



**Sustainable  
Agriculture  
Network**

# **Public Consultation Report - SAN**

## **Standard Development for Sustainable Cattle Production Systems**

*(August 2009 – March 2010)*

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July 2010

Sustainable Agriculture Network (SAN):

Conservación y Desarrollo, Ecuador · Fundación Interamericana de Investigación Tropical, Guatemala ·  
Fundación Natura, Colombia · ICADE, Honduras · IMAFLORA, Brazil · Nature Conservation Foundation, India ·  
Pronatura Sur, Mexico · Rainforest Alliance · SalvaNatura, El Salvador

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Pronatura Sur, Mexico · Rainforest Alliance · SalvaNatura, El Salvador

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## Summary

From August 2009 to March 2010 a public consultation process was conducted according to the “ISEAL Alliance Code of Good Practice for Setting Social and Environmental Standards” ([www.isealalliance.org](http://www.isealalliance.org)) with two 60-day rounds of on-line consultation, local workshops and trial audits.

More than 130 organizations of 34 countries (*Argentina, Australia, Botswana, Brazil, Chile, Colombia, Cook Islands, Costa Rica, El Salvador, France, Germany, Ghana, Guatemala, Honduras, India, Indonesia, Italy, Japan, Kenya, Mexico, Namibia, Netherlands, New Zealand, Nicaragua, Panama, Paraguay, Peru, Philippines, Sweden, Switzerland, Uganda, United Arab Emirates, United States and Uruguay*) posted their comments for a total of 3,500 comments. The majority of the participating stakeholders came from the environmental interest group (72%), followed by economic (20%) and social (8%) sectors. A distinct categorization showed the following participation statistics: producers (13%), NGOs (28%), academic & research (28%), industry and commerce (5%) and government (6%). Local consultation workshops were held in Brazil, Colombia, Costa Rica, Honduras and Nicaragua with the participation of producers and their organizations, representatives from universities and ministries, as well as environmental and animal welfare NGOs. Field tests were conducted in Australia, Brazil, Colombia, Costa Rica, Kenya and Nicaragua.

SAN's International Standards Committee of 12 voluntary expert advisers met during March and April 2010 to write the final draft of this standard and approved the current version in July 2010.

## Introduction

### The Sustainable Agriculture Network and Rainforest Alliance

The Sustainable Agriculture Network (SAN) is a coalition of independent non-profit conservation organizations that promote the social and environmental sustainability of agricultural activities by developing standards. Standard and policy development and review is coordinated by the SAN secretariat based in San José, Costa Rica. A Certification Body certifies farms or group administrators that comply with SAN's standards and policies. Certified farms or group administrators can apply for use of the *Rainforest Alliance Certified*<sup>™</sup> trademark for products grown on certified farms.



Since 1992, more than 600 certificates for more than 60,000 farms - including small family farms of cooperatives, as well as plantations - in 27 countries (Argentina, Brazil, Chile, Colombia, Costa Rica, Côte d'Ivoire, Dominican Republic, Ecuador, El Salvador, Ethiopia, Guatemala, Honduras, India, Indonesia, Jamaica, Kenya, Malawi, Mexico, Nicaragua, Panama, Peru, Philippines, Tanzania, USA, Vietnam and Zambia) have met the SAN standards on more than 500,000 ha for more than 20 crops: coffee, cocoa, banana, tea, pineapple, flowers and foliage and citrus. Other crops include aloe vera, apple, avocado, cherry, grapes, heart of palm, kiwi, macadamia, mango, pear, rubber and vanilla.

SAN representatives and their operating countries are: Conservación y Desarrollo (C&D), Ecuador; Fundación Interamericana de Investigación Tropical (FIIT); Guatemala; Fundación Natura, Colombia; ICADE, Honduras; IMAFLORA, Brazil; Nature Conservation Foundation, India; Pronatura Chiapas, Mexico; SalvaNatura, El Salvador and Rainforest Alliance.

### **The Sustainable Agriculture Network's Mission**

The Sustainable Agriculture Network (SAN) promotes efficient agriculture, biodiversity conservation and sustainable community development by creating social and environmental standards. SAN fosters best management practices across agricultural value chains by encouraging farmers to comply with SAN standards and by motivating traders and consumers to support sustainability.

SAN pursues its mission by:

- Integrating sustainable production of crops and livestock into local and regional strategies that favor biodiversity conservation and safeguard social and environmental well-being.
- Raising awareness among farmers, traders, consumers and business leaders about the interdependencies among healthy ecosystems, sustainable agriculture and social responsibility.
- Impressing upon business leaders and consumers the importance of choosing products grown on environmentally sustainable and socially responsible farms.
- Stimulating dialog among environmental, social and economic groups, North and South, about the benefits of sustainable agriculture.

### **Background of the SAN Cattle Standard development process**

The Sustainable Agriculture Network (SAN) Secretariat has been developing since 2007 in collaboration with CATIE (*Centro Agronómico Tropical de Investigación y Enseñanza*) and technical support from experts of Grupo GAMMA (Livestock and Environmental Management Program) the initiatives that led to this version of the Standard for Sustainable Cattle Production Systems.

CATIE's Grupo GAMMA has been working on sustainable cattle production in Latin America through a holistic development approach since 1995 integrating production, environmental and social issues with the goal of reducing environmental degradation, increasing productivity, generating environmental services and evaluating different incentives for the adoption of best practices and silvopastoral systems (SSP) on farms.

### **Process according to ISEAL Alliance Code**

This public consultation process was coordinated by the Sustainable Agriculture Network's Secretariat of the Rainforest Alliance's Sustainable Agriculture Program. As a full ISEAL Alliance member ([www.isealalliance.org](http://www.isealalliance.org)), Rainforest Alliance's Standards and Policy Manager Oliver Bach, hereby confirms that the SAN secretariat has strived at all times during the Addendum development-process to follow and implement the contents of the ISEAL Alliance Code of Good Practice for Setting Social and Environmental Standards ISEAL Code of Good Practice (P005 - Public Version 4 - January, 2006).

## Stakeholder outreach methods

The stakeholder outreach for the SAN Addendum consultation process was based on three methods:

1. Local Workshops with interested stakeholders in Brazil, Colombia, Costa Rica, Honduras, and Nicaragua.
2. Field tests were conducted in Australia, Brazil, Colombia, Costa Rica, Kenya and Nicaragua.
3. An online consultation platform in English, Spanish and Portuguese at [www.sanstandards.org](http://www.sanstandards.org).

## Statistics on stakeholder participation

### General statistics

The average participation rate during the two public consultation rounds compared with the total number of contacted stakeholders was 5.65%. The following are the respective statistics per main consultation activity:

### First round – online consultation

The first 60-day public consultation period for the SAN Cattle Standard was finished by October 10, 2009.

A total of 3.6% of the 2527 database-stakeholders commented. In total, the SAN Secretariat based at the Rainforest Alliance office in Costa Rica received electronically 2241 comments from 91 stakeholders via the public consultation website representing 76 stakeholder organizations or stakeholders, and 18 countries. This total does not include comments from the four local consultation workshops.

- Number of comments via website: **2241**
- Number of countries: **18**
- Number of stakeholders who have commented via website: **91**
- Number of organizations: **74**
- Average number of comments per stakeholder (website only): **24.6**

### List of countries represented

- |               |                |                              |
|---------------|----------------|------------------------------|
| 1. Argentina  | 7. El Salvador | 13. Netherlands              |
| 2. Brazil     | 8. Germany     | 14. Nicaragua                |
| 3. Canada     | 9. Honduras    | 15. Panama                   |
| 4. Colombia   | 10. India      | 16. South Africa             |
| 5. Costa Rica | 11. Indonesia  | 17. United Kingdom           |
| 6. Ecuador    | 12. Mexico     | 18. United States of America |

The number of participating stakeholders represents 3.6% of the total number of stakeholders in the database who were invited to log into [www.sanstandards.org](http://www.sanstandards.org).

### List of participating stakeholder organizations

- |   |  |
|---|--|
| 1. Agrolash, S.A.   | 38. Imperial College London                              |
| 2. AGROPRODUCTORA   | 39. Independiente  |
| 3. Agrosuisse, Brazil   | 40. Indesagro, S.A.                                      |
| 4. Asociación Macarena  | 41. Indian Veterinary Research Institute                 |
| 5. Betancé  | 42. Instituto Biotropicos                                |
| 6. Biotrópicos  | 43. Instituto de Desenvolvimento<br>Sustentável Mamirauá |
| 7. bmap consultores   | 44. ISEAL Alliance                                       |
| 8. BNDES  | 45. Isla De la Libertad                                  |
| 9. Brasil Diverso Solucoes Ambientais Ltda.                         | 46. JBS  |
| 10. Carnes Orgánicas de México                                      | 47. La florida y horizonte                               |
| 11. CATIE   | 48. Louis Bolk Institute                                 |
| 12. Cenasel   | 49. Ministerio de Fomento, Industria y<br>Comercio       |
| 13. Cisaagro  | 50. Mundial Food Sustentabilidade                        |
| 14. COHCIT, Honduras  | 51. ninguna  |
| 15. Colnodo Red de Desarrollo Sostenible                            | 52. Particular   |
| 16. Conservación y Desarrollo                                       | 53. PGP  |
| 17. consultor   | 54. Plator S.A.  |
| 18. consultor independiente   | 55. Productos y Procesos Sustentables S.A.               |
| 19. CORANTIOQUIA  | 56. Project Coaching Consultancy                         |
| 20. Embrapa   | 57. Rainforest Alliance                                  |
| 21. Empresa Cuesta Ambiental  | 58. SalvaNatura  |
| 22. Estudio Agronómico Posadas, Argentina                           | 59. Sistemas de Gestión Ecoalianza S.A.                  |
| 23. Facultad de Ciencias Agronómicas,<br>Universidad de El Salvador | 60. Starbucks  |
| 24. Fazenda Ecológica Pecuária Sustentável                          | 61. tellus   |
| 25. Fazenda Sabia   | 62. The Forest Trust                                     |
| 26. FCA Unesp Botucatu  | 63. Top Sales  |
| 27. FIIT  | 64. TUYOMOTOR S.A.                                       |
| 28. FMVZ-USAD   | 65. UNED   |
| 29. fnet  | 66. Uniagraria   |
| 30. Fundación Defensores de la Naturaleza                           | 67. Unilever   |
| 31. Fundación Natura - Colombia                                     | 68. Universidad Autónoma                                 |
| 32. Ganadería Internacional S.A.                                    | 69. Universidad Nacional                                 |
| 33. GLOBALGAP   | 70. Universidad Nacional Agraria                         |
| 34. ICADE   | 71. Universidade Federal de Roraima                      |
| 35. ICOMVIS-Universidad Nacional                                    | 72. Wildlife Conservation Society Brazil                 |
| 36. IDIAP   | 73. WWF – Brasil   |
| 37. Imaflora  | 74. Zootecnista  |

### First round – local workshops

The SAN Secretariat conducted the following local stakeholder consultation workshops:

#### Costa Rica:

1. San Jose (Hotel Corobici, September 7, 2009) with 23 stakeholders; list of organizations:
  - CEGESTI
  - CGUS
  - Colegio de Médicos Veterinarios
  - CORFOGA

- EARTH University
- Fundación Neotrópica
- Humane Society International
- Instituto Internacional en Conservación y Manejo de Vida Silvestre (ICOMVIS)
- MAG (Ministerio de Agricultura y Ganadería)
- Universidad de Costa Rica
- World Society for the Protection of Animals

The workshop lasted for 9 hours and participants worked actively in various smaller workgroups about environmental aspects, animal welfare, transport and slaughterhouse issues.

