index.ssf/2012/06/beachwood_residents_may_apply.html.

83. *E.g.*, Anne Marie Chaker, *Backyard Farming Gets Fancy*, WALL ST. J. (Jan. 30, 2013) (quoting the owner of Backyard Chickens.com as saying, "[p]eople wanting to be self-sufficient and eating locally grown food is synonymous with people who are affluent."); Susan Hauser, *Babysitters for Backyard Chickens*, CNNMONEY (July 23, 2010), http://money.cnn.com/2010/07/23/smallbusiness/urban_chickens/.

84. Rebecca Solnit, *Revolutionary Plots*, ORION MAG. 6 (2012) (stating that "I sometimes find myself telling the students that baby boomers in their youth famously had sex, drugs, and rock-and-roll, but the young now have gardens"), http://www.orionmagazine.org/index.php/articles/article/6918. Dan Cristelli, *Garden to Table: A 5-Year Look at Food Gardening in* America, National Gardening Association (2014) (finding that the millennial generation, aged 18-34 had the largest increase in the percentage of people gardening, 67%, over the past five years and is the second largest demographic group of gardeners, behind those aged 55 and older), http://www.garden.org/articles/articles.php?q=show&id=3819.

85. *Id.* at 7.

86. Poultry Products Inspections Act, 21 U.S.C. §§ 451-472 (2012); Eggs Products Inspections Act, 21 U.S.C. §§ 1031-1056 (2012); Meat Products Inspections Act, 21 U.S.C. §§ 601-691 (2012).

87. 21 C.F.R. § 1240.61 (2014)*; see also* Food and Drug Administration, *Grade "A" Pasteurized Milk Ordinance*: §1(R), FOOD AND DRUG ADMINISTRATION (2011) (explaining that goat's milk is included in the definition of milk), http://www.fda.gov/downloads/Food/GuidanceRegulation/UCM291757.pdf.

88. 21 U.S.C. §§ 342(d)(3), 343 (2012)*; see also* Patricia Salkin, *Honey It's All The Buzz, Neighborhood Beehives*, 39 B.C. ENVTL. AFF. L. REV. 55 (2012) (discussing federal and state regulation and common ordinance provisions on beekeeping).

honeybees.[89] While many of these laws have exceptions for animals and animal products raised for home consumption,[90] one who wants to produce eggs, milk, or meat for sale or distribution would have to comply with these federal laws.

States also regulate livestock. Most states have laws regulating the movement of livestock, including chickens, goats, and bees, into and out of the state.[91] To track and attempt to control many of the diseases that have been attacking bees, for example, some states require all beekeepers, even hobbyists, to register with the state.[92] Other states merely require small-scale beekeepers to alert the state if a hive becomes diseased.[93] Many states also have laws regulating the slaughter and sale of any animal used for meat, as well as laws regulating the sale of eggs, milk, and milk products.[94] While these laws generally have exceptions for animals raised for home consumption,[95] any person who wishes to sell or distribute eggs, milk, or meat should become familiar with the state laws and their exemptions. Many state agricultural extension services will have information pages posted on the internet describing the regulations and exemptions for the layperson hobbyist.[96]

89. 7 U.S.C. § 281 (2012).

90. *See, e.g.*, 21 U.S.C. § 1044(a) (2012) (relating to the household consumption of eggs).

91. *See, e.g.*, Amy Ackerman, *Buy Healthy, Buy Local: An Analysis of Potential Legal Challenges to State and Local Government Local Purchase Preferences*, 43 URB. LAW. 1015, 1024 (2011) (providing examples of state laws regulating the movement of food into and out of the state). *See generally* UNITED STATES DEPARTMENT OF AGRICULTURE, *State Regulations for Importing Animals*, ANIMAL AND PLANT HEALTH INSPECTION SERVICES, http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/importexport?1dmy&urile=wcm%3apath%3a%2Faphis_content_library%2Fsa_our_focus%2Fsa_animal_health%2Fsa_import_into_us%2Fsa_entry_requirements%2Fct_us%2Bstate_and_territory_animal_import_regulations (last visited Feb. 28, 2015).

92. *See* CAL. AGRIC. CODE § 29040 (1987); LA. REV. STAT. ANN. § 3:2305 (2003); OH. REV. CODE ANN. § 909.02 (1989); R.I. Gen. Laws § 4-12-12 (1989); UTAH CODE ANN. § 4-11-04 (2010); WYO. STAT. ANN. § 11-7-205 (2010). *But see* MONT. CODE ANN. § 80-6-114 (2009) (exempting hobbyist beekeepers from registration).

93. *See, e.g.*, TEX. AGRIC. CODE. ANN. § 131.025 (2013); VT. STAT. ANN. tit. 6 § 3023 (2013); VA. CODE ANN. § 3.2-4404 (2008) (requiring beekeepers to notify the state when hives become diseased).

94. *See, e.g.*, TEX. AGRIC. CODE ANN. §§ 148.002-148.022 (1981) (regulating the slaughter and sale of livestock); *Home Processing of Poultry*, UNIVERSITY OF MINNESOTA EXTENSION, http://www.extension.umn.edu/agriculture/poultry/home-processing-of-poultry/ (last visited Feb. 28, 2015).

95. *See, e.g.*, Ala. Code § 2-17-27 (2014); Ga. Code Ann. § 26-2-205 (2014); Pa. Code. Ann. § 483.3 (2014); W. Va. Code Ann. § 19-2B-8 (2015) (exempting the state's regulation on animals raised for home consumption).

96. *See, e.g.*, COLORADO STATE UNIVERSITY EXTENSION, http://www.ext.colostate.edu/menu_ag.html (last updated Jan. 15, 2015); *Missouri Meat and Poultry Inspection Program*, MISSOURI DEPARTMENT OF AGRICULTURE, http://agriculture.mo.gov/animals/

A few states have laws that restrict a local government's ability to regulate beekeeping. In Wyoming, for instance, the state controls how close together beehives or sets of beehives, called apiaries, may be located.[97] Wyoming requires registration to keep bees, but will not issue a certificate of registration to any apiary that is "within such close proximity to established registered apiaries that there is danger of spread of bee diseases, bee parasites or bee pests or that the proximity may interfere with the proper feeding and honey flow of established apiaries."[98] Thus, while a city in Wyoming may allow for beekeeping, the state, in practice, may prohibit new beekeepers.

Other states have more directly impacted local government's ability to regulate. In June 2011, Tennessee passed a law preempting local government ordinances regulating honeybee hives.[99] The law provides that no local government can "adopt or continue in effect any ordinance or resolution prohibiting the establishment or maintenance of honeybees in hives" as long as the hive meets state standards.[100] The statute provides that it should not be construed to restrict zoning authority, but that established hives will be exempted from any new zoning regulations adopted after June 2011.[101]

Florida adopted a similar law preempting local government ordinances regulating managed honeybee colonies or determining where they can be located.[102] State law allows honeybees only on land zoned agricultural or on land "integral to a beekeeping operation."[103] The state has granted the Department of Agriculture and Consumer Services the authority to draft rules to determine where apiaries can be located after "consultation with local governments and other affected stakeholders."[104]

health/inspections/ (last visited Feb. 28, 2015); *Regulatory Services, Meat and Poultry*, VIRGINIA DEPARTMENT OF AGRICULTURAL AND CONSUMER SERVICES, http://www.vdacs.virginia.gov/meat&poultry/ (last visited Feb. 28, 2015); *Meat and Poultry Inspection Division,* NORTH CAROLINA DEPARTMENT OF AGRICULTURAL AND CONSUMER SERVICES, http://www.ncagr.gov/meatpoultry/info.htm (last visited Feb. 28, 2015). The United States Department of Agriculture has a page on its website that helps to locate the nearest Cooperative Extension office: *Cooperative Extension System Offices,* UNITED STATES DEPARTMENT OF AGRICULTURE, http://www.csrees.usda.gov/Extension/index.html (last visited Feb. 28, 2015).

97. Wyo. Stat. Ann. § 11-7-201 (2014).
98. *Id*. § 11-7-201(e).
99. Tenn. Code Ann. § 44-15-124 (2011).
100. *Id.*
101. *Id*.
102. FLA. STAT. § 586.055 (2012); *Id.* § 586.10 (2013).
103. *Id*. § 586.055.
104. *Id.* § 586.055(2)(b).

