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October 19, 2009

Valerie Frances, Executive Director, NOSB
USDA-AMS-TMD-NOP
1400 Independence Ave. S.W.
Room 4004-S, Ag Stop 0268
Washington, D.C.20250-0268

**RE: Docket No. AMS-TM-09-0060; TM-09-07
Animal Welfare Recommendation, September 14, 2009**

Thank you for the opportunity to provide comment to the NOSB regarding the *Animal Welfare* recommendation from the Livestock Committee of September 14, 2009.

The Accredited Certifiers Association (ACA) is a non-profit educational organization representing 40 USDA accredited certification agencies.

Our members are very appreciative of the efforts of the NOSB Livestock Committee for their work to draft a recommendation for the incorporation of animal welfare requirements into the National Organic Program Rule. We believe the incorporation of animal welfare guidelines into the Rule will not only provide clarity for producers and certification agents, but will also indicate to consumers that organic livestock products are being produced in a manner beneficial to the animals.

However, based on our review of the *Animal Welfare* recommendation document we urge the NOSB to change the status of this recommendation to a discussion document at the November 2009 meeting. Due to the importance of this topic, and since the adoption of this recommendation would entail a major regulatory change in the National Organic Program Rule, we are requesting that the NOSB permit additional time for discussion and comments.

ACA makes this request for the following reasons:

- The Animal Welfare recommendation of September 2009 differs greatly from the Animal Welfare Discussion document of March 10, 2009. The March 2009 document focused on the cleanliness of animals, body scoring and lameness and very little of this material is present in the September 2009 Recommendation. The 30 day comment period does not allow for detailed consideration of the new recommendation.
- As this recommendation will require a major regulatory change in relation to poultry and the requirement for pasture, we ask that additional time be allotted to permit the organic poultry community to discuss this requirement and provide comment to the NOSB.

*USDA-accredited certifying agents working together to ensure the integrity of
organic certification in the United States*

- ACA also recognizes that the Animal Welfare recommendation contains multiple topics which may overlap with the Proposed Pasture Rule currently in the rulemaking stage. We recommend that the NOSB take time to confer with the National Organic Program staff in order that requirements contained in an Animal Welfare document do not conflict with the upcoming Pasture Rule. ACA believes that the NOSB and the public must await publication of the Proposed Pasture Rule prior to presenting additional or conflicting recommendations.

Examples of the overlapping topics include:

(1) The addition of stocking rates in the Animal Welfare recommendation at 205.239(a), in comparison to the determination of stocking rates in the proposed pasture rule that are based on carrying capacity of the land. Fixed stocking rates have long been debated by the NOSB, and generally rejected due to wide diversity of geography and regional variation in climate and precipitation in the US.

(2) The extensive revision of §205.239 Livestock Living Conditions in the Animal Welfare recommendation. The Proposed Pasture Rule also contained an extensive revision of this section of the Rule.

Again, ACA urges the NOSB to reconsider proposing requirements that may overlap or conflict with the upcoming Pasture Rule.

Specific Comments

ACA would like to provide the following specific comments on the *Animal Welfare* recommendation.

1. We believe that the Animal Welfare document would provide additional clarity if the recommendation is revised to include a section pertaining to the general principles of improved animal welfare practices, and then include separate species specific guidelines sections. This revision would provide producers and certifiers with all requirements for a particular species in one location. Currently, various requirements for one species are located throughout the document.

As an example, in the current format, specific references to poultry requirements are contained in the following sections:

§205.238(a)(6)	§205.238(c)(10)	
§205.239(a)(2) & (3)	§205.239(b)(3)	§205.239(c)(5)

2. ACA supports the use of specific numbers to address such issues as space requirements for livestock and poultry. For reasons of equivalency we understand the use of the Canadian spacing requirements, however, we have two concerns with this. One is the speed and frequency with which the Canadian requirements could change, as their system for revision is a much more flexible system than the USDA utilizes. The 2nd concern is whether these numbers are actually appropriate to the production in the United States, and what the basis for these numbers was in Canada. Additional time for comment and discussion would allow producers to provide this information.