2. Cañas with 18 stakeholders (“*Subasta Ganadera*” in Cañas, Guanacaste Province, September 9, 2009) - all from the cattle producing sector:
  - CORFOGA
  - Cámara de Ganaderos local
  - Cattle estate representatives
  - Individual producers

#### Nicaragua:

1. Managua, August 19, 2009 at the Hotel Hilton Princess with 15 stakeholders representing the following organizations:
  - ANGAP
  - CISAAGRO
  - CONAGAN
  - Fondo Natura
  - GAINSA
  - Hacienda Cosiguina
  - Hacienda Genízaro
  - IICA
  - MIFIC
  - UNA

Three smaller workgroups worked on topics such as necessary records from operations, animal nutrition, fire use, prohibited veterinary drugs amongst others.

2. Juigalpa, September 25, 2009 with 18 stakeholders representing the following organizations:
  - Asociación Taurina
  - Asogacho
  - Cooperativa Mayales
  - MACESA
  - MAGFOR
  - Ucosemun
  - UNAG

Colombia

1. Bogotá, August 28, 2009 at Fundación Natura with 22 stakeholders representing the following organizations:
  - Agroambientalista
  - Agropecuario
  - CECODES
  - CIPAV
  - Consejo Nacional cadena cárnica - secretario técnico
  - FEDEGAN - Gestión Sostenible
  - Fondo para la Acción Ambiental y la Niñez
  - Ganadero
  - Ministerio del medio ambiente
  - Ministerio del medio ambiente - Asesor
  - The Nature Conservancy
  - Zootecnista
  - Zootecnista - EAAB
  
2. Montería, September 23, 2009 with 18 stakeholders (*conducted by Ingrid Ayub with support from Ana María Agudelo*) representing the following organizations:
  - ASODOBLE - Universidad de Sucre
  - Biotecnología de reproducción - Independiente
  - Corpoica
  - FEDEGAN - Coohorizonte
  - FRIGOSINU S.A - Directora de Calidad
  - Ganacor
  - Ganadería Rio Grande
  - Ganadero - Reserva Natural Betancí
  - Ganadero Independiente
  - Universidad de Córdoba
  - Universidad de Sucre
  
3. Villavicencio, September 25, 2009 with 17 stakeholders (*conducted by Ingrid Ayub with support from Ana María Agudelo*) representing the following organizations:
  - Universidad de los Llanos
  - Progreso - Acción Social
  - Particular
  - UNIMETA
  - Agroguaduales
  - Rancho J.J
  - Independiente
  - Ganatec Ltda.
  - Asociación de Ganaderos del Ariari - AGANAR
  - IDEAM - CI- INAP
  - MIDAS
  - Rancho Sprint

Brazil

1. Piracicaba, September 14, 2009 with 19 stakeholders representing the following organizations:

- ABCC MM
  - Boviplan
  - ESALQ Junior Consultoria
  - Estancia y Pati
  - IMAFLORA
  - Instituto Biotropicos
  - Instituto Economia UNICAMP
  - Minerva S.A.
  - Rede-Agronegocios
  - Terra Assesora
  - The Forest Trust
  - Viviani Agronegocios
2. Cuiabá, Mato Grosso, September 17, 2009 with 9 stakeholders representing the following organizations:
- Acrimat
  - Boviplan
  - FAMEV, UFMT
  - ICU
  - IMAFLORA
  - Mundialfood Sustentabilidade
  - WWF Brasil

## **Second round – online consultation**

The second 60-day public consultation period for the SAN Cattle Standard was finished by March 11, 2010. 169 stakeholders or 7.7% of the stakeholder database participated, 53% more than during the first round (91). 1303 comments were received in comparison to 2241 during the first round, which probably illustrates the significant improvement of the second draft compared to the first draft.

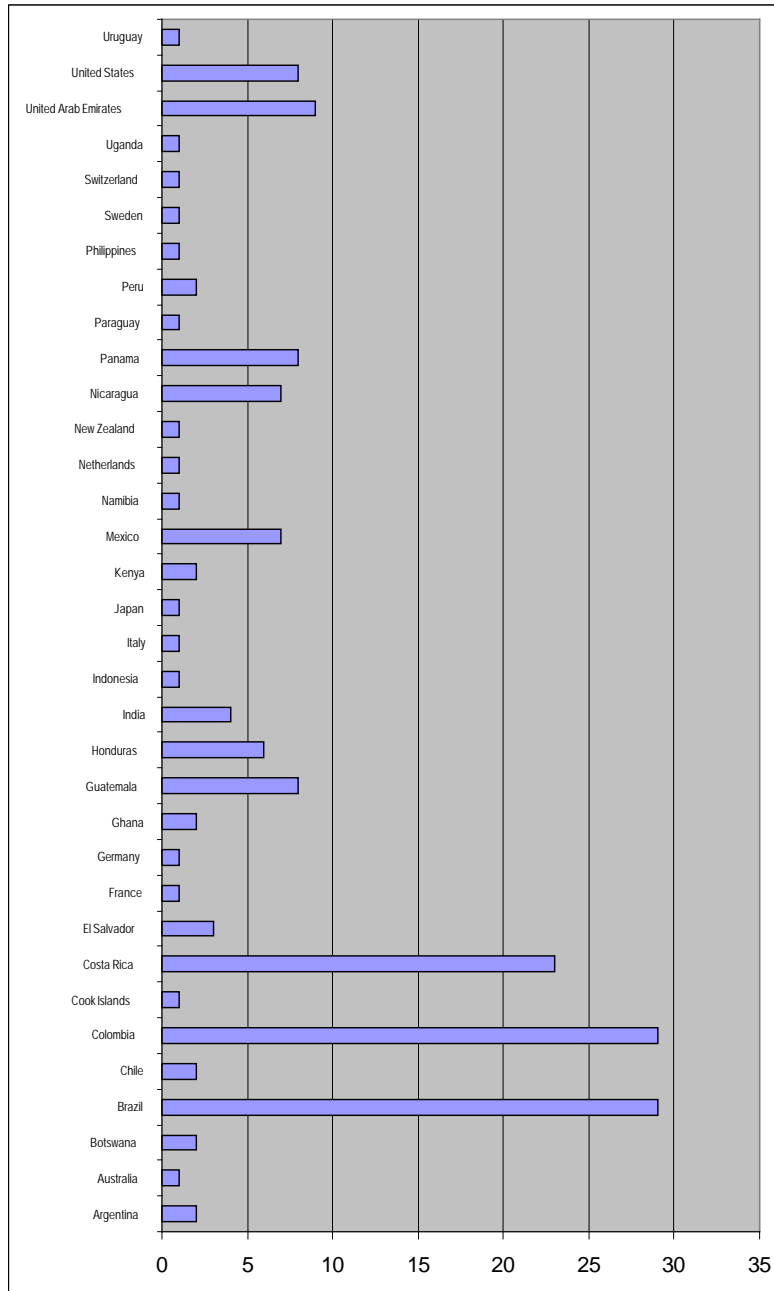
### **Participation statistics:**

- 34 countries participated with most comments coming from Brazil, Colombia and Costa Rica.
- 30% of the participation came from CAFTA-DR countries.
- The vast majority of the stakeholders came from the environmental interest group (72%), followed by economic (20%) and social (8%) sectors.
- Only 15% of the participants disagreed on the second draft, whereas 60% agreed.
- 76% of the participants posted comments.

**List of countries represented:**

Argentina, Australia, Botswana, Brazil, Chile, Colombia, Cook Islands, Costa Rica, El Salvador, France, Germany, Ghana, Guatemala, Honduras, India, Indonesia, Italy, Japan, Kenya, Mexico, Namibia, Netherlands, New Zealand, Nicaragua, Panama, Paraguay, Peru, Philippines, Sweden, Switzerland, Uganda, United Arab Emirates, United States, Uruguay.

The number of participating stakeholders represents 7.7% of the total number of stakeholders in the database who were invited to log into <http://sanstandards.org/>. The following graph illustrates the proportion (in percent) of participation by each one of the 34 countries:

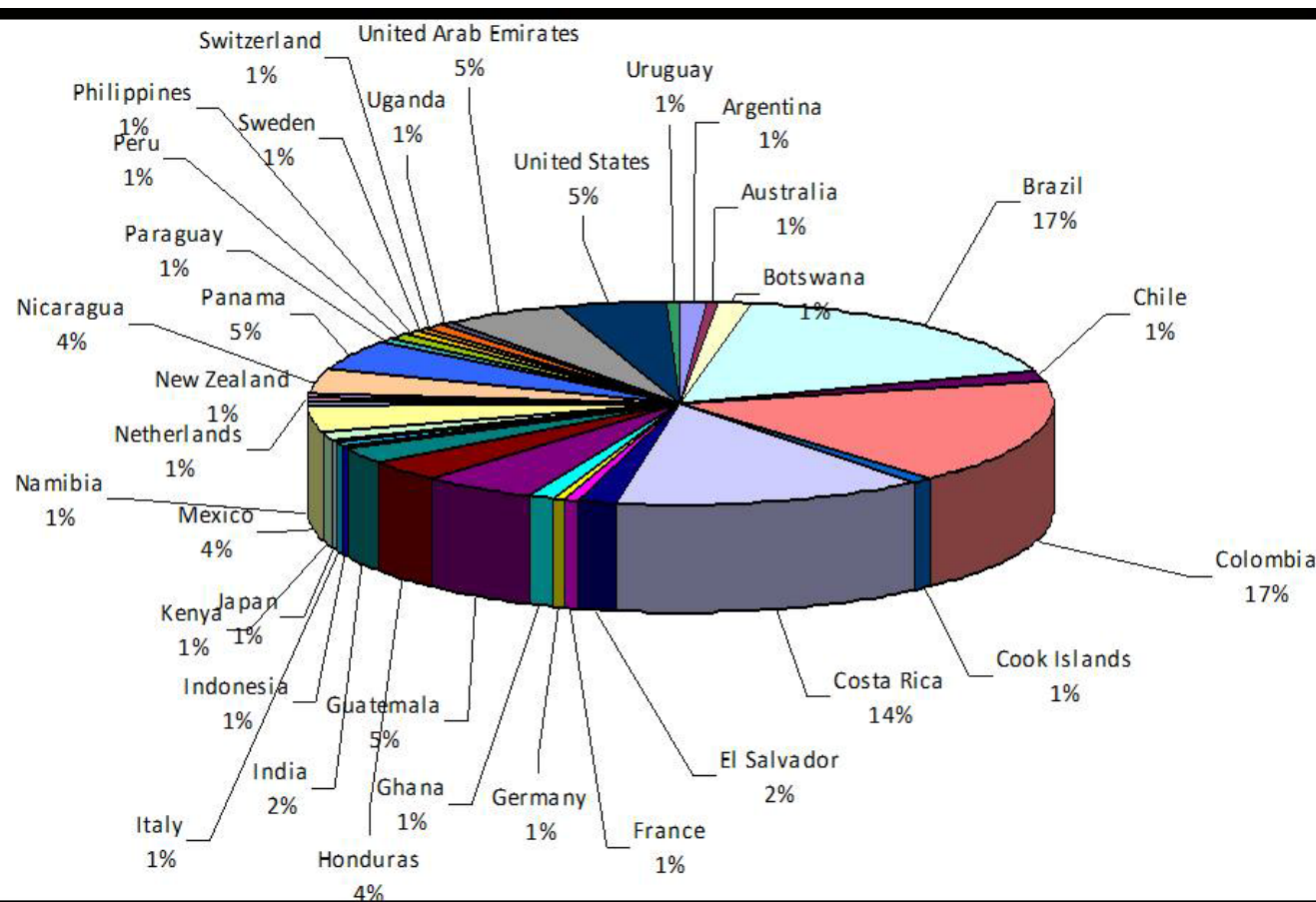


**List of stakeholder organizations represented**

<b>N°</b>	<b>ORGANIZATION</b>
1	ACP- Panamá
2	Aditi Organic Certifications Pvt. Ltd.
3	Agrícola El Cantaro / Ganadera El conchito
4	Agricultura Sostenible - Perú
5	Agro Eco-Louis Bolk Institute
6	AGROECONOMICA CONSULTORIA em Meio Ambiente e Pecuaria
7	Ard Colombia
8	Asociación Colombiana de Agroproductores Ambientalistas - Agroambientalistas
9	Asociación de Criadores de Búfalos- Costa Rica
10	Asociación de Ganaderos del Ariari - AGANAR
11	Auriverde
12	Betanci Reserva Natural
13	Better Cotton Initiative
14	Boviplan Consultoria Agropecuária Ltda.
15	CATIE
16	CATIE Mesoterra
17	Centro de Pesquisa Mokiti Okada
18	CERES India
19	Ceres Qualidade
20	CERES, GmbH
21	CIMS
22	CINDAP
23	Cisa Agro
24	Comité Nacional de Biodiversidad y Competitividad- Colombia
25	Conservación Internacional
26	Consultagro Ltda
27	CORFIDES Y APSENA
28	CORFOGA- Costa Rica
29	CORPORACION MUNDO NOVO
30	Correnteza
31	EALA
32	EARTH
33	ESALQ USP
34	Ethical Trading Initiative
35	FAEP
36	FAO
37	FAZENDAS REUNIDAS SERRA NEGRA
38	FIIT
39	FMVZ/USAC
40	FondeAgro
41	Forum for Agricultural Research in Africa (FARA)
42	Fundación CIPAV-Cali Colombia
43	Fundación Interamericana de Investigación Tropical
44	Fundación Natura
45	Fundación NaturaCertificación
46	Gainsa
47	Ganaderías Unidas
48	Ganatec Ltda
49	Greenpeace
50	Grupo Empresarial
51	Heifer International
52	Helveta
53	Herring Farms
54	Ibicatu Ltda
55	ICADE
56	IDEAM
57	IFC

<b>N°</b>	<b>ORGANIZATION</b>
58	IICA
59	Imaflora
60	Indacasa
61	Indian Veterinary Research Institute
62	Instituto Biotrópicos/ABCCMM
63	Instituto PROMEGA
64	International Food Safety Consultancy Ltd
65	Intertek
66	ISEAL Alliance
67	JBS Five Rivers Cattle Feeding
68	Joseaguila- Small Farmers Support
69	Julius Kühn-Institut
70	LABORATORIOS SERVINSUMOS S.A.
71	Latinorgánica
72	Lyon University
73	M&P Colombia
74	MAG
75	MAGFOR Nicaragua
76	MINAET- Costa Rica
77	Minister of Food & Agriculture- United Kingdom
78	Ministerio de Agricultura y Ganadería- Costa Rica
79	Ministerio de Desarrollo Agropecuario- Panamá
80	MKADC
81	MR CONSULTORIA RURAL
82	Nature Conservation Foundation
83	Nestle Centro América
84	OIT
85	Oxford University
86	Pinnacle Consulting
87	PNUD
88	Proyecto USAID/CBC
89	Rainforest Alliance
90	Rancho Sprint
91	Red de Desarrollo Sostenible
92	Red Tianguis Orgánicos
93	RG Unlimited
94	RPC Istmo Oaxaqueño
95	SAG- Chile
96	SalvaNATURA
97	Secretaria de Agricultura e Abastecimento do Estado de São Paulo
98	SENA
99	SENASA-SAG
100	SENP- Brazil
101	Serviço Brasileiro de Certificações
102	Smithsonian Institution
103	Solidaridad
104	Solidaridad Southern Africa
105	Stockholm Environment Institute
106	Sustainable Farm Certification Intl
107	SWISS COLLEGE OF AGRICULTURE
108	TechnoServe
109	Tips
110	Track Record Global Ltd
111	UDEC
112	UFF Latec
113	Uganda Agroforestry Development Network (UGADEN)
114	UN- Colombia
115	UNEMAT- Brazil
116	Unilever
117	Universidad Austral de Chile

N°	ORGANIZATION
118	Universidad Autónoma Chapingo
119	Universidad Autónoma de Chiapas
120	Universidad de Costa Rica
121	Universidad de La Salle
122	Universidad de San Carlos- Guatemala
123	Universidad EARTH
124	Universidad Nacional de Colombia
125	Universidad Nacional de Colombia, Instituto de Ciencias Naturales
126	Universidad Politécnica de Huastusco
127	Universidade de São Paulo
128	University of Botswana
129	University of California Davis
130	USAC-FMVZ
131	Via Verde Consultoria Agropecuária
132	Via Verde Consultoria Agropecuária em Sistemas Tropicais
133	Wildlife Conservation Society Brazil
134	Witvlei Meat-Namibia
135	WWF Sweden



## Second round – local workshops

In Nicaragua 70 people participated (minimum 40) and in Costa Rica 35 respectively.

### Costa Rica

- During the Cañas workshop on January 27, 2010 at *Cámara de Ganaderos de Cañas*, 10 producer representatives participated – amongst them board members from the *Cámara*. 90% of the participants already assisted to the first workshop in Cañas in September 2009.
- During the San José - workshop on February 3, 2010 at the Rainforest Alliance Costa Rica office, 25 stakeholders participated, representing government representatives, academic institutions, producer organizations, slaughterhouse staff, conservation and animal well-being NGOs.

In general, much less comments than during the first round of public consultations were received. The main comments focused on the importance of the agro-forestry systems, as well as recommendations on genetic and production improvement. For the scope of the standard the option of confinement should be considered, if feasible for climatic reasons, including the importance of forage banks.

### Nicaragua

- During the Juigalpa workshop on February 9, 2010 at Hotel La Quinta, 36 stakeholders participated – such as independent producers and veterinarians and representatives from ASOGACHO (Asociación de Ganaderos de Chontales), UNAG (Unión Nacional de Agricultores y Ganaderos), FADCANIC (Fundación para la Autonomía y Desarrollo de la Costa Atlántica), local government, Cooperativa Mayales, CISA AGRO (company), UNA (Universidad Nacional Agraria) and CATIE (Centro Agronómico Tropical de Investigación y Enseñanza).
- On February 10, 2010 the consultation workshop of Matiguás was conducted at *Instalaciones de Cooperativa Cacaotera La Campesina* with the participation of 34 stakeholders from government institutions (*Ministerio Agropecuario y Forestal de Nicaragua*), producer organizations, rural development projects, as well as independent producers and technicians.

### Colombia

- *La Dorada, Caldas*: lasted for about seven hours with the participation of 43 representatives from organizations such as:
  - Corporación Universitaria Santa Rosa de Cabal (UNISARC), Universidad de Cundinamarca (UDEC), Transferencia Tecnológica de Fedegan (Tecnigán), Alcaldía de Guaduas, Sistema Nacional de Información e Identificación del Ganado Bovino (Sinigán) and individual producers, cooperatives and associations.
- Another workshop was held in *Montería, Córdoba*: 12 stakeholders participated:
  - Federación Ganadera de Córdoba (GANACOR), Federación Colombiana de Ganaderos (FEDEGAN), Corporación Colombiana de Investigación Agropecuaria (CORPOICA), Universidad de Sucre (UNISUCRE), Universidad de Córdoba (UNICORDOBA) to individual farmers.

## Brasil

*Piracicaba, Sao Paolo (February 23, 2010):* Counted with the participation of 11 stakeholders from WWF Brasil, Conexao Delta G, Correnteza, PROJEPEC, Viviani Agronegocios, Boviplan Cons. Agrop., Agroeconomica and IMAFLORA.

## **Approval process**

During the final approval process during May, June and July 2010, the ISC reviewed further specific technical issues and the terms and definitions of the standard.

## **Trial audits**

Trial audits were conducted in countries where cattle farming represent an important economic activity. Extensive diagnostic audits based on SAN cattle standard drafts were performed in:

- December 2009:
  - Australia (8093 ha)
  - Costa Rica (875 ha farm)
  - Nicaragua (o 5,633 hectare farm with more than 2,000 animals mainly dedicated to animal breeding)
- February 2010:
  - Colombia (470 ha farm)
- March 2010:
  - Brazil (2 farms: 4120 ha + another one with 6,400 animals)
  - Kenya (2 farms: 80 ha + 4451 ha)

Some results of the trial audits include for Costa Rica:

- *Australia:* Cattle production in this region of the tropics will introduce a large scale dynamic to the application of the standard, as Australian states are known to be the largest in the world. For example, the areas under management are so vast that helicopters are often used to spot and muster mobs of cattle. Shade, as envisioned in the SAN standard, is not typical in this natural ecosystem which has some trees but large areas open areas.
- *Costa Rica:* A key challenge for traceability in this 875 ha farm relates to how to monitor the origin of animals bought at auctions.

In general there was good alignment between current practices on cattle farms and the Sustainable Agriculture Standard and Standard for Sustainable Cattle Production Systems.

## **Summary of main topics subject to comments**

### **First round**

The following is a summary of the main comments received during the first round:

- Change of Standard Name: *Norma para Sistemas Sostenibles de Producción Ganadera* – Standard for Sustainable Cattle Production Systems

- Include more terms and definitions
- Assure that Monitoring and Evaluation Indicators are covered by the standard
- Reduce number of critical criteria
- Broaden scope to milk production also
- Don't permit cloned or transgenic animals
- Scope does not apply to nomade production systems
- Scope should only apply to the following WWF ecoregions:
  - Tropical and subtropical moist broadleaf forests
  - Tropical and subtropical dry broadleaf forests
  - Tropical and subtropical coniferous forests
  - Tropical and subtropical grasslands, savannas and shrublands
- Excluded:
  - Flooded grasslands and savannas
  - Montane grasslands and shrublands
  - Temperate grasslands, savannas and shrublands

#### Contents issues:

- Waste Management: cover deposit of animals that die on the farm
- Create a new Chapter (Principle) about Climate care on cattle farms
  - Include nutrition aspects that reduce the emission of methane
- Fuse two chapters on Transport and Slaughterhouses into only one: Selection of Transport and Processing Service Providers
  - Include indicators on washing of trucks
  - One criterion about selection of transport service providers with link to Annex (Checklist)
  - One criterion about selection of processing service providers with link to Annex (Checklist)
- Traceability: create criterion on minimum stay period of animals on certified farms
- Reduce number of criteria with documents-records requirements for the sake of less "bureaucracy"
- Improved pasture: include concept of compatibility with shade conditions in silvopastoral system
- Prohibit the use of fire (exception: ecosystems where fire is part of their natural cycle of self-maintenance)
- Animal Well Being
  - Include criterion about maximum stay of animals in confinements
  - Allow the use of ivermectine, diclofenac and urea (controlled use)
  - Permit the use of hormones in the case of artificial insemination
  - Minimize pain – not avoid pain

### Second round

The following is a summary of the main comments received during the second round:

- Minimum stay of animals on certified farms is an issue to consider. The fattening process usually takes less than six months. This criterion will exclude some farms from certification. An option for discussion would be a minimum stay of six months. The respective current criterion could penalize those farmers that are more efficient and work towards reduction of time until slaughtering the animals.