Both of these state laws were adopted out of concern that local governments were too restrictive in regulating beekeeping. In Florida, in particular, communities had begun to ban beekeeping because of the fear of spreading Africanized honeybees—a breed of bee that is more aggressive than the gentler European honeybee.[105] Florida beekeepers were able to persuade the state legislature that banning beekeeping in urbanized areas would actually contribute to the spread of the Africanized bee because it created less competition for the Africanized bee in that environment.[106] Beekeepers do not seek to keep Africanized bees and by managing their colonies can more effectively hinder Africanized bees from breeding into the bee population.

V. How City Ordinances Balance the Benefits and Concerns Raised by Micro-Livestock

A. *Benefits of Micro-Livestock*

Those who wish to keep micro-livestock, such as chickens, goats, and bees, see numerous benefits, but the main benefit for many is not to eat the animal itself (although people do eat chickens and goats) but consumption of the food the animals produce—eggs, milk, cheese, and honey.[107] Eggs from a backyard chicken and milk from a backyard goat are seen as superior to eggs or milk, even organic eggs and goat milk, purchased from a grocery store.[108] Many people also use

105. *Africanized Honey Bees in Florida: Bee Aware. . .Look, Listen, Run*, FLORIDA DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES, http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Pests-Diseases/Africanized-Honey-Bee (last visited Feb. 28, 2015).

106. Interview with Tom Nolan, Former Chair of Florida State Beekeepers Legislative Committee, (Dec. 18, 2013) (on file with author)*; see also* Eric Staats, *New Florida Law Creates Buzz about Where Beekeepers Can Operate*, NAPLES NEWS DAILY (May 2, 2012), http://www.naplesnews.com/news/2012/may/02/new-florida-law-beekeeper-hives-hobby-rulesrules-/?comments_id=1264098.

107. *See* Tess Pennington, *How Micro Livestock Can Be Used for Suburban and Rural Sustainability*, READY NUTRITION (Apr. 8, 2011) (providing advantages of raising micro-livestock), http://readynutrition.com/resources/how-micro-livestock-can-be-used-for-suburban-and-rural-sustainability_08042011/.

108. *See* Bouvier, *Illegal Fowl*, *supra* note 76 at 10892; GRANT, *supra* note 1, at 22; G.F.W. Heinlein, *Goat Milk in Human Nutrition,* 51 SMALL RUMINANT RESEARCH 155-63 (Feb. 2004) (noting that goat milk has high levels of short and medium chain fatty acids that can be medically valuable for to cure diseases and maintain health)*; see also Farm Fresh Eggs vs. Store Bought Eggs*, OUR LITTLE COOP (July 7, 2012), http://ourlittlecoop.blogspot.com/2012/07/farm-fresh-eggs-vs-store-bought-eggs.html?m=0; *Store Eggs vs. Farm Eggs*, MODERNSTEAD (July 28, 2012), http://www.modernstead.com/store-eggs-vs-farm-eggs/; *Got Goat's Milk?*, NOURISHING OUR CHILDREN (June 11, 2012), http://nourishingourchildren.wordpress.com/2012/06/11/got-goat-milk/.

The difference between an egg from a backyard chicken and an egg from a typical grocery store can easily be compared to the difference between an heirloom home-

goat's milk to make artisanal cheeses, such as soft chevre or feta.[109] Micro-livestock can help address food security concerns.[110] While few are likely to fully replace more conventional food sources with food grown and raised at home, ownership still acts as a hedge against potential threats.

Likewise, bees are not only desirable livestock for the honey they produce,[111] they also are prodigious pollinators,[112] and their presence will increase the yield and quality of fruits, vegetables, and flowers.[113] From a policy perspective, beekeeping should be encouraged in light of the recent devastating losses to the honeybee population.[114]

grown tomato and the tasteless mealy grocery-store variety. Eggs from backyard hens have a brighter, deep orange yolk, more viscous and robust albumen, and a superior egg taste. Eggs are also more nutritious with far more omega-3 fatty acids and beta-carotene and far less cholesterol and saturated fat. The difference in eggs is believed to be not only because backyard hens generally have access to more nutritious food, such as greens and insects that conventionally raised hens lack, but also because they lead a happier and calmer life in a small flock with plenty of room and access to the outdoors.

Many people prefer goat milk to cow milk. Goat milk is higher in fat, but also lacks agglutinin, which causes the cream to separate out in cow's milk. Goat milk, thus, has a creamier texture than cow milk. It also has different kinds of protein than cow's milk, which some argue makes it easier to digest for those who have problems digesting cow's milk. Finally, it has higher levels of some nutrients—like calcium, vitamin B6, vitamin A, potassium, niacin, and copper. Goat milk from a backyard goat tastes far superior to goat milk from a grocery store. Because goat milk is more fragile than cow milk, due to its different composition, it will develop an earthy gamy flavor in about a week or if it is handled roughly. Thus, it does not ship well. Fresh goat milk, however, lacks this gamy flavor and actually tastes similar, but creamier, to whole cow's milk.

On a similar note, some claim that honey produced by urban bees tastes superior to that of rural bees due to fewer pesticides and greater access to a variety of flowers. *See* Sarah Elton, *Urban Hives Make Better Honey*, THE ATLANTIC (Sep. 1, 2010); Alison Benjamin, *Urban Bees Fare Better Due to Varied Diet, Research Reveals,* THE GUARDIAN (Aug. 17, 2010), http://www.theguardian.com/environment/2010/aug/17/bees-urban-pollen-diet. However, each bee colony produces honey unique to the variety of flowers and plants that the bee is pollinating—and serious honey connoisseurs differ about what makes the best honey—so this argument has not yet been settled. *E.g.*, C. MARINA MARCHESE & KIM FLOTTUM, THE HONEY CONNOISSEUR (2013); *Top Honey Plants for Producing the Best Honey,* COUNTRYFARM LIFESTYLES, http://www.countryfarm-lifestyles.com/honey-plants.html (last visited Feb. 28, 2015); BUZZ ABOUT BEES, *Plants For Bees*, http://www.buzzaboutbees.net/plants-for-bees.html (last visited Feb. 28, 2015).

109. *E.g.* SUE WEAVER, THE BACKYARD GOAT, 112-23 (2011).

110. COCKRALL-KING, *supra* note 27.

111. One hive of bees can produce up to 100 pounds of honey. FLOTTUM, *supra* note 1, at 15.

112. Alexandra-Maria Klein et al., *Importance of Pollinators in Changing Landscapes for World Crops*, PROCEEDINGS OF THE ROYAL SOCIETY B 303 (Oct. 27, 2006) (arguing that one third of our food crops rely on pollinators like bees), *available at* http://rspb.royalsocietypublishing.org/content/274/1608/303.full.pdf+html.

113. KEITH S. DELAPLANE & DANIEL F. MAYER, CROP POLLINATION BY BEES 1 (2000).

114. Désirée Tommasi et al., *Bee Diversity and Abundance in an Urban Setting*, 136 THE CANADIAN ENTOMOLOGIST 851, 851-869 (Dec. 2004); Richard Black, *Bee*

Beekeepers in environmentally diversified urban environments, who do not subject their hives to stressors increasingly occurring in rural areas, may prove to be an important haven for the continued existence of honeybees.[115]

Micro-livestock are raised for more than just food consumption benefits. Enterprising knitters keep goats for their hair,[116] and the manure from both chickens and goats may be used to fertilize home gardens, or possibly shared with neighbors and nearby community gardens.[117] Such sharing leads to greater interaction between neighbors and can increase community ties.[118]

Decline Linked to Falling Biodiversity, BBC NEWS, Jan. 20, 2010, http://news.bbc.co.uk/2/hi/8467746.stm. *See also* Noah Wilson-Rich, *Every City Needs Healthy Honey Bees*, TEDTALK, Jun. 2012, http://www.ted.com/talks/noah_wilson_rich_every_city_needs_healthy_honey_bees (last visited Feb. 28, 2015) (Professor Wilson-Rich, an entomologist at Simmons College, argues that urban beekeepers may be a haven for an extant honeybee population.)