3. ACA does not support the requirement that producers must have a valid veterinary-client-patient relationship (VCPR) with a licensed veterinarian (§205.238(a)). We believe that the veterinarian-client relationship is more likely the rule than the exception, and producers are experienced enough to determine when they require veterinary assistance, but this should not be mandated. In many areas veterinarians that deal with large animals may not be available; veterinarians that have experience with organic methods may be even less available, and veterinarians with knowledge and experience with various species (beef, swine, poultry, and sheep) may not be available. We believe that this requirement will be burdensome to producers and could result in veterinary guidance that is not based on organic principles, just for the intent of meeting the client-patient relationship. In general the National Organic Standards (NOS) as written does not specify how a producer meets rule requirements, such as in §205.271 which requires a handler to implement a pest management plan; the NOS does not require that the handler contract with a pest management company to do this. We believe that this requirement in §205.238(a) exceeds the scope of the NOS.
4. ACA recommends the removal of the word *antibiotics* in section §205.238(b)(1) in both instances. It appears that this language was adopted from the Canadian Standards, which permit the use of antibiotics. We believe that the NOP Rule is clear that antibiotics are not permitted, and the inclusion here of antibiotics is unnecessary and confusing.
5. ACA recommends the removal of the new language of §205.238(b)(3) which prefaces the existing requirements and requires a parasite management plan. We believe that this requirement already exists in §205.201(a)(1) & (3) *Organic production and handling system plan* and also §205.238(a)(1) & (3) *Livestock health care practice standard*.
6. There are several instances where new text has been included, but this was not identified in “red” text or highlighted in any manner. These include:
 - §205.238(b)(2) *under veterinary supervision* is new wording; ACA supports the striking of this language, as administering synthetic materials allowed under §205.603; *under the supervision of a veterinarian* goes beyond the purview of an animal welfare requirement
 - §205.239(a)(1) *rotational pasture* is new wording; the inclusion of this wording will require significant regulatory change
 - §205.239(c)(2) *dangerous* is new wording; a definition is needed
 - §205.239(c)(4) *plants* is new wording
7. A number of key welfare issues are not addressed in this document; especially slaughter practices, euthanasia techniques, and transportation of livestock. The ACA urges NOSB to consult established private standards such as Humane Farm Animal Care and the Animal Welfare Institute for guidance in these essential areas.

ACA Proposal for an Organic Poultry Production Guidance Document

The ACA has just completed work on an Organic Poultry Production Guidance Document. This document is included here as Appendix # 1. We believe that the more detailed information provided in our document provides the clarity necessary to both producers and certifiers.

One of the main objectives for developing this Guidance Document is to provide standardization to the space requirements of poultry including outdoor space. Our discussion identified two issues relating to outside access:

- (a) that even when provided with outdoor access many of the birds do not go outdoors, especially laying hens, and
- (b) the layout and number of exit areas in some buildings is a limiting factor in encouraging the birds to go outside.

We believe that this issue needs to be addressed by including a requirement that pullets be provided with some degree of outside access, as there was general agreement that birds provided with outside access at a younger age continued to go outside. The general current practice is to provide outdoor access only after moving pullets into a laying house (at the age of 16-30 weeks). This issue is contentious. NOP Compliance and Enforcement Branch recently issued a noncompliance to one certifier – but no notice to all - requiring pullet outside access, with no previous notification or clarification from NOP, and no NOSB prior recommendation on this topic. ACA requests that the Livestock Committee address the issue of providing outside access at an earlier age.

Our Guidance Document included the following provisions to address these issues:

III. Living Conditions

F. Birds must have sufficient exit areas, appropriately distributed around the building, to ensure that all birds have ready access to the outdoors. Exit areas must allow the passage of more than one bird at a time.

IV. Outside Access

A. Outside access and door spacing must be designed to promote and encourage outside access for all birds on a daily basis, weather permitting. Producers must provide access to the outdoors at an early age in order encourage (train) birds to go outdoors.

Pullets must be provided with outside access from the age of 6 weeks providing they are fully feathered and weather permits. Broilers must be provided with outside access from the age of 4 weeks providing they are fully feathered and weather permits.

Once layers are accustomed to going outdoors, a brief confinement period to allow for nest box training is permitted.

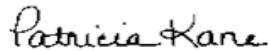
ACA is requesting clarification on §205.239(a)(3) Poultry open air runs. It is not clear if you are saying that the open air run must also have a protective facility and that water and feed must be provided outside (ii). Currently most poultry outside access areas are adjacent to a poultry

house, which would provide protection. An explanation of what the NOSB Livestock Committee considers an open air run is needed. ACA members and their clients indicated that providing water and feed outside would only lead to contamination of the feed by precipitation, increasing the amount of waste. The requirement of providing feed and water outside should be removed, just from a practical standpoint.