- The farm must have strict controls on the origin of animals that have been bought. This is a critical issue to ensure that breeding is not causing deforestation in susceptible areas, such as the Brazilian Amazon.
- The presence of transgenic or cloned animals on certified farms is prohibited, but difficult to audit and is a critical criterion.
- The identification record system of cattle from its birth or arrival to its date of final disposal should be a critical criterion.
- If urea is allowed, it should not be only for nutritional blocks. Supplementation with urea is essential to ensure maximum performance of low digestibility tropical fodders. A key issue is to keep records.
- Ivermectines should be included again in the list of prohibited substances, because its impact on the soil macro-fauna.
- Diclofenac should not be prohibited. It is widely used.
- Natural hormones should be allowed to promote weight gain.
- Artificial insemination and embryo transfer should be allowed in sustainable cattle farms and needs to be specified.
- A separate criterion should be:
  - *The farm must ensure that breeds and cross-breeds are adapted to the farm's agro-ecological conditions.*
- A new criterion should include fodder banks as an important animal feed source.
- The pasture management plan should be approved by a competent professional.
- Silvo-pastoral systems are not applicable in all eco-regions. This is limited to some areas.
- If grazing in pastures with slopes steeper than 50% or 25° would be prohibited, then cattle farming in South America would not be applicable for standard implementation.
- The expression "Providing food and water" does not mean that animals will fulfill their requirements. A better statement would be "avoiding hunger and thirst".
- The farm should oversee service providers to safeguard responsible transportation and slaughter that minimizes stress and pain.
- Animals should be treated with anti-inflammatory medication to avoid possible complications as result of branding activities.
- According to Humane Society representatives, confinement is not a critical issue on animal well-being. It is more important to specify a minimum space for each animal.
- How should the SAN handle dairy farm male calves discarded after born? Should there be a criterion that regulates this?
- Examples of weaning should be eliminated. Each farm must define its own methodology.
- Chemical dehorning must be allowed if done properly.
- The standard should allow confinement as a way to reduce the development time of animals intended for slaughter. Is this consistent with the reduction of the carbon footprint.
- FAO (2006) estimate that 25% of livestock related emissions come from enteric fermentation and EPA (2009) estimates a 35% - value for the US. As a consequence criterion 14.1 should be a critical criterion.
- Bigger animals produce more methane. Creole breeds are more efficient.
- Fresh manure should not be incorporated into the soil. It causes burning of pastures.
- As the demand for livestock products is likely to rise, and hence pressure on ecosystems can increase, it should be carefully considered that good pasture land be restored to natural ecosystems. If productivity per hectare is reduced, this could result in the

increased demand for new land and possibly additional deforestation or ecosystem destruction, in general.

In general, the evolution of the different versions of the mentioned criteria, scope and structure issues can be observed in Annexes 1, 2, 3 and 4. Annexes 5 and 6 provide examples of the detailed comments received during the first and second round of the public consultation process.

## Annex 1: First Draft of SAN Cattle Standard (August 2009)

### ADDITIONAL CRITERIA FOR SAN'S SUSTAINABLE AGRICULTURE STANDARD

- 2.10 The farm must protect aquatic ecosystems against possible alterations caused by the cattle by preventing it from entering the protected areas by establishing vegetation or physical barriers. When moving cattle from one lot to another, measures must be taken to guarantee controlled crossing of cattle through aquatic ecosystems.
- 4.10 The farm must identify all available sources of water for the animals, including tanks, reservoirs and wells. The water supply system for cattle must include:
- Access parameters, including number of animals allowed, volume of available water and when it is available;
  - Protection measures for each water source against damage and contamination, preventing direct access by domestic animals.
- 10.6 In order to reduce the amount of methane gas produced by the cattle, the farm must define and implement a cattle manure and urine control, contention, disposition and utilization program, including the use of processing techniques such as biodigestors, compost, treatment ponds or other alternatives.
- 10.8 *Critical Criterion.* The farm must adequately dispose of medication containers to prevent environmental contamination and risks to humans. Medication containers must be eliminated or treated in accordance with local sanitation legislation or must be delivered to an official recollection system. Empty containers must not be reused.
- 10.9 *Critical Criterion.* Bio-infectious waste must be labeled and stored separately in containers to prevent contamination and accidents. Bio-infectious waste must be eliminated or treated in accordance with local sanitation legislation or must be delivered to an official recollection system.

### SAN COMPLEMENTARY PRINCIPLES FOR SUSTAINABLE CATTLE RANCHING

#### 11. INTEGRATED CATTLE MANAGEMENT SYSTEM

Summary of the Principle (not binding for audit purposes): The Sustainable Agriculture Network promotes livestock production in agroforestry systems, wherein feeding the animals is based on the resources produced in the farm itself, such as fodder, pasture and other supplements. Certified farms keep records of the origin of the animals and have established an animal health program, providing integrated disease treatment with preventive care and timely cures. Medication or supplements prohibited by SAN are not applied to animals, to avoid the use of substances known at international, regional and national level for their negative impact on animal welfare, human health or the environment.

- 11.1 The farm must implement a management plan, which includes at least the following:

- a. Zoning of the farm with identification of all areas destined for cattle; including marginal zones according to carrying capacity and their characteristics, for example, slope, stone cover, drainage and soil types.
  - b. Grazing control activities, including restrictions established for marginal zones.
  - c. Activities to establish and maintain tree cover, fodder banks, as well as woody or herbaceous leguminous species.
- 11.2 The farm must have a record of its animals by using individual and unique identifications. This record must contain the following elements:
- a. Record of each animal from birth or arrival to the farm, including origin, breeds or hybrids - in order to verify that the genotype can adapt to the farm's agro-ecological conditions -, as well as purchase or sale documents for animals not born in the farm.
  - b. Date of final disposal (sale or death).
- 11.3 The farm must design or adopt and implement a feeding program to ensure adequate nutrition of the animals. The farm must guarantee that calves consume colostrum in the first eight hours of life and receive milk from their mother, at minimum, during these first fifteen days of their life. The calves must receive milk until access to fodder or other food sources are sufficient for their development. The feeding program must include:
- a. A nutrition plan with details of food rations balanced in accordance with the physiological condition and production requirements of the animals, including vitamins, minerals, proteins and amino acids, fatty acids, energy and fiber sources, supplementation with hay or silage from fodder or other sources of food such as grains or fruit trees.
  - b. Estimation of fodder, grains and supplements with emphasis on inputs produced on the farm or purchased by the farm – native or improved pastures, fodder trees in pastures, natural vegetation, living fences, energy and protein fodder banks.
  - c. Availability of clean and fresh water, suitable for animal consumption, in sufficient quantity and continuity to meet their requirements.
  - d. Registration document from the national regulatory authority in the case of animal feed, concentrate or medicated feed, if applicable.
- 11.4 *Critical Criterion.* The following substances must not be fed to cattle:
- a. Transgenic crops or their by-products.
  - b. Hormones, chemicals or medicines that promote weight gain or stimulate higher production.
  - c. Urea.
  - d. Any animal by-product originating from the sacrifice of mammals or birds – for example blood meal, bone meal, mammal meat – or excrements from animals, such as bird manure or pig slurry.
  - e. Products not registered by the competent national government entity responsible for livestock feeding.
- 11.5 The farm must design or adopt and implement a herd health program, endorsed by a veterinarian or competent professional. The program must give priority to

the use of natural preventive treatments for animal diseases. The program must be updated once a year and must include the following:

- a. Records of activities, applied treatments and verification of withdrawal times, including collective sanitation events, veterinary medical check-ups, and diseases and occurred accidents, deworming schedule, post-natal treatment, received treatment and prescribed medications, in general.
- b. Certificates confirming that the herd is free of tuberculosis and brucellosis or of other diseases – or in the process of recovery – as determined by the national regulatory authority.
- c. Outbreak reports of mandatory reportable diseases, if applicable.

11.6 The farm's vaccination plan must cover all vaccines required by animal health regulatory authorities.

- a. The vaccination records must indicate: vaccine manufacturer, vaccine name, production lot, expiration date, pathogenic agent against which it immunizes and the person responsible for application.
- b. The vaccines must be administered in accordance with label instructions, respecting the method of administration and injecting only in the mid-neck region for intramuscular or subcutaneous injections.

11.7 **Critical Criterion.** The farm must not practice the application of routine veterinary treatments – including natural or biological ones - without prior verification of the need for its use by a competent professional.

11.8 Only in case preventive and biological practices are not sufficient to control diseases or parasites, the farm is permitted to administer medications or veterinary products authorized by the national regulatory authority. In case of application of any veterinary product, the farm must demonstrate the following:

- a. An inventory with the name of the product, active ingredient, dose, frequency of application and withdrawal time.
- b. Limitation of the use of antibiotics or coccidiostates in feed only to specific treatments authorized by a competent professional.
- c. Record of coprological analyses of a significant sample of the animal population to determine the need to administer anti-helminthic medication.

11.9 **Critical Criterion.** All medications must be administered following the instructions on the label or of the veterinarian. No expired medications must be administered. The farm must strictly comply with the instructions regarding withdrawal periods of the medication indicated on the label.

11.10 A record of the purchase of medications must be kept including: name of product, active ingredient, quantity, presentation, lot number and expiration date, vendor name and contact information, as well as date of purchase.

11.11 **Critical Criterion.** The farm must only use medications approved by and registered with the respective animal health regulatory authorities. The use of substances listed in Annex 1 of this document is prohibited:

- a. Organochlorinated substances;
- b. Macrocyclic lactones (Ivermectin);

- c. **Implants and anabolics;**
- d. **Antibiotics as preventive medication;**
- e. **Hormones to detect and induce heat in cows;**
- f. **Hormones for routine use.**

**11.12 The farm must store the inputs for cattle separately from agrochemicals or other toxic substances to prevent contamination.**

- a. **Feed must be stored separately and be clearly identified according to the use for different species.**
- b. **Medications must be stored in a safe place following the conditions indicated on the original label and the container.**

**11.13 The farm must keep, for a minimum of three years, all labels of the used feed compounds and the purchase invoices.**

**11.14 The farm must keep reproduction records for each animal. The records must include:**

- a. **Dates of exposure to natural or artificial insemination services and male/s to which exposed;**
- b. **Date of birth, sex and identification number assigned to the offspring;**
- c. **Date of weaning; weight of offspring at weaning; and – for dairy animals – lactation period.**

**11.15 The farm must establish methods to control consanguinity. The farm is permitted to use artificial insemination as a tool for genetic improvement and sanitation control, as well as the transfer of embryos as supplementary reproduction methods.**

## **12. SUSTAINABLE PASTURE MANAGEMENT**

Summary of the Principle (not binding for audit purposes): In tropical regions, sustainable pasture management is a key element to ensure maximum yield in cattle-raising operations. The farm selects its pastures considering agro-ecological parameters, resistance to grazing, nutritional value and adaptability to ensure optimum growth and availability. Shade trees reduce animal heat stress and improve production and reproduction values.