115. Honeybee population loss has been caused by parasites, such as the Varroa mite, and the mysterious Colony Collapse Disorder, in which whole hives of bees seem to just disappear. *See* RENÉE JOHNSON, CONG. RESEARCH SERV., RL33938, HONEY BEE COLONY COLLAPSE DISORDER 5 (2010). Experts assert that these problems are caused by, or exacerbated by, the use of certain pesticides, the stress of constant travel to different farms to pollinate crops, and a lack of plant diversity. *Report on the National Stakeholders Conference on Honey Bee Health*, USDA (Oct. 15-17, 2012); CCD STEERING COMMITTEE, *Colony Collapse Disorder Action Plan* (Jun. 20, 2007), http://www.ars.usda.gov/is/br/ccd/ccd_actionplan.pdf; Clara I. Nicholls & Miguel A. Altieri, *Plant Biodiversity Enhances Bees and Other Insect Pollinators in Agroecosystems. A Review*, AGRONOMY FOR SUSTAINABLE DEV. 257-274 (Apr. 2013). Rural environments, surprisingly, often have less bio-diversity than urban ones because so much land is devoted to growing one crop, such as corn, in a monoculture environment. Matina Donaldson Matasci, *Honeybees and Monoculture, Nothing to Dance About*, SCIENTIFIC-AMERICAN GUEST BLOG (Jun. 7, 2013), http://blogs.scientificamerican.com/guest-blog/2013/06/07/honey-bees-and-monoculture-nothing-to-dance-about/ (last visited Feb. 28, 2015). Corn and soy grown in rural areas is genetically modified so that it can withstand a special herbicide. FELICIA WU & WILLIAM BUTZ, THE FUTURE OF GENETICALLY MODIFIED CROPS: LESSONS FROM THE GREEN REVOLUTION 41 (2004). This leaves hundreds of thousands of acres of corn or soy and little else, since most other plants cannot survive the herbicide. John M. Pleasants and Karen S. Oberhauser, *Milkweed Loss in Agricultural Fields because of Herbicide Use: Effect on the Monarch Butterfly Population*, INSECT CONSERVATION AND DIVERSITY 2 (2012) (describing how the near universal adoption (94% of soy and 72% of corn in 2011) of glysophate resistant crops has resulted in less biodiversity in rural areas); BEE POLLINATION IN AGRICULTURAL ECOSYSTEMS vi (ed. by Rosalind R. James & Theresa L. Pitts-Singer 2008).

116. Goat hair can be used to make cashmere or mohair fabric, which are prized for their softness and strength. *See* ROBERT FRANCK, SILK, MOHAIR, CASHMERE AND OTHER LUXURY FIBERS 136-139 (CRC Press 2001); LAURA CHILDS, THE JOY OF KEEPING FARM ANIMALS: RAISING CHICKENS, GOATS, PIGS, SHEEP AND COWS 159 (Skyhorse Publishing 2010).

117. ULRICH JAUDAS & SEYEDMEHDI MOBINI, THE GOAT HANDBOOK 118 (Barron's Educational Series trans. 2006); Bouvier, *Illegal Fowl*, *supra* note 76, at 10892.

118. Nathan McClintock & Esperanza Pallana, *Urban Livestock in Oakland*, PLUCK & FEATHER 6 (Sept. 2011), http://pluckandfeather.com/wp-content/uploads/2011/09/OaklandLivestockReport.pdf.

Other, less understood, benefits of chickens and goats are that they can be entertaining companion animals.[119] Many people think of their chickens and goats as pets and feel as close to them as dog or cat owners feel to their pets.[120] Micro-livestock can also be an excellent educational tool. They can teach children where our food comes from and contribute to a greater respect for our food. After all, if a child, or an adult for that matter, sees the time and effort that goes into making an omelet with chevre filling from his own backyard, they are much less likely to take a cavalier attitude towards mealtime. This decreased distance between people and their food is something that really interests many people currently living in urban areas.[121] City planners and decision makers would be wise to get in front of this wave.

B. *Addressing Concerns of Keeping Micro-Livestock through City Ordinances*

There are many concerns associated with backyard keeping of micro-livestock. One major concern is the animals' effect on the neighbors, specifically noise, smells, disease, and safety. A further concern is the safety and the well-being of the animal itself. These concerns are addressed in this section, along with recommended ordinances compiled from cities throughout the United States dealing with the concerns.

The noise caused by backyard micro-livestock is manageable. After acclimating to their environment, goats are not generally noisy animals.[122] While a goat may bleat especially as it adjusts to a new environment, the sound is generally far less loud than the noise of a barking dog;[123] and cities already have ordinances in place to address

119. ROBERT LITT & HANNAH LITT, A CHICKEN IN EVERY YARD 7-8 (2011).

120. Carolyn Bush, *A Chicken Christmas Tale*, BACKYARD POULTRY, http://www.backyardpoultrymag.com/a_chicken_christmas_tale/ (last updated Feb. 7, 2013) (describing her pet chickens and mourning one of their deaths); *Who I contact to find out if having Chickens in my back yard is legal?,* CHICKENVIDEO.COM, http://www.chickenvideo.com/outlawchickens.html (last visited Feb. 28, 2015) (collecting stories from people who keep chickens as pets despite their illegality).

121. Pollan, *supra* note 5.

122. *See* GRANT, *supra* note 1, at 41.

123. *See* GRANT, *supra* note 1, at 41; HEIRLOOM GARDENS: ADVENTURES IN URBAN HOMESTEADING, *Myths vs. Facts*, http://eatwhereulive.com/sustainable-food-denver/about-food-producing-animals-fpas/myths-vs-facts/ (last visited Mar. 1, 2015); THE CITY OF SAN DIEGO, *Keeping Goats in the City of San Diego*, (explaining that, while goats bleat occasionally, "the average bleat is quieter than the average dog bark [and] [u]nlike dogs, which tend to bark if they see or hear another animal, goats are a 'prey' species that stays still and quiet in response to a perceived threat or unusual situation") http://www.sandiego.gov/development-services/pdf/news/keepinggoats.pdf.

this type of noise concern.[124] In the case of chickens, while roosters are noisy,[125] hens are not. Hens are generally quiet during the daytime,[126] but even when they do cluck, the resulting noise is around the same decibel level of a quiet human conversation.[127]

The concern of odors from backyard chickens and goats can be addressed through city ordinances. Many cities require that chicken and goat shelters be cleaned and maintained.[128] As long as a chicken cage is well maintained and has adequate ventilation, a flock of hens fewer than a dozen will not smell.[129]

To address odor concerns regarding goats, ordinances should differentiate between the keeping of female and male goats. Female goats (called does) and neutered male goats (wethers) do not smell.[130] Male goats (bucks), during the mating season, have a strong gamy smell.[131]

124. *See, e.g.*, DEANNA CASWELL & DAISY SISKINS, LITTLE HOUSE IN THE SUBURBS: BACKYARD FARMING AND HOME SKILLS FOR SELF-SUFFICIENT LIVING (2012).

125. Roosters crow a lot, not just in the morning to greet the rising sun, but also sometimes for no discernable reason at all. Cities should restrict roosters to only agricultural zones or ban them altogether from dense urban environments, thus eliminating the issue of noise nuisance concerns. *See* RICK LUTTMANN & GAIL LUTTMANN, CHICKENS IN YOUR BACKYARD: A BEGINNER'S GUIDE 50 (1976). Prohibiting roosters is generally not controversial with backyard chicken advocates because roosters are not necessary for hens to lay eggs, they are only necessary to fertilize the eggs if one wants the eggs to hatch into chicks. Bouvier, *Illegal Fowl*, *supra* note 76, at 10919; *Poultry Extension-Small and Backyard Flocks*, UNIVERSITY OF KENTUCKY COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT, http://www2.ca.uky.edu/smallflocks/FAQs.html (last visited Feb. 28, 2015).

126. There should be no concern with noisy hens at night because they have an instinct to return to the roost at night and are quiet during that time. *See, e.g.*, BARBARA KILARSKI, KEEP CHICKENS!: TENDING SMALL FLOCKS IN CITIES, SUBURBS, AND OTHER SMALL SPACES 46 (2003).

127. *See Shutting Up Roosters to be Discussed Tonight in Bristol*, THE CENTRAL CONNECTICUT POST (Oct. 9, 2013), http://centralctpost.com/2013/10/09/shutting-up-roosters-to-be-discussed-tonight-in-bristol/; *Protecting Against Noise*, NATIONAL AG SAFETY DATABASE, http://nasdonline.org/document/1744/d001721/protecting-against-noise.html (last visited Feb. 28, 2015) (explaining that a chicken coop and human conversation are both about 65 decibels).