In the process of developing this Guidance Document, we solicited comments from member aca's who in turn solicited comments from their certified poultry producers. We also received comments from the non-organic poultry industry trade group and various technical specialists working with organic poultry producers. As a result of the comments received, revisions were incorporated into our Guidance Document. We have identified areas in the *Animal Welfare* recommendation that are not in agreement with our conclusions and these are noted below in Appendix # 2, Comparison of NOSB and ACA Proposals.

The ACA would like to thank the Board for your efforts on this very important topic and for an opportunity to comment on this issue.

Sincerely,



Patricia Kane
ACA Coordinator

List of Appendices:

- Appendix # 1 ACA Organic Poultry Production Guidance Document
- Appendix # 2 Comparison of NOSB and ACA Proposals
- Appendix # 3 Canadian Livestock Space Requirements with US Equivalent

Appendix # 1

Accredited Certifiers Association, Inc. Organic Poultry Production Guidance Document 9.30.2009

The Accredited Certifiers Association Poultry Outside Access Working Group has drafted the following guidance on **Organic Poultry Production** for producers and certification agents in order to provide consistency in the certification of organic poultry. We have reviewed many guidance documents and certification standards in developing this document. Particular attention was paid to harmonization with the EU requirements and the soon to be implemented Canadian Standards.

We are aware that the current level of organic poultry production practices may not be in compliance with this guidance, especially in the areas of outdoor access and space requirements. The Working Group believes that organic poultry production practices must be consistent and in line with consumer expectations, therefore this document attempts to “raise the bar” for organic poultry production. In addition, the NOSB Livestock Committee has indicated it will be addressing this issue in the near future.

The Working Group solicited comments from ACA members and received comments from ACA members, their clients, inspectors, and poultry industry specialists and representatives. The comments were reviewed by the working group, and suggestions incorporated.

Note: While the Working Group wholeheartedly supports the use of pasture in organic poultry production, we are not making a recommendation for a pasture requirement at this time. As the National Organic Program does not require pasture for poultry, and operations have been certified without the requirement of pasture, a change of this nature would have a severe economic impact on existing producers who do not currently utilize pasture. We have provided guidance on the management of pasture if a pasture based system is used.

The Working Group believes that the guidance provided in this document will be supported in order to provide guidelines for enforcement, as noted in the following comments from the Preamble of the Regulation:

Livestock Production - Changes Requested but Not Made

(5) Delineation of Space Requirements for Animal Confinement. The proposed rule did not establish space requirements for livestock living conditions but stated that a producer must accommodate the health and natural behavior of animals under his or her care. Some commenters stated their preference for space requirements because they are more uniform and enforceable. These commenters stated that some existing certification standards include space requirements in standards for livestock living conditions and that Codex guidelines support this approach. While not disagreeing that space requirements could be an effective certification tool for organic livestock production systems, we have not incorporated any such provisions in the final rule. We anticipate that additional NOSB recommendations and public comment will be necessary for the development

of space requirements. At its June 2000 meeting, the NOSB agreed that it would be premature to include space requirements in the final rule.

The Working Group would like to see all ACAs make use of this document to assess new applicants for compliance to § 205.239. Additionally, we would like to see all ACAs utilize this document to assess the compliance of currently certified operations to § 205.239 with the recommendation that five years be granted for potential redesign of infrastructure.

The members of the Poultry Outside Access Working Group consisted of representatives of the following ACA members representing 350 poultry producers raising in excess of 2 million birds:

CCOF	PCO
MOFGA	QCS
MOSA	WSDA
OTCO	

I. Origin of livestock (§205.236)

Poultry or edible poultry products must be from poultry that has been under continuous organic management beginning no later than the second day of life.

II. Feed Requirements (§205.237)

All requirements of the National Organic Program §205.237 Livestock Feed must be met.
Fresh water must be available at all times.

III. Living Conditions (§205.239)

A. Allowance for natural behavior including:

- (1) access to materials for dust bathing
- (2) adequate floor space areas, and outdoor run areas to escape from predators and aggressive behavior
- (3) perches must be provided for all laying hens at not less than 6” per hen. Perch area can include the alighting rail immediately in front of next boxes. Multi-tier operations are required to provide perch space for 55% of birds at one time.

B. Access to the outdoors, shade, shelter, exercise areas, fresh air and direct sunlight suitable to the age of the poultry, climate and the environment.