**12.1 The farm must select and plant appropriate grass species to achieve optimum and sustainable yields. Grass species must be selected based on criteria for:**

- a. **Adaptability to the climate and soil conditions of the farm;**
- b. **Resistance to grazing;**
- c. **Nutritional value;**
- d. **Resistance to pests, disease and drought;**
- e. **High productivity.**

**12.2 The farm must design or adopt and implement an integrated management program for optimal pasture production. The program must consider the following elements:**

- a. **Establishment and maintenance of herbaceous and woody leguminous species;**

- b. **Application of previously processed manure or organic fertilizers;**
  - c. **Utilization of biomass: leaf litter, living or dead cover, crop residues, tree or shrub pruning;**
  - d. **Estimated availability of pasture per year;**
  - e. **Adjustments every two to three years on average in animal carrying capacity;**
  - f. **Analysis of the pasture availability curve to control degradation of pastures and to ensure feeding resources in times of crisis.**
- 12.3 The farm must design or adopt and implement a program for the establishment and expansion of native tree cover. The farm's pastures must reach a tree canopy density of 20%. Pastures with slopes greater than 30% must be managed with tree canopy densities higher than 20%. Grazing is prohibited in pastures with slopes steeper than 50%. The program must contain the following elements:**
- a. **An inventory of current trees on pasture lots;**
  - b. **Areas where trees will be planted in the future;**
  - c. **Planting or natural regeneration methods;**
  - d. **Measurements for maintaining trees less than two meters in height, including protection from grazing animals;**
  - e. **Tree diversification and plant density increase in live fences;**
  - f. **Implementation schedule and responsible persons.**
- 12.4 The farm must implement measures to prevent erosion and ensure good soil cover. The farm must demonstrate the following:**
- a. **The use of fire for pasture management is prohibited.**
  - b. **Monitoring of erosion symptoms caused by the presence or over-grazing of cattle in pastures, crossing areas and steep slopes.**
  - c. **Grazing areas count with at least 80% herbaceous cover.**
  - d. **Use of preventive practices, for example pasture rotation, definition of appropriate rest periods depending on grass species.**
  - e. **Tools and materials that mitigate the continuous and daily crossing of animals through the same area.**

### **13. ANIMAL WELFARE**

Summary of the Principle (not binding for audit purposes): The farm strives for responsible cattle raising and provides dignified treatment to the animals while tending to its basic needs, without causing stress or mistreatment. Animals are provided shelter, food and water in adequate quantity and quality to ensure their good health and productivity. Farms have adequate physical facilities for the responsible management and treatment of cattle.

- 13.1 The farm must design or adopt and implement an animal welfare program, in accordance with the "five freedoms" established by the OIE (World Organization for Animal Health): provide space, food and water, and prevent stress and pain, as well as allowing natural animal behavior.**
- 13.2 The training program for workers in charge of the animals must cover all aspects related to animal welfare. The farm must keep training records and a document signed by the personnel in which the personnel commit to comply with good practices for animal welfare.**

- 13.3 *Critical Criterion.*** The farm must not use mechanisms or tools to beat or mistreat the animals. The operators must not use sharp objects or apply irritating substances to the animals. Throwing or letting the animals fall is not permitted, nor raising or dragging them by body parts such as tail, horns, ears or limbs. The farm must define the types of tool authorized for animal treatment. The use of prodders is only permitted in contact with the hind quarters. In case the animal does not respond to stimulus, no further attempts should be made to move it and the reason that the animal does not react must be found.
- 13.4** The farm must inspect all animals to verify possible impacts on health resulting from branding and restraining methods. The farm must not market sick animals, nor with cuts or injuries on their bodies. The farm must cure ailing animals before deciding on their fate.
- 13.5** The farm must have appropriate physical facilities, including pen, sleeve, loading area, funnel, drinking trough, rest area and supply warehouse. These facilities must be designed, built or retrofitted and used in such a way as to minimize animal stress during production, herd management, health care and marketing activities. The facilities must:
- a. Allow sufficient space for animals to move- minimizing the likelihood of injuries;
  - b. Supply clean spaces to rest;
  - c. Offer spaces to isolate and provide treatment to injured or sick animals;
  - d. Provide sufficient natural ventilation to prevent accumulation of odors, humidity and extremely high temperatures;
  - e. Protect animals from sun, rain and strong winds;
  - f. Be subject to a continuous cleaning program;
  - g. Have available sufficient deposits to handle manure and dirty beddings, with sufficient slope and drainage to facilitate loading and removal.
- 13.6** In semi-confined production systems, the facilities must be designed to include an area that will allow free animal movement, according to breeding and physiological conditions. Confinement must be regulated and the maximum stay time must not exceed twelve hours. Stables must have wide doors and smooth edges for the animals to enter and exit without injury.
- 13.7** The farm must design or adopt and implement an integrated pest control program for the infrastructure, based on ecological control principles for harmful pest populations. This program must give priority to the use of physical, mechanical, cultural and biological controls and the least use possible of chemical substances. The program must include:
- a. Activities to monitor pest populations;
  - b. Definition of monitoring and control methods, for example traps, lights or physical media.
  - c. Training for monitoring personnel and integrated pest management techniques;
  - d. Records containing information on pest infestations: dates, duration, extent and location of the infestation, type of pest, control mechanisms used,

environmental factors during the infestation, damages and estimated cost of damages and of control;

- e. Continuous inspections to ensure there are no habitats – such as food, water puddles or unsanitary conditions - that favor the reproduction of pests;
- f. Rodent control in feed storage and feeders;

**13.8 *Critical Criterion.*** The farm must consider each country's standards for the selection and use of an identification system – including, for example ear tag, microchip or ruminal bolus – and to prevent animal suffering. The farm must demonstrate the following:

- a. The use of potash, acids and any toxic product for branding the animals is prohibited;
- b. If the farm performs branding, the methods must be duly registered with the national regulatory authority;
- c. Tattoos or the use of liquid nitrogen must be preferred for branding;
- d. Heat branding is only allowed as long as unnecessary suffering for the animal is avoided and the procedure is executed by trained personnel.

**13.9** Castration must be carried out at the earliest age of the animal. If it is necessary to castrate adult animals, the farm must use local anesthesia and take precautions to control possible hemorrhages.

**13.10** Dehorning must be carried out at the earliest age of the animal and a non traumatic method must be applied.

## **14. LOADING AND TRANSPORTATION OF ANIMALS**

Summary of the Principle (not binding for audit purposes): Loading and transportation are carried out by trained personnel. The vehicles and facilities are appropriate to minimize the occurrence of accidents that may affect the physical integrity of the animals.

**14.1** The farm must design or adopt and implement a loading and unloading program. Loading and unloading must be carried out cautiously, with the least amount of noise possible, without harassment or use of unnecessary force. Unloading must take place as soon as possible once the destination has been reached and must be supervised by trained personnel.

**14.2** The farm must have an identification system for animals that cannot be sent to slaughter. The dispatch slip for transporting animals to slaughter must include a review of the medical records and verification of the withdrawal period for any veterinarian medication.

**14.3 *Critical Criterion.*** The farm must have pens, sleeves and loaders suitable for animals to walk to and from the vehicles. These facilities must comply with the following:

- a. The design must minimize the risk of accidents for workers and cattle;
- b. Loading and unloading ramps must have anti-slip surfaces;
- c. Ramps must be narrow enough to prevent animals from turning around or from two animals getting stuck;

- d. Ramps must have railings, so that animals can not fall from the ramp or be injured;
  - e. The loaders must fit flush and without spacing to the transportation vehicle;
  - f. The slope of the loader must not exceed 20 degrees;
  - g. The loader must not have sharp edges.
- 14.4 The farm must use suitable transportation vehicles in order to minimize the occurrence of accidents that could affect the physical integrity and health of the animals and thereby the quality of the meat. The number of animals to be transported must match the carrying capacity of the vehicle. Vehicles must comply with the following:**
- a. No sharp or pointed ends, screws or other objects that may injure or cause discomfort to the animal during transportation;
  - b. Provide protection against wind, rain, sun and cold;
  - c. Ventilation must introduce fresh air to eliminate excess heat, humidity and toxic gases, such as carbon dioxide or ammonia;
  - d. Allow the animals to travel standing and not have the head or limbs sticking out through railings;
  - e. Include a back door;
  - f. Contain sand or shaving bedding or other similar material;
  - g. The floor must not be slippery;
  - h. In case of covered vehicles, the height exceeds the height at the withers by one third, at minimum.
- 14.5 *Critical Criterion.* Animals must be inspected by a veterinarian or trained personnel to assess their fitness for travel. Animals not deemed apt to travel must not be loaded and must be tended to with consideration and efficacy. Animals with the following conditions must not be transported:**
- a. Sick, injured, weak or tired animals;
  - b. Animals that cannot stand unassisted or carry weight in each leg;
  - c. Animals that are totally blind;
  - d. Animals that cannot be moved without causing additional suffering;
  - e. Newborns with not cicatrized navels;
  - f. Females separated from their offspring less than 48 hours after birth;
  - g. Pregnant females in the last month of gestation;
  - h. Animals recently submitted to surgery and with not cicatrized wounds.
- 14.6 The farm must take permanent measures to ensure the carrier transports the animals to their destination in as little time as possible for a maximum travel time of not more than seven hours. The driver must have basic knowledge of animal welfare and must drive the transportation vehicle in a smooth way, avoiding jolts. Animals must be monitored during travel to verify their health. Upon arrival at their destination, animals must have abundant water available.**

## **15. ANIMAL HANDLING IN THE SLAUGHTER HOUSE**

Summary of the Principle (not binding for audit purposes): Farms with slaughter operations ensure animals receive adequate treatment while in the holding areas. The death or slaughter process is quick and pain-free for the animal through the use of stunning methods.

**15.1 Slaughter facilities must be constructed and designed to avoid elements of distraction. Slaughter areas must:**

- a. Be sufficiently narrow to prevent animals from turning around or two animals getting stuck;
- b. Have waiting pens with water available at all times;
- c. Subject to continuous cleaning.

**15.2 The personnel in charge must assess the conditions of the animals upon their arrival at the slaughter facilities to detect any welfare or health problem. If the animals are not to be slaughtered in the next 6 to 12 hours, water and necessary food must be made available and must continue to be fed at appropriate intervals.**

**15.3 The slaughter of females in the last third of gestation is not allowed. The farm must not attempt – during normal slaughter operations – to save the life of a fetus found alive when eviscerating the mother due to possible serious complications for the welfare of the newborn. Lactating animals with obvious swelling of the udder must be milked to alleviate discomfort.**

**15.4 Animals destined for slaughter must not be made to step on other animals. Violent procedures that may cause injuries or anguish must not be used for manipulating animals. Immobilization of animals for stunning – or slaughter without stunning – must consider the following:**

- a. Providing non slippery floors;
- b. Avoiding excessive pressure from the restraint materials;
- c. Not using restraining materials with pointed ends that may injure the animals.