128. *See, e.g.*, FORT COLLINS, COLO., CODE §§ 4-117, 4-121 (2013) (providing standards for the keeping of chickens and goats).

129. GAIL DAMEROW, THE BACKYARD HOMESTEAD GUIDE TO RAISING FARM ANIMALS 35 (2011) (arguing that "[a] chicken coop that smells like manure or has the pungent odor of ammonia is mismanaged. These problems are easily avoided by keeping litter dry, adding fresh litter as needed to absorb droppings, and periodically removing the old litter and replacing it with a fresh batch").

130. Molly Nolte, *Male Goat Information: Bucks & Wethers*, FIAS CO FARM, http://fiascofarm.com/goats/buck-wether-info.htm (last updated Aug. 15, 2012) (noting that does and neutered bucks do not develop a smell like bucks do).

131. *Id.* (stating that when bucks go into rut they urinate on their front legs and mouth which can cause them to smell).

To avoid odor nuisances, cities should prohibit or restrict uncastrated bucks.[132]

Cities are also concerned with animals causing harm to neighbors by spreading disease and by causing physical injuries. Many believe urban livestock will increase the risks of animal to human disease transmission. But such risk is an issue for all domesticated animals, including dogs and cats, because disease is generally spread though fecal material.[133] As a result, risks can be mitigated by regularly cleaning coops, food dishes, and other animal areas, as well as practicing straightforward sanitation practices like washing one's hands.[134] Such steps will not only go a long way in helping to prevent disease spread, but will also mitigate any potential odor nuisances.

With chickens, many express concern with avian flu. The kind of avian flu that can cross over to humans, however, has not been detected in people or in poultry in North America, and public health agencies have not asserted that the very low possibility of avian flu occurring in the future is a reason to ban backyard hen keeping.[135] Public health scholars, moreover, have concluded that backyard chickens

132. Fort Collins, Colorado and Hillsboro, Oregon, for example, prohibit uncastrated male goats with no exceptions. FORT COLLINS, COLO., CODE § 4-121(a) (2013); HILLSBORO, OR., CODE § 6.20.070(A)(2) (2014). Seattle, Washington prohibits uncastrated male goats but has an exception for nursing offspring that are less than 6 or 12 weeks old. SEATTLE, WASH., CODE § 23.42.052(F) (2010).

Also note that while it is necessary for a doe to mate with a buck and deliver a kid to lactate and provide milk, the mating can occur through a stud-buck that is kept in a more rural environment.

133. *Zoonotic Diseases and Pet FAQ,* AMERICAN VETERINARY MEDICAL ASSOCIATION (Oct. 7, 2008), https://www.avma.org/public/PetCare/Pages/Pets-and-Zoonotic-Diseases-FAQs.aspx (last visited Feb. 28, 2015).

134. *Id.* And in reality, more than 99.99% of diseases carried by animals cannot infect humans. Wynne Parry, *Are Urban Vermin the Most Disease-Ridden Animals?*, SCIENTIFIC AMERICAN (Jan 17, 2008) (arguing that while zoonotic diseases like the bird flu have received significant media attention, the vast majority of diseases carried by animals do not spread to humans), *available at* http://www.scientificamerican.com/article/are-urban-vermin-the-most-disease-ridden-animals/.

135. *First Human Avian Influenza A (H5N1) Virus Infection Reported in Americas*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Jan. 8, 2014) (reporting that a traveler who had recently returned from Beijing, China was the first detected case of infection with this strain of virus in North or South America and emphasizing that even this strain of avian flu does not pass easily from person to person and that the detection of this single case does not change the current risk assessment of the spread of this virus in North America as being very low), http://www.cdc.gov/flu/news/first-human-h5n1-americas.htm. Both the Centers for Disease Control and the Department of Agriculture recommend keeping chickens away from wild birds and practicing regular sanitation, such as washing hands after handling birds, as effective methods of preventing the spread of avian flu. *Keeping Backyard Poultry*, CDC, http://www.cdc.gov/features/salmonellapoultry/ (last updated Feb. 12, 2015); *Biosecurity for Poultry-Keeping Your Poultry Healthy*, USDA, http://www.aphis.usda.gov/animal_health/birdbiosecurity/biosecurity/basicspoultry.htm (last visited Feb. 28, 2015).

present no greater threat to public health than that of other animals like dogs and cats.[136]

With backyard beekeeping, an additional concern is physical harm caused by bee stings.[137] Bee sting concerns, however, are exaggerated. The stinger of the honeybee is attached to its entrails, so a bee will die if it stings.[138] Thus, honeybees are defensive, tending not to sting unless they are threatened, unlike the more aggressive wasp for which honeybees are often mistaken.[139] Bees are interested in pollen and fresh water, and, again unlike wasps, are not interested in human food or activities.[140]

Bees do have a tendency to take a regular flight path to food or water, called a bee-line.[141] To reduce any problems that may occur from a bee-line, many cities have implemented regulations that require flyway barriers, which means a barrier such as a fence or a hedge, be placed in front of the entrance to the hive causing the bees to fly up and over the heads of most people before flying in a straight line until they descend to the water or food source.[142] Some cities also

136. S.L. Pollock et al., *Raising Chickens in City Backyards: The Public Health Role*, 37 J. COMMUNITY HEALTH 734, 734 (2011) (finding that public health concerns about infectious diseases and other nuisances that might be caused by keeping hens in an urban setting cannot be supported by literature specific to the urban agriculture context and recommending that public health practitioners approach this issue in a manner analogous to concerns over keeping domestic pets).

137. Here, it is important to understand the distinction between bees and wasps. Wasps, in contrast to honeybees, are predatory, can sting repeatedly with little consequence, and are attracted to human food and garbage. Many people confuse fuzzy honeybees with the smooth-skinned yellowjackets—a kind of wasp that forms papery hives. If you have seen a yellow and black striped insect hovering over a garbage dump or zeroing in on your outdoor picnic, it was a wasp. And, if you have been stung, chances are high that it was a wasp that did it. Stephen J. Parise, *Honey Bee or YellowJacket Wasp?* VERMONT AGENCY OF AGRICULTURE, FOOD AND MARKETS, http://agriculture.vermont.gov/sites/ag/files/pdf/apiary/Honey%20Bee%20or%20Yellowjacket%20Wasp.pdf (last visited Feb. 28, 2015); *Prevention and Control: Bees and Wasps*, *supra* note 58. Urban homesteaders do not keep wasps because they are far less effective pollinators and they do not produce honey. ALAN HENDERSON, DEANNA HENDERSON, & BESSIE SINCLAIR, BUGS ALIVE 97 (2008).

138. W.S. Cranshaw, *Nuisance Wasps and Bees*, COLORADO STATE UNIVERSITY EXTENSION (Dec. 2012), http://www.ext.colostate.edu/pubs/insect/05525.html (last visited Feb. 28, 2015).

139. CAROL BUTLER & ELIZABETH EVANS, WHY DO BEES BUZZ, 153 (2010); MARK L. WINSTON, THE BIOLOGY OF THE HONEYBEE, 110 (1987); CHARLOTTE SEIDENBERG, THE WILDLIFE GARDEN, PLANNING BACKYARD HABITATS, 89, 89-90 (1995).

140. Parise, *supra* note 137.

141. Clarence H. Collison, *Beekeeping Basics*, PENN STATE, COLLEGE OF AGRICULTURAL SCIENCES COOPERATIVE EXTENSION, 21-22 (2002), http://pubs.cas.psu.edu/FreePubs/pdfs/agrs93.pdf (last visited Feb. 28, 2015).

142. Cleveland, Ohio, for example, requires a flyway barrier, consisting of either a fence or a dense hedge, of at least six feet in height, within five feet of the hive, and extending at least two feet on either side. Cleveland does not require a flyway barrier if

require a fresh water source on the beekeeper's property reducing the need for many of the bees to leave that property.[143]

Another concern that many express is the fear of a swarm.[144] A swarm occurs when the hive creates a new queen causing the old queen to leave the hive with a good portion of the bees following her.[145] Although a swarm can be intimidating, because the bees gorge on honey before leaving and have no hive to defend while in transit, swarming bees are docile and, unless they are attacked or bothered, the bees will move to a new location within a few hours to a day without incident.[146]

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the hive is at least 25 feet from the property line or on a porch or balcony at least ten feet from the ground. CLEVELAND, OHIO, ZONING CODE § 347.02(d)(1)(C) (2009).