C. Ventilation must be adequate to prevent buildup of ammonia. Ammonia levels of 10 ppm are considered acceptable while 25 ppm is considered to be high.

D. For layers and mature birds, artificial light may be used to prolong the day length up to 16 hours. Light intensity should be lowered gradually to encourage hens to move to perches or settle for the night. Natural light should be sufficient indoors on sunny days so that inspector can read/write when lights are turned off.

E. Suitable Flooring

- (1) Mesh or slatted flooring under drinking areas to provide drainage;

(2) Houses with slatted floors must have 30% minimum of solid floor area available with sufficient litter available for dust baths;

(3) Litter must be provided and maintained in a dry manner.

F. Birds must have sufficient exit areas, appropriately distributed around the building, to ensure that all birds have ready access to the outdoors. Exit areas must allow the passage of more than one bird at a time.

G. Complete clean out of a poultry house is required if there have been adverse health issues with the previous flock; otherwise litter should be refurbished between flocks to maintain a sanitary environment.

H. Space Allowance

Poultry housing must be sufficiently spacious to allow all birds to move freely, stretch their wings and engage in natural behaviors. Perching areas and nest boxes may not be used in the calculation of floor space. Slatted/grated floors may be considered floor space.

	Pullets	Layers	Broilers	Turkeys/ Large Birds
Permanent Houses				
Indoor Floor Space	1 sq. ft./bird ^a	1.8 sq. ft./bird ^a	1 sq. ft./bird ^a	7.5 lbs. / sq. ft. ^b Examples: 15 lbs. = 2 sq. ft. 22.5 lbs. = 3 sq. ft. 30 lbs. = 4 sq. ft. 37.5 = 5 sq. ft
Outdoor runs (associated with permanent house)	1 sq. ft./bird	1.8 sq. ft./bird	1 sq. ft./bird	4 sq. ft / bird
Perch Space	--	6" per bird ^b	--	16" per bird ^b
Mobile Pens (without free range access to pasture)				
Structure Area	.7 sq. ft./bird ^c	1.8 sq. ft./bird ^a	.7 sq. ft./bird ^c	3.6 sq. ft./bird ^c

a Canadian Standards

b Humane Farm Animal Care

c Soil Association

IV. Access to Outdoors

- A. Outside access and door spacing must be designed to promote and encourage outside access for all birds on a daily basis, weather permitting. Producers must provide access to the outdoors at an early age in order encourage (train) birds to go outdoors.

Pullets must be provided with outside access from the age of 6 weeks providing they are fully feathered and weather permits. Broilers must be provided with outside access from the age of 4 weeks providing they are fully feathered and weather permits.

Once layers are accustomed to going outdoors, a brief confinement period to allow for nest box training is permitted.

- B. Birds may not be confined to the house due to a “threat” of an outbreak of disease. There must be a documented occurrence of an outbreak in the region or relevant migratory pathway, or state or federal advisory in order to confine birds.
- C. Producers must maintain records documenting periods of confinement. Producers must identify in the OSP how they plan to protect birds from disease and predators.
- D. For pasture based systems birds must be provided with access to a variety of vegetation. Management of pasture areas must be in compliance with §205.203 – §205.206. Birds must be protected from natural predators.

V. Health Care (§205.238)

- A. All requirements of the National Organic Program §205.238 Livestock health care practices must be met.
- B. Minimal beak trimming is allowed for protection of the flock and must be done in a manner that minimizes pain and stress, no later than 10 days old. Debeaking (severe beak trimming) is prohibited.
- C. Toe clipping or other surgical alterations are prohibited.
- D. Forced molting of poultry is prohibited. Withdrawal of feed to induce molting is prohibited.

VI. Euthanasia

- A. Producers must have plan for prompt humane euthanasia for sick or injured birds.
- B. The following methods of euthanasia are permitted¹:
 - (1) Hand held electrical or percussive stunning followed by neck cutting;
 - (2) Cervical dislocation must involve stretching the neck to sever the spinal cord and cause extensive damage to the major blood vessels.

¹ Based on American Veterinary Medical Association guidelines.

(3) Carbon dioxide or a mixture of nitrogen and argon gases, delivered in an appropriate container at acceptable concentrations.

(4) Decapitation

C. The following methods of euthanasia are not permitted²

(1) Suffocation

(2) Blow to the head by blunt instrument

(3) Equipment that crushes the neck including killing pliers or burdizzo clamps³

VII. Carcass Disposal

Carcass disposal, whether from daily mortality or emergency euthanasia, must be promptly addressed, both to reduce the incidence of disease transmission, and to avoid degradation of soil and water.