**15.5 The slaughter house personnel responsible for stunning the animals must have the necessary training and competency to ensure that:**

- a. The animal is correctly restrained;
- b. Immobilized animals are stunned without delay;
- c. The stunning material is maintained, calibrated and used according to manufacturer's recommendations;
- d. The instrument is applied correctly;
- e. Stunned animals are slaughtered without delay;
- f. Animals are not stunned if not to be slaughtered immediately;
- g. Replacement stunning instruments are available in case the first method fails.

**15.6 Only the following stunning methods are permitted:**

- a. **Mechanical stunning must be applied in the frontal part of the head and perpendicular to the bone surface using penetrating and non penetrating captive bolts.**
  - b. **The device used for electric stunning must have the necessary power to consistently reach the recommended minimum level of 1.5 amps current for head stunning for cattle. The electric stunner must have a control device incorporated to indicate the tension RMS (effective tension) and the applied current RMS (effective current). These devices must be calibrated regularly at least once a year.**
- 15.7 The interval between stunning and bleeding must be less than one minute between both actions. The operator must determine that the animal is insensitive at the time of bleeding, by verifying the animal's vital signs. Bleeding must not start unless stunning has been carried out.**
- 15.8 *Critical Criterion.* The following methods must not be used:**
- a. **Restraining methods causing unnecessary suffering of conscious animals such as:**
    - **Suspending or raising the animal by the legs;**
    - **Indiscriminate and inappropriate stunning material;**
    - **Fracturing legs, cutting tendons or blinding;**
    - **Cutting the spinal cord with sharp objects;**
    - **Using electric current to immobilize.**
  - b. **Using the electric stunning method in a single leg to leg application.**
  - c. **Cutting the brain stem by perforating the orbit of the eye or the bones of the skull without prior stunning.**

### **Annex 1: List of Veterinary Substances Prohibited for Cattle**

1. Chloramphenicol
2. Clenbuterol
3. Diclofenac
4. Diethylestilbestrol (DES)
5. Dimetridazole
6. Fluoroquinolones (such as: Enrofloxacin – danofloxacin)
7. Furazolidone
8. Glycopeptides
9. Iprnidazole
10. Nitrofurazone
11. Other nitroimidazoles
12. Sulfadimethoxine
13. Sulfadimethoxine (sustained release)

**Annex 2: Products Permitted in Cattle Facilities**

<b>Products</b>	<b>Description, Requirements and Conditions for Use</b>
Acetic acid (vinegar)	Of natural origin and not mixed with prohibited substances
Alcohols (ethanol, isopropanol)	<ul style="list-style-type: none"> <li>As disinfectant ad for external medical treatment</li> <li>Prohibited in feed</li> </ul>
Antibiotics	<ul style="list-style-type: none"> <li>To save the life of an animal, to avoid suffering in individual cases.</li> <li>Treatment must be prescribed by a veterinarian and be recorded in the farm's documentation.</li> <li>The withdrawal period must be respected, as well as the conditions for use established in that regulation.</li> </ul>
Aspirin	As anti-inflammatory
Chlorine: calcium hypo-chloride, sodium hypo-chloride, chlorine dioxide	Disinfectant for facilities and equipment
Copper sulfate	For external use
Dextrose	For support treatment
Electrolytes	Must not contain antibiotics
Essential oils	As antiparasitics
Glucose	For support treatment
Glycerin	As nipple sealant, produced by hydrolysis of oils and fats
Herbal preparations	<ul style="list-style-type: none"> <li>Herbs and components of the preparation must be organic.</li> <li>Tobacco and its by-products are prohibited.</li> </ul>
Homeopathic preparations	Verify source and process
Hormones	<ul style="list-style-type: none"> <li>Use of hormones to stimulate growth and production is prohibited.</li> <li>Hormones may be used for treatment of a particular animal or to synchronize heat periods, under the responsibility of a veterinarian.</li> </ul>
Hydrogen peroxide	For disinfection of wounds
Iodine	Allowed as external disinfectant
Lanolin	For external use
Local anesthetics: (procaine, lidocaine)	<ul style="list-style-type: none"> <li>To be used by a veterinarian.</li> <li>The withdrawal period must be respected.</li> </ul>
Medication for animals	<ul style="list-style-type: none"> <li>To save the life of an animal, to avoid suffering in individual cases.</li> <li>Treatment must be prescribed by a veterinarian and be recorded in the farm's documentation.</li> <li>The withdrawal period must be respected, as well as the conditions for use established in the pamphlet.</li> </ul>
Mineral oil	External use and lubricant
Non synthetic external antiparasitics	<ul style="list-style-type: none"> <li>Essential plant oils extracted with water, oil or alcohol.</li> <li>Pyretrines may be used as external antiparasitics.</li> </ul>
Phosphoric acid	Only for equipment cleaning
Potassium permanganate	For disinfection of utensils
Probiotics	Verify source and process
Soaps	For use on cattle and facilities
Vaccines	As recommended by the Official Animal Health Authority.

## Annex 2: Second Draft of SAN Cattle Standard (January 2010)

### STANDARD FOR SUSTAINABLE CATTLE PRODUCTION SYSTEMS

#### 11. INTEGRATED CATTLE MANAGEMENT SYSTEM

Summary of the principle (not binding for audit purposes): Certified farms plan their land use respecting the conservation of ecosystems and vulnerable areas. Farms keep track of animals and have herd health and nutrition programs respecting SAN prohibited substances. The cattle feed is produced on farms and pests in farm's structures are controlled with Integrated Pest Management techniques.

- 11.1 The farm must have a land use plan, which identifies and maps areas for:**
- a. Cattle: pastures and other feedstock;
  - b. Ecosystem conservation;
  - c. Restricted and vulnerable areas.
- 11.2 *Critical Criterion.* Animals must be born and raised on a certified farm unless purchased. Purchased animals must stay a minimum of 12 months on certified farms. Purchase documentation must be kept for animals not born on a certified farm.**
- 11.3 *Critical Criterion.* The presence of transgenic or cloned animals on certified farms is prohibited.**
- 11.4 The farm must implement an individual identification record system of its cattle from its birth or arrival and its date of final disposal – sale or death.**
- 11.5 Farms must produce at least 80% of the feed and fodder of the animal, except when this is not possible due to adverse conditions such as drought, floods or pests.**
- 11.6 The farm must implement a feeding plan to ensure proper animal nutrition with information about meeting the animal's physiological and production requirements. The plan can include:**
- a. Availability of protein, energy and fiber from pastures, and supplementation with hay or silage from fodder, grains or fruits.
  - b. Mineral and vitamin supplements and feed concentrates if used, including records showing formulation details;
  - c. Use of urea in nutritional blocks only;
  - d. Efforts to ensure that concentrates or processed products do not come from genetically modified crops.
- 11.7 The farm must supply clean and fresh water in sufficient quantity and continuity. The water supply system must include:**
- a. Amount of water available per animal;
  - b. Measures to protect the artificial water sources from damage and pollution;
  - c. Water source inspection and maintenance activities.
- 11.8 *Critical Criterion.* The following products must not be supplied to cattle:**

- a. **Products not registered with the national government entity responsible for livestock feeding.**
  - b. **Any animal by-product originating from mammals or birds – such as blood meal, bone meal, mammal meat – or animal excrement, such as bird manure or pig slurry.**
  - c. **Feed and fodder that has been produced without complying the withdrawal period.**
- 11.9 The farm must implement a herd health program endorsed by a veterinarian, including measures to prevent diseases and parasites. The farm must only use cattle medications approved by and registered with the respective animal health regulatory authorities. It must cover a vaccination plan including those required by animal health regulatory authorities. Vaccinations must be administered strictly according to label instructions. The program must prefer natural treatments. Synthetic medicines may be used only after competent professional approval.**
- 11.10 *Critical Criterion.* All medications must be administered following either label instructions or as to dosage and veterinarian approved variations. A farm must strictly comply with label instructions regarding withdrawal periods and expiration dates.**
- 11.11 Herd health program documentation must include records of:**
- a. **Professional medical check-ups;**
  - b. **Diseases and accidents;**
  - c. **Treatment of diseases and accidents, parasites, as well as pre- and post-natal conditions;**
  - d. **Person responsible for application;**
  - e. **Administered vaccination and medications, including name of the product, active ingredient, dose, frequency of application, withdrawal time, expiration date, and the starting and ending dates of the application;**
  - f. **If legally required, certification that the herd is free of legally stipulated diseases;**
  - g. **Outbreaks of diseases, when legally required.**
- 11.12 *Critical Criterion.* Use of the following substances is prohibited:**
- a. **Substances included in SAN's prohibited pesticide list**
  - b. **Organochlorinated substances;**
  - c. **Anabolics to promote weight gain;**
  - d. **Antibiotics as preventive medication, except where surgery is involved;**
  - e. **Implants, except those used to induce heat in cows;**
  - f. **Hormones, chemicals or medicines to stimulate higher production;**
  - g. **Clenbuterol;**
  - h. **Diclofenac;**
  - i. **Diethylstilbestrol (DES);**
  - j. **Dimetridazole;**
  - k. **Glicopeptids.**
  - l. **Ipronidazole.**

- 11.13 The farm must implement a herd reproduction program, including its control of inbreeding and activity dates. The farm must ensure that breeds and cross-breeds are adapted to the farm's agro-ecological conditions.**
- 11.14 The farm must implement an integrated pest control program for farm structures. Priority must be given to using physical, mechanical and biological controls and avoiding chemical substances. The program must include:**
- a. Pest population monitoring;**
  - b. Integrated pest management techniques;**
  - c. Continuous inspections to ensure there are no habitats favoring pest reproduction;**
  - d. Records on pest infestations: dates, duration, location, type of pest, control mechanisms and estimated damage.**

## **12. SUSTAINABLE PASTURE MANAGEMENT**

Summary of the principle (not binding for audit purposes): In tropical regions, sustainable pasture management is a key element to ensure maximum yield in cattle ranching operations. Pastures are selected and managed by the farm based on agro-ecological parameters, characteristics such as resistance to grazing, nutritional value and adaptability to ensure optimum growth, availability and avoid pasture degradation.

- 12.1 The farm must implement and document a pasture management plan, including the following:**
- a. Management activities for native and improved pastures, including the selection of pasture species and tree species, if applicable;**
  - b. Grazing control activities, including pasture rotation and measures to conserve natural grasslands, and avoid over grazing, pasture degradation and soil erosion.**
- 12.2 Grazing must be the primary feeding activity. The farm must manage its pasture including the following elements:**
- a. Annual estimate of feed available from pasture to sustain the cattle, considering shortage periods;**
  - b. Annual adjustments of the cattle stocking rate;**
  - c. Planting and maintenance of herbaceous and woody leguminous species within pasture lots;**
  - d. Preference for the application of compost and manure.**
- 12.3 The farm must select pasture species to achieve sustainable cattle production based on the following:**
- a. Adaptability to the farm's climate conditions – including the shade level of the silvopastoral system - and soil characteristics;**
  - b. High growth and re-growth rates, nutritional value and digestibility;**
  - c. Resistance to grazing;**
  - d. Resistance to pests, disease, floods and drought.**
- 12.4 The farm must implement a pasture rotation plan considering:**
- a. Number and size of pasture lots;**
  - b. Number of animals grazing on each pasture lot;**
  - c. Daily grazing time on each pasture lot;**

- d. Pasture rest periods based on its stocking rate capacity.