South Portland, Maine has a similar flyway barrier, but requires it to extend at least ten feet in each direction. South Portland has no exception for hives located on balconies, unless they also qualify as more than 25 feet from the property line. SOUTH PORTLAND, ME., CODE § 3-79 (2012).

Fort Collins, Colorado also requires a flyway barrier if the hive is within 25 feet of the property line, but does not require one as long as the bees are at least "six feet above ground level over the property lines in the vicinity of the apiary." FORT COLLINS, COLO., MUN. CODE § 4-229 (1989).

Carson City, Nevada requires the flyway barrier to "surround" the hive on any side that is within 25 feet of a property line. It, likewise, has no exception for balcony or rooftop hives. CARSON CITY, NEV., MUN. CODE § 7.02.050 (2012).

Portland, Oregon requires a flyway barrier of six feet if the hive is located within 150 feet of any public walkway, street, or road or any public building, park or recreation area, or any residential dwelling. It, likewise, has no exception for hives located on balconies. PORTLAND, OR., CITY CODE § 13.05.015(C)(7) (2008).

Also, note that bees kept on balconies or roofs typically do not require a flyway barrier because the hive is already above human activity.

143. Ellensburg, Washington requires "a consistent source of water . . . at the apiary when bees are flying unless it occurs naturally." ELLENSBURG, WASH., CITY CODE § 5.30.260 (C)(5) (2012). "The water may be 'sweetened' with mineral salt or chlorine to enhance its attractiveness." *Id.* Cleveland requires a fresh water source to be maintained "throughout the day." CLEVELAND, OHIO, ZONING CODE § 347.02(d)(1)(D) (2011). And Carson City requires water only from April 1 to September 30. CARSON CITY, NEV., MUN. CODE § 7.02.040 (2012).

144. *See* FLOTTUM, *supra* note 1, at 140.

145. When this happens the bees will stay together in a swarm and rest on a close-by tree branch or other convenient area while scout bees look for a new home. Once the scout bees have identified a good location, the rest of the hive follows. *See Swarming and Its Control*, BASIC BEEKEEPING OPERATIONS, http://www.uky.edu/Ag/Entomology/ythfacts/4h/beekeep/basbeop.htm (last visited Feb. 28, 2015); *Honey Bee Swarms*, TENN. DEP'T OF AGRIC., http://www.tn.gov/agriculture/regulatory/swarms.shtml (last visited Feb. 28, 2015).

146. *Swarming and Its Control*, *supra* note 145; *Honey Bee Swarms*, *supra* note 145.

Bee clubs, like the ones identified above, and experienced beekeepers will often help relocate a swarm of honeybees. It is, after all, a free colony. E. C. Mussen, *Removing Honey Bee Swarms and Established Hives*, UNIVERSITY OF CALIFORNIA INTEGRATED PEST MANAGEMENT PROGRAM (May 2012), http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74159.html (last visited Feb. 28, 2015); e.*g., Swarm Control,* WASHINGTON STATE BEEKEEPERS ASSOCIATION, http://wasba.org/local-beekeeping-organizations/swarm-control/

All cities, regardless of whether they have passed ordinances specifically regulating micro-livestock, have long-standing nuisance laws to deal with issues of animal-related noise, odor, and safety. Most cities that have adopted micro-livestock ordinances limit the number of animals that can be kept per land area. For example, many of the cities that have adopted comprehensive micro-livestock ordinances have limited the numbers to eight chickens, two goats, and two to four beehives.[147] Some cities have step systems that allow more animals on larger parcels of land.[148] Other cities employ overall minimum area requirements and minimum area requirements per animal to regulate how many animals can be in one physical space.[149] Setbacks are also included in many city ordinances to regulate where the animals and their shelters can be placed on the property in relationship to neighboring residences and adjacent property.[150]

(last visited Feb. 28, 2015); *Honey Bee Swarm Removal Service in Maine*, ME. STATE BEEKEEPERS ASS'N, http://mainebeekeepers.org/beekeeping-resources/honey-bee-swarm-removal/ (last visited Feb. 28, 2015); *Swarms/Cutouts*, IND. BEEKEEPERS' ASS'N INC., http://www.indianabeekeeper.com/ (last visited Feb. 28, 2015).

147. *See infra* note 150.

148. *See infra* note 150.

149. *See infra* note 150.

150. Denver allows up to eight ducks or chickens combined, and up to two dwarf goats. DENVER, COLO., ZONING CODE § 11.10.10.1(A) (2010). But it requires that each chicken or duck have sixteen square feet of permeable land available to it, and each goat have 130 square feet. This means that to have the full complement of animals, the yard would have to have approximately 400 square feet of space in addition to the setbacks. For chickens, ducks, and goats, Denver has a fifteen-foot setback from neighboring structures used for dwelling and requires that the animals be kept in the rear half of the lot. § 11.8.5.1(B)(5). For bees, Denver has a five-foot setback from any property line and requires that hives be kept in the back third of the lot. § 11.8.5.1(A). Denver also requires adequate shelter for the animals—likely to protect them from the elements and predators. *See generally* DENVER, COLO., REVISED MUN. CODE § 8-81(a) (2015).

Seattle allows up to eight domestic fowl, four beehives, one potbelly pig, and three pygmy goats on any lot. SEATTLE, WASH., MUN. CODE § 23.42.052(C), (E)-(F) (2013). It then employs a step system for additional animals. For lots larger than 20,000 square feet, an additional small animal—which means either a dog, cat, or goat, may be kept on the lot for each 5,000 square feet area in excess of the 20,000. § 23.42.052(A). Seattle also allows other farm animals, including cows, horses, and sheep, to be kept on lots that are greater than 20,000 square feet. § 23.42.052(D). Seattle allows one of these animals per 10,000 square feet. § 23.42.052(D)(1). There is a 10-foot setback from any neighboring property for domestic fowl. § 23.42.052(C)(3). Also, it has a fifty-foot setback from the neighboring property for all farm animals, § 23.42.052(D)(2), but the definition of farm animal does not include potbelly pigs, fowl, or miniature goats. § 23.42.052. It has a ten-foot setback from neighboring occupied structures for chicken coops. § 23.42.052(C)(3). It has no setback for beehives that are situated at least eight feet off the ground or have a flyway barrier of six feet high extending at least twenty feet beyond the hive in both directions, otherwise the setback for beehives is twenty-five feet from the lot-line. § 23.42.052(E)(2).

To ensure that the city is not mandating poor animal husbandry practices, regulations should also allow people to keep at least four

Portland allows for up to three animals, including chickens, ducks, pygmy goats or rabbits, without requiring a permit or appearing to regulate much further. PORTLAND, ORE. CITY CODE § 13.05.015(E) (2008). If a person wants to keep more than three of these, or wants to keep up to four beehives, PORTLAND LAND USE CODE § 23.42.052(E)(1), the person must get a permit for a Specified Animal Facility. PORTLAND, ORE., CITY CODE § 13.05.015 (2008). This permit requires proof that all neighbors within 150 feet of the residence have been notified, and also requires that the animals are kept at least fifteen feet from any building capable of being used for human habitation. Like Seattle, Portland has an exception to the setback for beehives as long as they are located 8 feet above grade, or have a flyway barrier six feet in height extending twenty five feet in both directions. PORTLAND LAND USE CODE § 23.42.052. The permit also requires that the applicant demonstrate that the place where the animals are located can be kept clean, with adequate light and ventilation and free of nuisance, and can protect the animals from escaping and members of the public from unauthorized access to the animals. PORTLAND, ORE., CITY CODE § 13.05.015(C)(3)-(7) (2008).