Following a euthanasia procedure, birds must be carefully examined to ensure that they are dead. Producers must maintain carcass disposal records to include flock identification, type of euthanasia, where disposed of.

Carcass disposal can be either on or off the farm, but must be in accordance with state and local laws. If disposed of on farm, process must not degrade soil and water quality. On farm composting of carcasses is permitted. Incineration of carcasses is permitted.

² Animal Welfare Approved, 3.2

³ Humane Farm Animal, H. 13.c

Appendix # 2. Comparison of NOSB and ACA Proposals

NOSB Animal Welfare Recommendation		ACA Guidance Document
a.	§205.238(a)(6) Prohibits beak trimming and de-toeing.	V. B. Permits minimal beak trimming, no later than 10 days old. Debeaking (severe beak trimming) is prohibited. V. C. Toe clipping or other surgical alterations are prohibited.
<p><i>Comment:</i> Comments received on our Guidance Document requested that beak trimming be allowed. This is a conventional management practice that does support improved animal welfare, as it limits the amount of injury to birds. This tool should remain available to producers.</p>		
b.	§205.239(a)(2)(ii) Perches	III.A.(3) Perches must be provided for all laying hens at not less than 6” per hen. Perch area can include the alighting rail immediately in front of next boxes. Multi-tier operations are required to provide perch space for 55% of birds at one time.
<p><i>Comment:</i> We received many comments regarding perches in our document. Producers requested specific requirements for perch space, and whether sufficient perch space was to be provided for all birds at the same time.</p>		
c.	§205.239(a)(2)(iii) Requires pasture §205.239(a)(3)(i) Resting & seeding of runs	III. B. Requires access to the outdoors, shade, shelter, exercise areas, fresh air and direct sunlight suitable to the age of the poultry, climate and environment.
<p><i>Comment:</i> While the ACA wholeheartedly supports the use of pasture in organic poultry production, we did not recommend pasture as a requirement. Since the NOP has not required pasture, and operations have been certified without the requirement of pasture, a change of this nature would have a severe economic impact on existing producers who do not currently utilize pasture. In addition, some currently certified facilities have little or no land available to access for pasture. One certifier estimated that 50% of their currently certified poultry operations would not be able to meet a pasture requirement and would be forced to surrender their certification.</p> <p>A requirement for poultry to have pasture, or runs that are covered in vegetation/rested & reseeded would require a significant regulatory change. If this is retained as a requirement, a lengthy transition time should be provided to producers to meet this new requirement, and there must be an acknowledgement that a certain number of currently certified operations will not be able to comply with the new requirement.</p>		

NOSB Animal Welfare Recommendation		ACA Guidance Document
d.	§205.239(b)(2) Requires disinfecting of houses using approved materials	III. G. Complete clean out of a poultry house is required if there have been adverse health issues with the previous flock; otherwise litter should be refurbished between flocks to maintain a sanitary environment.
<p><i>Comment:</i> In a previous draft of our Guidance Document we did recommend disinfection of the poultry house. Producer and inspector comments did not support this unless there had been health or disease issues. Many indicated that it was not necessary to utilize disinfecting materials as these would also kill the “good” bacteria. Often the removal of litter, use of water, fresh air, and sunshine are sufficient. Commenters also pointed out that broilers live a short term compared to layers and the requirement for disinfection is not necessary as disease is normally not a problem in broiler flocks. We revised our Guidance Document to remove the <u>requirement</u> of disinfection of poultry houses.</p>		
e.	§205.239(c)(5) Stocking Rates	III. H. Space Requirements – please review table in ACA Guidance Document.
<p><i>Comment:</i> Based on our calculation of equivalent space requirements between the Canadian requirements and US measurements, the NOSB recommendation exceeds these requirements in many instances. ACA developed a chart of the Canadian Livestock Space Requirements with the US equivalent. This is attached as <u>Appendix #3</u>. The space requirements contained in the ACA Guidance Document are based upon the Canadian requirements for the most part.</p> <p>For example: the indoor space recommendation for laying hens by NOSB is 2 sq.ft. per bird. The ACA recommendation is 1.8 sq.ft. per bird, which is the same as the Canadian requirement. The difference of .2 sq.ft per bird does not seem to be a large difference, until you consider that there may be thousands of birds in one poultry house, thus it increases the required square footage of the facility radically. Current organic industry practice is 1.5 sq ft per bird or less. Poultry producers comments reflect even the most minor of changes in square footage requirements for this reason. We urge the NOSB to maintain the identical Canadian requirements, not increase these, even by an apparently minor amount.</p> <p>For poultry outdoor runs ACA did not require an equivalent square footage to the Canadian requirements. In a previous draft of our Guidance Document ACA required a larger sq. ft. requirement for the outdoor run (equivalent with the Canadian requirement); however, this was reconsidered after we received comments indicating that not all the birds are outside at one time. We did revise our sq. ft. recommendation for outdoor runs downward based on comments received. Please refer to our comments regarding the requirement of pasture and the current state of US organic poultry production above – some currently certified poultry operations do not have available land for an increased requirement.</p>		