**12.5 The farm must implement measures to prevent pasture degradation and soil erosion including:**

- a. Grazing areas maintain a vegetative cover of at least 90%;
- b. Monitoring and correcting soil erosion and compaction in pastures, including crossing areas and steep slopes;
- c. Grazing in pastures with slopes steeper than 50% or 25° must be avoided;
- d. The use of fire for pastures is prohibited, except for ecosystems where fire is part of their natural cycle.

### **13. ANIMAL WELFARE**

Summary of the principle (not binding for audit purposes): The farm practices responsible animal husbandry through an animal welfare program including safe transportation. The farm and its handling facilities do not mistreat the cattle. Animals are provided with shelter, food and water in sufficient quantity and quality to ensure good health and productivity. Farms have adequate physical facilities for the responsible management of cattle.

**13.1 Critical Criterion. The farm must implement and document an animal welfare program providing space, food, water and disease prevention, avoiding fear, stress and pain and allowing natural behavior.**

**13.2 Cattle handling facilities must minimize animal stress and the risk of accidents, including:**

- a. Sufficient and clean space for animals to move and rest;
- b. Spaces to isolate and treat injured or sick animals;
- c. Natural ventilation to prevent accumulation of odors, humidity and high temperatures;
- d. Protection from sun, rain and strong winds;
- e. Cleaning program;
- f. Storage for manure.

**13.3 Critical Criterion. The farm must not mistreat animals.**

- a. The farm must not use electric devices, sharp objects or irritating substances on animals, including potash, acids and any toxic product for animal branding.
- b. Throwing or dragging the animals by body parts in a pain inflicting way is not permitted.
- c. The use of electric prods or dragging the animals is only permitted in emergency situations when the life of human beings or animals is at risk.
- d. Surgical modification of bulls such as penectomy, penis deviation or installation of devices to prevent prepuce to erect are not allowed for identification of cows in heat.

**13.4 Animal identification techniques must minimize animal suffering and must be done by trained personnel.**

- a. Tattoos, ear tags, microchips, ruminal bolus or the use of liquid nitrogen are preferable to heat branding;

- b. Animals must be checked for potential health impacts resulting from branding and restraining.**
- 13.5 The farm must be prepared to perform swift and accurate euthanasia on sick or injured animals that do not respond to treatment.**
- 13.6 Animals' maximum time in confinements must not exceed twelve hours in 24 hours, except for calves or sick animals under treatment.**
- 13.7 The farm must feed newborns with colostrum to guarantee absorption of natural antibodies. Calves must consume milk until access to fodder or other food sources is adequate for their development. The farm must practice weaning implementing unstressful measures like a two-stage weaning process or weaning with the use of fences.**
- 13.8 When castrating, it must be done under the age of four months. If the farm acquires adult animals, castration must be done using surgical methods or emasculation. All animals must be provided with anti-inflammatory or pain medications, and monitored to prevent potential complication.**
- 13.9 When the farm prefers animals without horns, hot iron dehorning must be practiced on calves under five months of age. If the farm acquires adult animals, blunting or tipping is preferred as the less traumatic method.**
- 13.10 When artificial insemination is practiced and identification of cows in heat is required, detection methods must not attempt with animal wellbeing.**
- 13.11 There must be an inspection by competent personnel before an animal is deemed fit to travel. Animals of the following conditions must not be transported unless for the treatment of disease or injury:**
  - a. Sick or severely injured animals;**
  - b. Animals recently subjected to surgery and with open wounds;**
  - c. Baby calves with unhealed navels;**
  - d. Females separated from their offspring less than 48 hours after birth.**
- 13.12 The animal loading and unloading structures must have:**
  - a. Ramps with anti-slip surfaces, side railings and slopes under 40% or 20°;**
  - b. Tight fits to the transportation vehicle;**
  - c. No sharp edges.**
- 13.13 Farm transport vehicles and procedures and those contracted externally must comply with the requirements of the Annex.**

#### **14. REDUCING THE CARBON FOOTPRINT**

Summary of the principle (not binding for audit purposes): Certified cattle ranching operations seek to reduce greenhouse gas emissions through improved diet, optimized productivity, manure and urine processing, and agro-forestry systems.

- 14.1 The farm must make efforts to reduce methane emissions from cattle's enteric fermentation considering:**

- a. Improving digestibility of feed using physical methods to cut fodder and controlling pasture maturity;
  - b. Providing dietary supplements, preferably from local sources;
  - c. Optimizing productivity per animal through genetic improvement of the herd and reducing the development time of animals intended for slaughter.
- 14.2 The farm must control, contain and treat the manure and urine produced in the stable to contribute to the reduction of methane emissions considering:
- a. Aerobic treatment: composting as input for organic fertilizer;
  - b. Anaerobic treatment, for example the use of biodigestors for burning of methane;
  - c. Incorporating fresh manure into the soil.
- 14.3 In areas where forests represent the original natural vegetation (see ecorregions in Figure 2), the farm must implement a plan to establish or expand native tree cover considering the following:
- a. An inventory of existing trees in pasture lots;
  - b. Areas where trees will be planted in the future;
  - c. Measures to protect young trees from cattle;
  - d. Tree diversification and density increase in live fences;
  - e. A minimum 50% proportion of native trees.
- 14.4 The farm's pasture lots must have a tree canopy density of minimum 20%. If the farm's agro-ecological conditions do not tolerate shade, the farm must dedicate at least 30% of its land to the conservation or recovery of representative ecosystems. Pastures with slopes greater than 30% must be managed with a tree canopy density higher than 20%.

## 15. ADDITIONAL ENVIRONMENTAL REQUIREMENTS FOR CATTLE FARMS

Summary of the principle (not binding for audit purposes): Certified cattle farms minimize the access of cattle to ecosystems and establish a balance between the presence of wildlife and cattle. Farms dispose hazardous waste without negative impacts on human health and the environment.

- 15.1 The farm must protect aquatic and terrestrial ecosystems from livestock damage by establishing physical barriers or offering sufficient water supply in the pasture system. When cattle moving involves crossing through aquatic and terrestrial ecosystems, the farm must establish the routes on a farm map.
- 15.2 The farm must be responsible for the co-existence of its cattle and local wildlife. The risk of wild predators attacking the cattle must be minimized. When the cattle are in danger of being attacked the farm must work with local environmental authorities and specialist groups on a solution. The following measures must be considered:
- a. Placement of cows and their offspring in internal pasture lots;
  - b. Placement of larger animals, including with horns, in peripheral pastures adjacent to or near forest areas;
  - c. Installation of electric fences in peripheral pastures adjacent to or near forest areas.

- 15.3 The farm must store medications and empty containers in a manner that minimizes potential negative impacts on human health and on the environment. Medications must be stored in a safe place in compliance with original label and container instructions.**
- 15.4 Bio-infectious waste on the farm must be lawfully treated and discharged or delivered to an official recollection system.**
- a. Bio-infectious waste must be labeled and kept separately in identified sites with restricted access to prevent contamination and accidents until its treatment.**
  - b. The animals that die on the farm must be treated and promptly buried to eliminate the risk of contamination.**
- 15.5 Treatment and disposal of residues from liquid medical treatments must be handled as residues from pesticides, according to the requirements of the Sustainable Agriculture Standard.**

## **Annex Cattle transportation monitoring indicators**

- **The number of animals to be transported corresponds to the vehicle's load capacity.**
- **Transportation vehicles are suitable to minimize the occurrence of accidents that could affect the physical integrity and health of the animals, and thereby the quality of the meat.**
- **Vehicles comply with the following requirements:**
  - **No sharp or pointed ends, screws or other objects that may injure or cause discomfort to the animals during transportation;**
  - **Provide protection against wind, rain, sun and cold weather;**
  - **Ventilation introduces fresh air to eliminate excess heat, humidity and toxic gases, such as carbon dioxide or ammonia;**
  - **Allow the animals to travel standing and not have the head or limbs sticking out through the railings;**
  - **Include a back door;**
  - **Contain sand or shaving bedding or other similar material and have no slippery floors;**
  - **In case of covered vehicles, the height exceeds the height at the withers by one third, at minimum.**
- **The provider and driver have basic knowledge about animal welfare.**
- **The carrier transports the animals to their destination in the shortest time possible.**
- **The transportation vehicle is driven in a smooth way and the driver avoids jolts.**
- **Long periods of travel are interrupted with stops for rest and to give the animal food and water.**
- **Animals are monitored during travel to check their health condition.**
- **Upon arrival at their destination animals have abundant water available.**

## Terms and Definitions

- **Aerobic treatment:** Processing of organic matter by using oxygen to degradate compounds.
- **Anaerobic treatment:** Oxidation of organic matter in absence of oxygen.
- **Animal welfare:** Everything related to animal comfort beyond the mere absence of disease, encompassing the complete state of physical well-being, It considers the state of the animal's body and mind and how well its nature fares in its environment, considering the animal's comfort, accommodation, treatment, care, nutrition, disease prevention, responsible care, management and humane euthanasia when necessary.
- **Aquatic ecosystem:** Lagoons, lakes, rivers, creeks, streams, swamps, estuaries, flooded savannahs, peat bogs and other natural water bodies.
- **Biodigester:** Closed container, airtight and waterproof, where organic material is placed inside with water to ferment excreta of animals, vegetable waste or other. The material is decomposed, producing methane and organic fertilizers rich in nitrogen, phosphorus and potassium.
- **Bio-infectious waste:** Biological waste, such as body fluids and tissues and any objects that may have been in contact with these, such as sharp objects like needles, blades and syringes.
- **Bleeding:** Part of the slaughter where the main blood vessels of the neck are cut to drain the blood from the body.
- **Blunting:** Removing of the tip of the horn with a saw in order to avoid that animals can break or damage the skin of other animals.
- **Carbon footprint:** A measure of the total release of greenhouse gas emissions to the atmosphere by a determined activity indicated in CO<sub>2</sub> equivalent units.
- **Carrier:** Person authorized by a competent professional to transport animals.
- **Cattle:** Pet or domesticated animals, including bovine (including buffalo and bison), ovine, pork caprinos, equine, poultry and bees known for their use as food or food production.
- **Cloned animals:** Individuals born from the same cell; or with absolutely homogeneous cell lineage.
- **Colostrum:** Milk produced by the cow and sucked by the calf the first three days after birthing.
- **Competent professional:** An individual with demonstrated professional expertise, skills and experience in the specific area where advice is rendered.
- **Compost:** Combination of vegetable and animal matter that has been processed aerobically and has become a fertilizer rich in nutrients.
- **Confinement:** Captivity of an animal in a limited or closed place within the framework of a productive system in which the animal spends more than 12 hours in a 24-hour-period confined in stables or areas where natural grazing cannot be performed.
- **Crossing:** Animal crossing through bodies of water is an activity led and accompanied by cowhands or trained staff to keep cattle from going off course and remaining in the water longer than necessary.
- **Death:** Irreversible loss of brain activity demonstrated by the loss of reflexes of the brain stem.
- **Earpiece:** Earmarking system which involves placing a numbered earring, usually plastic, into the animal's ear.