Fort Collins, Colorado provides a step system for chickens and bees, but not for goats. *See* FORT COLLINS, COLO., MUN. CODE § 4-117, 4-233, 4-121. Any property can keep up to two pygmy or dwarf goats, two bee colonies, and eight chickens or ducks. § 4-117(b)(3)(a), 4-233(a)(1), 4-121(b)(1). Lots greater than ¼ acre can keep four bee colonies. § 4-233(a)(2). Lots greater than ½ acre can keep up to six colonies and twelve chickens or ducks. § 4-117(b)(3)(b), 4-233(a)(3). And lots greater than one acre can keep 8 colonies and six additional chickens per ½ acre. § 4-117(b)(3)(c), 4-233(a)(4). Also, Fort Collins allows that for each two bee colonies, one additional small beehive is permitted for sixty days to manage swarms as long as that hive that does not contain frames for collecting honey. § 4-233(b). In addition, if bee colonies can be kept at least 200 feet from any property line, there is no limit to the amount of bee colonies that may be kept. § 4-233(a)(5). Shelters for goats and chickens must be kept at least fifteen feet from any property line unless the owner contains written consent from that neighbor. § 4-121(b)(7), 4-117(b)(9). Chicken coops must provide at least four square feet per chicken. § 4-117(b)(6). Goat shelters must provide at least 150 square feet of space per goat and must be kept in the rear fifty percent of the lot. § 4-121(b)(3,5). Finally, Fort Collins requires chicken and goat shelters to be predator proof, designed to be easily accessed, and cleaned and maintained. § 4-117(b)(6), 4-121(b)(4). Chickens and goats must also be closed in the shelter from dusk to dawn. § 4-117(b)(8), 4-121(b)(6).

Hillsboro, Oregon and El Cerrito, California employ similar step systems. El Cerrito allows four hens as long as the property is at least 4,000 square feet. EL CERRITO, CAL., ANIMAL CONTROL CODE § 7.08.020(G)(2) (2011). Hillsboro allows three hens as long as the property is 7,000 square feet. HILLSBORO, OR., MUN. CODE § 6.20.070(A)(2) (2013). El Cerrito requires at least 10,000 square feet to keep goats. EL CERRITO, CAL., ANIMAL CONTROL CODE § 7.08.020(M)(1). El Cerrito requires a property of at least 5,000 square feet to keep one beehive. EL CERRITO, CAL., ANIMAL CONTROL CODE § 7.08.020(J)(1). That beehive must be twenty feet from an adjacent dwelling or five feet from the property line. § 7.08.020(J)(2). Hillsboro allows up to three beehives on any size residential property and also has a setback of ten feet from the property line. HILLSBORO, OR., MUN. CODE § 6.20.080.

Vancouver, Washington is the least restrictive. It allows up to three goats, if they are under 100 pounds, on any size property. VANCOUVER, WASH., MUN. CODE § 20.895.050(B) (2010). It also allows chickens, ducks, geese, or rabbits of any size lot with no number restriction. *Id.* It does provide in the ordinance that the keeping of animals is subject to already existing nuisance requirements. § 20.895.050(A). Vancouver does not mention bees in its code and does not appear to regulate them. § 20.895.050.

chickens and at least two goats,[151] because chickens and goats require companionship.[152] Protection from external predators can also be addressed in city ordinances, which can be done through requiring owners to put chickens and goats into coops and shelters at night.[153]

This discussion has taken place in the context of a residential district. Cleveland has a slightly more complex ordinance in that it has different regulations for residential districts and non-residential districts. *See* CLEVELAND, OHIO, ZONING CODE § 347.02 (2011). It also employs a step-system, allowing for one animal for a certain amount of square feet. In residential districts, it allows for one hen, duck, rabbit, or similar animal per 800 square feet, and one beehive per 2,400 square feet. § 347.02(b)(1)(A); § 347.02(d)(1)(A). The ordinance spells out that a standard residential lot in Cleveland is 4,800 square feet, so most households could keep up to six hens and two beehives. § 347.02(b)(1)(A); § 347.02(d)(1)(A). Setbacks for hens are five feet from the side-yard line and eighteen inches from the rear-yard line. § 347.02(b)(1)(B). Setbacks for bees are five feet from the lot line and ten feet from any dwelling on another parcel. § 347.02(d)(1)(B). Neither animal is allowed in the front or side yard. § 347.02(b)(1)(B); § 347.02(d)(1)(B). Cleveland only allows goats, pigs, sheep, or similar farm animals on lots that have at least 24,000 square feet–or a little more than a half-acre. § 347.02(c)(1). If a lot is that size or larger, two of these animals will be allowed, with an additional one for each additional 2,400 square feet. *Id.* Enclosures for these animals must be set back forty feet from the property line and at least 100 feet from the dwelling of another. *Id.* The non-residential districts are less restrictive, with one chicken or duck per 400 square feet, one beehive per 1,000 square feet, and one goat, pig, or sheep per 14,400 square feet. § 347.02(b)(2); § 347.02(c)(2); § 347.02(d)(2). This can allow for more intensive operations in lesser-populated areas—and also opens up room for urban farms in those areas.

151. FORT COLLINS, COLO., MUN. CODE § 4-117(b) (permitting the keeping of chickens), § 4-121(a) (permitting the keeping of goats) (2013).

152. Chickens are flock animals. *See* Bouvier, *supra* note 76, at 10897. They will become visibly upset, ill, and may even die without the company of other chickens. Chickens also naturally establish a pecking order where dominance is established down the flock. *Id.* Any time new chickens are added to an existing flock, the chickens will have to re-establish dominance through a new pecking order. *Id.* But if a single hen is added to an existing flock, that hen often receives more intense and more lasting abuse. *See* Pinky, *A Guide to Understanding the Chicken Pecking Order*, BACKYARD-CHICKENS, http://www.backyardchickens.com/a/a-guide-to-understanding-the-chicken-pecking-order (last updated Jan. 19, 2013). This means cities should allow, at a minimum, four chickens per lot. This way, the owner can always keep at least two chickens so that they can provide companionship to one another. It also allows the owner to introduce two hens at a time to the flock. This upsets the pecking order more fully, and gives the newer younger chickens a better opportunity to avoid unnecessary abuse. It is better for a city to allow more than four hens so that chicken-keepers can keep less productive hens and better regulate their flock.

Goats are herd animals. Suzanne W. Gasparotto, *Twenty Truths About Raising Goats*, ONION CREEK RANCH, http://www.tennesseemeatgoats.com/articles2/twentytruths06.html (last visited Feb. 17, 2015). While a single goat may be kept in the country to be the companion of other livestock, such as horses and cattle, in the city, that is not likely to be an option. Goats, moreover, are happier in the company of other goats. Like chickens, goats will be visibly depressed, and even ill, without sufficient companionship. *Id.* Thus, cities should allow, at least, two goats per lot. People may choose to keep two female goats—does—for milk, or a doe and a neutered male goat—wether—for companionship.

153. DENVER, COLO., REVISED MUN. CODE § 8.81 (2011); FORT COLLINS, COLO., MUN. CODE §§ 4-117(b)(6), 4-121(b)(4) (2013).

Additional micro-livestock protection can be prescribed through simple ordinance language requiring owners to ensure animals are fenced in properly as to protect them from escaping the premises.[154]

Cities should allow beekeepers to keep more than one hive for a number of reasons: it allows the beekeeper to compare the hives to determine hive health, it allows easier requeening of a queenless hive,[155] and finally good swarm management practices often depend on having the ability to split the colony into a new beehive.[156] Thus, it is a good idea for cities to allow backyard beekeepers to keep, at least, three hives:[157] two for hive health and maintenance, and the possibility of a third to properly manage swarms.[158]

Another approach local governments have taken is to require the owner to obtain a license or permit. Some cities' permits are relatively automatic and do not allow for much discretion on the part of the official who issues it.[159] Other cities issue permits or licenses after an evaluation of nuisance and sanitation concerns and consideration of the owner's prior record with the city.[160] Some cities require a license

154. Portland requires that the applicant demonstrate that the place where the animals are kept can be kept clean, with adequate light and ventilation, free of nuisance, and can protect the animals from escaping, and members of the public from unauthorized access to the animals. PORTLAND, OR., CODE § 13.05.015(C) (2008).