Appendix # 3

Canadian Livestock Space Requirements with US Equivalent

Livestock	Indoor Space		Outdoor Runs and Pens	
	Canadian Measurement	US Equivalent	Canadian Measurement	US Equivalent
Adult cows	6 m ² /head	64.6 sq.ft./hd.	9 m ² /head	96.8 sq. ft. hd.
Calves	Incremental increase of 2.5 m ² /head for young calves to 5 m ² /head for growing (1-year old) steers and heifers	26.9 sq.ft./hd. for young calves to 53.8 sq.ft./hd. for growing (1 year old) stock	5 m ² /head to 9 m ² /head, depending on the size of animals	53.8 sq.ft. to 96.8 sq.ft./hd. depending on the size of animals
Sheep and goats	1.5 m ² /head plus 0.35 m ² /head for each additional lamb/kid	16.1 sq.ft./hd., plus 3.8 sq.ft./hd. for each additional lamb/kid	2.5 m ² /head plus 0.5 m ² /head for each additional lamb/kid	26.9 sq.ft./hd., plus 5.4 sq.ft./hd.
Sows and piglets (up to 40 days' old)	7.5 m ² for each sow and litter	80.7 sq. ft. for each sow & litter	2.5 m ² for each sow and litter	26.9 sq. ft. for each sow & litter
Growing pigs				
a. up to 30 kg. (66#)	0.6 m ² /head	6.5 sq. ft./hd.	0.4 m ² /head	4.3 sq. ft./hd.
b. 30 – 50 kg. (66# - 110#)	0.8 m ² /head	8.6 sq. ft./hd.	0.6 m ² /head	6.5 sq. ft./hd.
c. 50 – 85 kg. (110# - 187#)	1.1 m ² /head	11.8 sq. ft./hd.	0.8 m ² /head	8.6 sq. ft./hd.
d. > 85 kg (> 187#)	1.3 m ² /head	14 sq. ft./hd.	1.0 m ² /head	10.8 sq. ft./hd.
Sows in group pens	3 m ² /head	32.3 sq. ft./hd.	3 m ² /head	32.3 sq. ft./hd.
Boars in individual pens	9 m ² /head	96.8 sq.ft./hd.	9 m ² /head	96.8 sq.ft./hd.
Laying hens	6 birds/m ²	6 birds/10.8 sq.ft.	4 birds/m ²	4 birds / 10.8 sq.ft.
Broilers	Maximum 21 kg./m ²	46 # /10.8 sq.ft.	4 birds/m ²	4 birds / 10.8 sq.ft.
Turkeys, geese and large birds	Maximum 26 kg./m ²	57.2 # /10.8 sq.ft.	17 kg./m ²	37.4 # / 10.8 sq.ft.
For pasture based operation and mobile poultry units (moved daily)				
Laying hens			2000 / hectare	800 / acre
Broilers			2500 / hectare	1000/ acre
Large Birds			1300 / hectare	540 / acre
Young rabbits	0.3 m ² /head	3.2 sq. ft./head	2 m ² /head	21.5 sq.ft./head
Pregnant Does	0.5 m ² /head	5.4 sq. ft./head	2 m ² /head	21.5 sq.ft./head
Does and offspring	0.7 m ² of floor space /doe and offspring	7.5 sq. ft. of floor space /doe and offspring	2 m ² /head	21.5 sq.ft./head
Bucks	0.3 m ² /head	3.2 sq. ft./head	2 m ² /head	21.5 sq.ft./head

1 meter = 39.27 inches
1 meter = 3.28 feet

1 meter² = 10.76 sq.ft.

1 kilogram = 2.2046 pounds