155. When a queen from one hive dies, a beekeeper may be able to introduce freshly laid eggs from the other hive that still have the possibility of being raised into queens. *Can a Bee Colony Replace Its Queen?,* EARTHSKY (Oct. 12, 2012), http://earthsky.org/earth/can-a-bee-colony-replace-its-queen. That way the queenless hive may be able to raise a new queen. *Id.*

156. FLOTTUM, *supra* note 1, at 141. Raymond A. Nabors, *Beekeeping Tips for Beginners*, UNIVERSITY OF MISSOURI EXTENSION (Jan. 2000), http://extension.missouri.edu/p/g7600 (last visited Feb. 17, 2015); David and Sheri Burns,*Welcome to Basic Beekeeping Lesson 18: How Many Hives Should I Start With*, LONG LANE HONEY BEE FARMS http://www.honeybeesonline.com/blesson18.html (last visited Feb. 17, 2015); Sara DeBerry, John Crowley, and James D. Ellis, *Swarm Control for Managed Beehives ENY-160*, UNIVERSITY OF FLORIDA IFAS EXTENSION (Nov. 2012), https://edis.ifas.ufl.edu/pdffiles/IN/IN97000.pdf.

157. Many cities are concerned that beehives should not be kept too close together for fear that they compete for access to pollen from nearby flowers. *See generally* Eckert, J. E., The flight range of the honeybee, 47 J. OF AGRIC. RESEARCH 257 (1933), http://naldc.nal.usda.gov/download/IND43968380/PDF. Bees, however, roam far and wide in search of food—up to a four-mile radius from the hive. *FAQ's,* INTERNATIONAL BEE RESEARCH ASSOCIATION, http://www.ibra.org.uk/categories/faq#FAQ_17 (last visited Feb. 28, 2015). Thus, keeping a few hives on a single property should not cause problems.

158. *E.g.*, FORT COLLINS, COLO., MUN. CODE, § 4-233 (2013).

159. Denver requires a livestock or fowl permit to keep chickens or goats, but requires no more than the provisions of the ordinance be met to acquire the license and a fee be paid. DENVER, COLO., REV. MUN. CODE § 8-91 (2011).

160. In issuing a license in Cleveland, evidence of "nuisance or conditions that are unsafe or unsanitary" and any "recorded violations" are considered and may be grounds for license denial. CLEVELAND, OHIO, HEALTH CODE § 205.04(b)(1) (2009).

or permit once any micro-livestock is present[161] or only after the owner has more than a designated number of specified micro-livestock.[162] By contrast, other cities only require a license for dogs and cats, but not for chickens and goats,[163] For cities that require permits, some charge a fee[164] and some limit terms to one or two years.[165] One city requires neighbors to be notified, and another has set up a process for receiving neighbor input.[166] Importantly, none of the cities with comprehensive micro-livestock ordinances require permission from neighbors in order to allow people to keep backyard livestock, perhaps correctly foreseeing that allowing one neighbor veto power over another is a good way to create or escalate neighbor disputes.[167]

161. Cleveland requires a license to keep any type of livestock, including chickens and bees. CLEVELAND, OHIO, HEALTH CODE § 205.04 (2009).

162. Portland allows for up to a total of three animals, including chickens, ducks, pygmy goats or rabbits, without requiring a permit or appearing to regulate much further. If a person wants to keep more than three of these, or wants to keep up to four beehives, the person must get a permit for a Specified Animal Facility. PORTLAND, OR., CITY CODE § 13.05.015(E) (2008).

163. El Cerrito requires an administrative use permit to keep goats. EL CERRITO, CAL., ANIMAL CONTROL CODE § 7.08.020(m)(1) (2011). Ellensburg, Washington requires a license for dogs and cats, but does not require a license for a household to keep up to two beehives and four hens. *Cf.*, ELLENSBURGH, WASH., CITY CODE § 5.30.080 (2007) (requiring license of dogs and cats), *with* §§ 5.30.260 *and* 5.30.310 (permitting chickens and bees without a license). Seattle, likewise requires a license for dogs, cats, pigs, and goats, but does not require one for chickens or bees. SEATTLE, WASH., MUN. CODE § 9.25.050 (2007).

164. Denver charges $100 annually for a livestock permit and $50 annually for a fowl permit. DENVER, COLO., REV. ORDINANCES § 8-91 (2011). *See* Jeremy P. Meyer, *Denver council delays vote on rule changes for backyard chickens,* THE DENVER POST (Apr. 19, 2011), http://www.denverpost.com/ci_17877542?source=infinite. Portland, Oregon charges $31 for a permit for anyone seeking to keep more than three chickens, ducks, rabbits, or pygmy goats. PORTLAND, OR., CODE § 13.05.015 (e) (2008). *See* Multnomah County, *Animal Codes,* MULTNOMAH COUNTY, *https://multco.us/health/records-and-regulations/animal-codes* (last visited Mar. 1,, 2015).

165. *E.g.*, Denver's permit is for one year, DENVER, COLO., REV. ORDINANCE § 8-91 (2011), and Cleveland's license term is two years. CLEVELAND, OHIO, HEALTH CODE § 205.04(c) (2009).

166. Portland's permit requires proof that all neighbors within 150 feet of the residence have been notified. PORTLAND, OR., CITY CODE § 13.05.015(B). Cleveland's Department of Health notifies neighbors about the license application and waits at least 21 days to hear back from them. It can consider any evidence that the neighbors submit when determining whether to grant the license. CLEVELAND, OHIO, HEALTH CODE § 205.04(b)(2).

167. For example, imagine the uproar that would be caused by requiring neighbor permission for a person to keep a dog or a cat. Since the nuisance concerns with these animals are similar, as demonstrated above, there is no need for the regulations to be more onerous. Fort Collins does require written permission from neighbors abutting the property to keep more than the maximum number of animals, and requires adult residents of the same unit to consent to animals kept in multi-dwelling units. FORT COLLINS, COLO., MUN. CODE §§ 4-117(b)(3)(c), 4-117(b)(4).

Cities should reflect on the costs a permitting system imposes on the city in relation to the benefit it provides. Developing the administrative systems for licensing may cost more than it will save in enforcement costs, as once cities allow for backyard livestock, cities typically report very few complaints or enforcement issues.[168] If a city decides to use a permitting process, one approach that cities might consider is partnering with a private organization to provide a class or an educational program in order to receive the license. For instance, Fort Collins requires the Humane Society to vouch that license applicants "have received such information or training pertaining to the keeping of poultry as the agency deems appropriate."[169] Right now, this appears to be a unique approach to licensing. This approach conserves city resources while educating those seeking to raise backyard chickens and goats in the best animal husbandry practices by those with expertise in the area.

When determining the method of regulating backyard keeping of micro-livestock, it is important to be aware of potential consequences that may occur from an overly burdensome process of licensing or a method of issuance or regulation that may allow for abuse of discretion. Any regulations that require an owner to seek a special type of permit or permission from a committee consisting of persons independent of the regulation decision-makers are subject to adverse discretion that may be in conflict with the original decision-makers' intent.[170]

Pittsburgh's ordinance shows the danger of using conditional use permits, or similarly burdensome permits, to regulate micro-livestock. After restricting livestock to property with 3 acres or more, Pittsburgh amended its ordinance to allow for chickens and bees in 2011.[171] It allows for three hens and two beehives per 2,000 square feet on an occupied and residentially zoned lot.[172] It allows one more bird for each additional 1,000 square feet and two more beehives for each additional 2,000 square feet.[173] It, however, requires the homeowner to seek a

168. *E.g.*, Chickens in the Yard, *A Case for Backyard Chickens in Salem*, MAGGIE'S CORNER (Sept. 2010) (collecting letters from several cities that report few or no complaints or enforcement issues after allowing backyard chickens), https://maggiescornerdotorg.files.wordpress.com/2014/03/research_packet_sept_2010.pdf.

169. FORT COLLINS, COLO., MUN. CODE § 4-117 (b)(5) (1987).

170. *See* Cleveland Heights, *Planning Commission,* CLEVELAND HEIGHTS OHIO (last visited Feb. 17, 2015) (providing information on the conditional use permit application process), http://www.clevelandheights.com/index.aspx?page=465

171. PITTSBURGH, PA., ZONING CODE §§ 911.04.A.2(a)(1), 912.07.B(8)-(9) (2013).

172. PITTSBURGH, PA., ZONING CODE §§ 912.07.B(8)-(9).

173. *Id.*

Special Exception to keep those chickens and bees as an accessory use.[174] The special exception requires the Zoning Board of Adjustment to hold a public hearing, to make findings of fact, and issue a written decision within 45 days of the hearing.[175] If the Board does not do so, it is considered a denial.[176] The Board is required to consider far more criteria than whether the application to keep chickens or bees meets the statutory requirements of the micro-livestock ordinance, including evaluating potential detrimental impacts on noise, health, safety, potential development, or property values.[177] This allows the Board to re-evaluate and re-weigh all of the concerns with raising chickens and bees in the city, even though the City Council had already made this legislative determination and set forth the criteria for when it was legal to do so within the city. This puts a substantial burden on each homeowner to fully argue why urban livestock should be allowed in the city before each iteration of the board, rather than just showing that the property meets the standards in the ordinance. It also consumes considerable city resources. Finally, according to advocacy groups, Pittsburgh is using the statute to allow urban agriculture in principle, but to deny it in practice–even when applicants meet the standards within Pittsburgh's ordinance.[178]

C. *Final Recommendations Exemplified through Existing City Ordinances*

This article is not intended to catalog all the many different ways that cities go about regulating[179] micro-livestock in general, but instead

174. PITTSBURGH, PA., ZONING CODE § 912.07.B.
175. PITTSBURGH, PA., ZONING CODE § 922.07.C.
176. *Id.*
177. PITTSBURGH, PA., ZONING CODE § 922.07.D.1.
178. *E.g.*, Pittsburgh Pro-Poultry People (P4), *Advocacy,* PITTSBURGH PRO-POULTRY PEOPLE (P4) (asserting that Pittsburgh's urban agriculture ordinance is too restrictive, because it requires a relatively large lot size in comparison to the average Pittsburgh lot, too expensive because it requires a conditional use permit, and too burdensome because of the hearing and procedural requirements. Finally, the group asserts that Pittsburgh has denied most of the permits, even though applicants were in compliance with the requirements the ordinance provides), http://pittsburghpropoultrypeople.blogspot.com/p/advocacy.html (last visited Mar. 1, 2015).
179. Many cities have allowed micro-livestock in some form for decades, or have never taken steps to make micro-livestock illegal, either under their zoning code, health codes, or animal codes. For instance, for over 20 years, San Francisco has allowed people to keep up to four chickens and two goats. S.F., CAL., HEALTH CODE, § 27 (1987) (allowing "not more than two female goats . . . for the exclusive use of the owner's family."); *Id.* § 37 (allowing no more "than four of the following Hares, rabbits, guinea pigs, chickens, turkeys, geese, ducks, doves, pigeons, parrots of any species, game birds of any species, or cats, within the residential districts"). Since the late 1970s, San Francisco also has exempted honeybees from its list of dangerous animals

identifies cities that have passed comprehensive micro-livestock laws recently in response to constituent efforts or in response to a developed policy or approach to urban agriculture. Three ordinances are recommended as relatively straightforward ordinances that other cities can choose to follow as a model—those of Denver,[180] last amended in 2012; Seattle,[181] last modified in 2011; and Fort Collins,[182] last modified in 2013. These ordinances show that the trend, over time, is to simplify the regulations to make it easier for constituents to follow and less burdensome for cities to enforce. Denver has, perhaps, the most straightforward ordinance. Seattle's ordinance, while slightly more complex, also makes a nice model.[183]

and has no other provisions to regulate them. *Id.* § 51. Many cities have long defined chickens as pets and do not seek to regulate them further, except through generally applicable nuisance laws. *See* BOISE, IDAHO, DEV. CODE, § 11-06-07.04.D(3) (2013); DALL., TEX., CODE § 7-1.1 (2013); INDIANAPOLIS, IND., REV. CODE § 531-101 (2011); JACKSONVILLE, FLA., CODE OF ORDINANCES § 656.1601 (2011); NEW ORLEANS, LA., CODE OF ORDINANCES § 18-1 (2011); RALEIGH, N.C., CODE OF ORDINANCES § 12-3004 (2013); PLANO, TEX., CODE OF ORDINANCES § 4-1 (2013); SPOKANE, WASH., MUN. CODE § 17A.020.040 (2012). And numerous cities have recently passed legislation allowing for chickens and bees. *See* SOUTH PORTLAND, ME., CODE OF ORDINANCES §§ 3-51, 3-71 (2008); MINNEAPOLIS, MI., §§ 70.10, 74.80 (2005); CARY, N.C., CODE OF ORDINANCES, §§ 5.3.4(J), 5.3.4(O) (2012); YPSILANTI, MICH., CODE OF ORDINANCES, §§ 14-13, 14-171 (2010); KANSAS CITY, MO., CODE OF ORDINANCES §§ 14-15, 34-21 (has allowed beekeeping since at least 1984); LITTLETON, COLO., MUN. CODE §§ 10-4-4, 10-4-14 (2010). A few cities have legislation allowing for goats, but not chickens or bees, but these ordinances appear to have been passed in response to a particular constituent without thought to a comprehensive micro-livestock policy or best practices. *E.g.,* LOVELAND, OHIO, CODE OF ORDINANCES § 505.16 (2011) (allowing two pygmy goats, but restricting weight to an unrealistic 60 pounds); CARL JUNCTION, MO., MUN. CODE, § 205.200(C) (2010) (allowing only one pygmy goat and thus mandating poor animal husbandry practices). Charlottesville, Virginia has an ordinance allowing three miniature goats, but has no ordinance regulating chickens or bees. CHARLOTTESVILLE, VA., CODE OF ORDINANCES, § 4-9 (2010). But, according to local advocacy groups, the ordinance does not ban those animals. Ian Lamb, *Albermarle Considers Allowing More Urban Agriculture and Livestock*, CHARLOTTESVILLE TOMORROW (Jul. 25, 2012) (noting that the city policy allows residents to have "chickens, bees and a maximum of three miniature goats," but that there is currently no ordinance regulating the chickens or bees), http://www.cvilletomorrow.org/news/article/12533-urban_agriculture/.

180. DENVER, COLO., REV. MUN. CODE tit. II, ch. 8.

181. SEATTLE, WASH., MUN. CODE tit. 9, ch. 25.

182. FORT COLLINS, COLO., MUN. CODE ch. 4.

183. It is important to note that Seattle also requires a license and has a separate statute that does not allow for miniature goats to leave the premises, "except for purposes of transport or when on property other than that of the miniature goat's owner with the permission of a lawful occupant of that property." SEATTLE, WASH., MUN. CODE § 9.25.084(H) (2014). At least one goat owner, Jennie Grant, author of *City Goats: The Goat Justice League's Guide to Backyard Goat Keeping*, has taken issue with this prohibition, arguing that goats do just fine walking with a leash, and that unnecessarily restricting their movement can lead to unhealthy and overweight goats. *See* GRANT, *supra* note 1, at 44.

Fort Collins' ordinance has more requirements than the other two, in that it has additional provisions addressing sanitation, predator-proof cages, and the health of the animals.[184] Fort Collins also has a unique provision of requiring any person who seeks to keep these animals to show that they have received training on keeping those animals from the Humane Society.[185] Fort Collins sets forth relatively straightforward requirements that are easy to follow and appear to be less burdensome for the city to enforce—mainly because it is outsourcing the permitting process to a local agency.

Before drafting a micro-livestock ordinance, a city should consider the needs of its residents and the lot sizes and land it has available for agricultural uses. Some cities, like Denver, draft ordinances with only a backyard model in mind, while others, like Cleveland, are thinking forward to using micro-livestock in a more integrated plan of urban agriculture that includes market gardens or urban farms disconnected from a residence. Cities should also take into account the amount of city resources required to implement a permitting scheme with multi-step approval processes or up-front site visits by animal control or other city officials as opposed to setting out clear and straightforward rules in an ordinance and only employing city resources to enforce those regulations upon complaint.[186] Finally, cities should look for other organizations to partner with, like State Extension offices, the Humane Society, or citizen groups with people experienced and educated in keeping small numbers of micro-livestock in the backyard or on urban lot. These groups and organizations can offer classes to would-be micro-livestock owners to teach them about best practices and help city officials draft regulations appropriate to their region.

184. FORT COLLINS, COLO., MUN. CODE ch. 4.

185. *See* FORT COLLINS, COLO., MUN. CODE, s*upra* note 153.

186. Cities should consider calling other cities that have passed these regulations to gather evidence on the number and kinds of complaints have arisen to make appropriate cost-benefit considerations. This author has called dozens of cities that have recently passed micro-livestock ordinances and low-level animal control officials have unofficially reported few to no complaints after ordinances were passed, but no official study has yet been done collecting this information.