- **Enteric Methane:** Methane produced as a result of the enteric fermentation carried out in the rumen of bovine and other ruminants.
- **Euthanasia:** Practice to finish with a life with no pain in order to avoid prolonged suffering.
- **Excrete:** Waste materials eliminated from the body of live beings as wastes, for example: urine, feces and sweat.
- **Fresh water (for animal consumption):** Safe water consumed by animals without the presence of bacteria, viruses, parasites, toxic substances, colour, taste and odor. The only difference between the quality of water for humans and for ruminants is the upper tolerance limit of dissolved salts.
- **Genetically Modified Organism:** A genetically modified organism (GMO) or genetically engineered organism (GEO), whose genetic material has been altered using genetic engineering techniques. These techniques are generally known as recombinant DNA technology. With this technology, DNA molecules from different sources are combined into one molecule to create a new set of genes. This DNA is then transferred into an organism, giving it modified or novel traits.
- **Hot iron dehorning:** Process to impede the growth of the bovine's horn's button (extreme that finishes in round tip) when beginning to develop. The hot iron dehorning is carried out in order to avoiding that the animals be injured each other and to facilitate herd management.
- **Illness:** Functional or morphological alteration with clinical signs caused by biotic or abiotic agents that can be present in animals and vegetable and produces modifications in its morphology or physiology.
- **Irritating substance:** Substance that can cause physical discomfort and pain.
- **Live fence:** Line of closely spaced shrubs and tree species planted in such a way as to separate crop and pasture areas or to define property boundaries supporting barb or plain wire fencing. Live fences cannot consist of dead fence posts only.
- **Loading:** Action of loading animals onto a vehicle, ship or container from the facility they are in before loading.
- **Manure:** Excrement of any animal.
- **Microchip:** Earmarking system which involves placing an electronic chip somewhere in the body of the animal, usually under the skin, and which can be read with an electronic reader.
- **Natural treatment:** Medical treatment with substances produced by plants or animals.
- **Organic fertilizer:** Product obtained from processing or transformation of vegetable or animal materials through microorganisms, and destined to supply the nutritious needs of plants.
- **Pasture:** Land with low-growing vegetation (grass or other plants) cover used for grazing of livestock.
- **Pest:** Situation where an animal causes economic damage, usually physical, to people's interests.
- **Physical Barriers:** Obstacles that impede or complicate the physical access to a place. Physical barriers can be live fences, dams, channels or any obstacle that impede access.
- **Program:** Elements of a system consisting of objectives, goals, policies, procedures, and the other elements and planning and implementation documents required to ensure compliance with the standard.

- **Restraining:** Application of any procedure designed to limit the movements of an animal in order to facilitate its efficient manipulation.
- **Sacrifice:** Procedure causing the death of an animal by bleeding.
- **Slaughter:** Any procedure causing the death of an animal.
- **Stocking rate:** The number of animals that can be maintained in an area expressed in heads per hectare.
- **Structures (Farm Structures):** Buildings on farms, such as corrals, stables, chutes, loaders, storages or any other built structure.
- **Supplement:** Substance added to complete the diet, overcome a nutritional deficiency, or improve vigor.
- **Synthetic Medicine:** Substances with no natural origin prepared by means of the reaction of other substances. They are used in people or animals to prevent, to diagnose, to treat, to alleviate or to cure illnesses, symptoms or pathological states.
- **Terrestrial ecosystems:** Primary and secondary forests, bush lands, grass lands or other advanced natural succession stages without significant human disturbance for minimum 10 years.
- **Transportation:** Procedure associated to the movement of animals for commercial purposes from one place to another by land (road and rail), sea or air.
- **Travel:** Movement of a vehicle, ship or container to transfer animals from one place to another.
- **Unloading:** The procedure whereby animals are unloaded from a vehicle, ship or container.
- **Vehicle:** Train, truck or ship used to transport animals.
- **Vulnerable area:** Area that is susceptible to the risk of infiltration, stoniness, or slope exceeding 40 %.
- **Wild predator:** Animal that has not received domestication and hunts live animals for its diet or survival.
- **Withdrawal period:** The amount of time during which an animal (or its products in the case of lactating cows) cannot be used for consumption. Animals cannot be sacrificed when they have been given medication. While the withdrawal period printed on the product label has not elapsed, the animal or its products must not be used for consumption.

## Annex 3: Final Draft of SAN Cattle Standard (May 2010)

### STANDARD FOR SUSTAINABLE CATTLE PRODUCTION SYSTEMS

#### Principle 11: Integrated Cattle Management System

- 11.1 The farm must have a land use plan, which identifies and maps areas for:
- Cattle: pastures and other feedstock;
  - Ecosystem conservation and restoration;
  - Restricted and vulnerable areas;
  - Other land use.
- 11.2 **Critical Criterion.** The farm must demonstrate that:
- The cattle were born and raised on a SAN certified farm; or
  - It purchases cattle born and raised on non-certified farms that do not violate the following SAN criteria:
    - Destruction of a high value ecosystem after November 1, 2005 (2.2);
    - Hiring child labor (5.8);
    - Forced labor (5.10);
    - Discrimination (5.2);
    - Critical criteria of SAN Animal Welfare Principle (13.3, X.X, ...);
    - Involvement in criminal or illegal activities.
  - Cattle purchased from these non-certified farms must stay a minimum of six months on the farm.
- 11.3 **Critical Criterion.** The farm must implement an individual identification record system of its cattle from birth or arrival, until sale or death.
- 11.4 **Critical Criterion.** The presence of transgenic or cloned animals on certified farms is prohibited.
- 11.5 The farm must implement a feeding plan to ensure animal nutrition conforming with cattle's wellbeing, physiological and production requirements.
- 11.6 The farm must supply water suitable for cattle consumption (*T&D*) in sufficient quantity and continuity. The water supply management system must include:
- Measures to protect the water sources from damage and pollution;
  - Maintenance activities.
- 11.7 **Critical Criterion.** The following products must not be supplied to cattle:
- Products or by-products (*T&D*) prohibited by national livestock feeding laws or regulations.
  - Any animal by-product originating from mammals or birds or animal excrement.

- 11.8 The farm must implement a cattle herd health program endorsed by veterinarians or authorized veterinary service providers or professionals, including vaccinations required by animal health regulatory authorities.
- 11.9 **Critical Criterion.** All medications must be administered strictly according to label instructions, including withdrawal periods and expiration dates. Dosage variations are permitted only when approved by veterinarians or authorized veterinary service providers or professionals.
- 11.10 **Critical Criterion.** The farm must only use cattle medications approved by and registered with the respective animal health regulatory authorities. Use of the following substances is prohibited:
- a. Substances included in SAN's Prohibited Pesticide List for pasture management
  - b. Organochlorinated substances;
  - c. Anabolics to promote weight gain (subject to expert review);
  - d. Hormones to stimulate higher production (subject to expert review);
  - e. Antibiotics as preventive medication, except for surgery;
  - f. Clenbuterol, Diethylstilbestrol (DES), Dimetridazole, Glicopeptids, Iprnidazole.
- 11.11 The farm must manage a reproduction program including records of reproduction periods and activities. The farm must avoid inbreeding within their reproduction herds.
- 11.12 The farm must implement an integrated pest control management program for its buildings and infrastructure.

### **Principle 12: Sustainable Range and Pasture Management**

- 12.1 The farm must implement and document a range and pasture management plan.
- 12.2 Farms must produce most of their feed and fodder on farm, except when impossible due to atypical adverse conditions.
- 12.3 The farm must select forage species for sustainable cattle production that avoid those that negatively affect other ecosystems and include consideration of:
- a. Agro-ecological conditions;
  - b. Production rates;
  - c. Nutritional value;
  - d. Resistance to pests or adverse climatic conditions.
- 12.4 The farm must manage its prevention of pasture degradation including consideration of:
- a. Quantity and quality of vegetative cover;
  - b. Reducing soil erosion, particularly on crossing areas and steep slopes.

- 12.5 Grazing on slopes steeper than 30 degrees is permitted only where there are no signs of soil erosion generated by cattle. Otherwise, grazing pressure must be reduced.**

### **Principle 13: Animal Welfare**

- 13.1 The farm must document its animal welfare program including provision of space, prevention of disease, avoidance of hunger and thirst, and minimization of fear, stress and pain.**
- 13.2 Cattle handling facilities must minimize animal stress and the risk of accidents, including:**
- a. Sufficient and clean space;**
  - b. Isolation of injured or sick animals;**
  - c. Natural ventilation;**
  - d. Protection from sun and rain.**
- 13.3 *Critical Criterion.* The farm must not mistreat animals, including:**
- a. Use of sharp objects;**
  - b. Misuse of irritating substances, including potash for branding;**
  - c. Moving animals in a pain inflicting way.**
- 13.4 Animal identification techniques must minimize animal suffering and must be done by trained personnel (*T&D*).**
- 13.5 The farm must perform swift and accurate euthanasia on incurable animals.**
- 13.6 The farm must guarantee that newborns get fed with colostrum. Calves must consume milk until their development allows for their digestion of fodder or other food sources. Weaning practices must be unstressful.**
- 13.7 Castration must be done at the earliest age possible to minimize pain and only using surgical methods or emasculation. Animals castrated after two months of age must be treated with pain relief medication.**
- 13.8 Calves under five months of age may be dehorned by chemical or hot iron processes. If older, only blunting or tipping is permitted.**
- 13.9 When artificial insemination is practiced and identification of cows in heat is required, detection methods must not negatively affect animal wellbeing.**
- 13.10 There must be an inspection by competent personnel before an animal is deemed fit to travel. Except for emergencies and medical treatment, animals with the following conditions must not be transported:**
- a. Sick or severely injured animals, including those with open surgical wounds;**
  - b. Females separated from their offspring less than 48 hours after birth.**

**c. Cows in the last month of pregnancy.**

**13.11 The animal loading and unloading structures must ensure animal safety.**

**13.12 Farm transport vehicles and procedures and those contracted externally must ensure animal safety and wellbeing.**

**Principle 14: Reducing the Carbon Footprint**

<i>Version A</i>	<i>Version B</i>
<b>14.1 The digestibility of feed and fodder must be maximized to reduce methane emissions from cattle’s enteric fermentation.</b>	<b>14.1 The farm must optimize feed and fodder to reduce methane emissions from cattle’s enteric fermentation.</b>

<i>Version A</i>	<i>Version B</i>
<b>14.2 The farm must control, contain and treat cattle effluents (T&amp;D) produced in its installations to reduce methane emissions.</b>	<b>14.2 Cattle effluents (T&amp;D) produced in farm installations must be controlled, contained and treated to reduce methane emissions.</b>

<i>Version A</i>	<i>Version B</i>
<b>14.3 The farm must have a minimum of 20% native tree canopy cover – proportional to the cattle production area - including:                      a. Trees on all pasture lots; and                      b. Land set aside for the conservation or recovery of natural ecosystems.                      Where a natural climax ecosystem (T&amp;D) has a tree canopy cover of less than 20%, only option b. applies.</b>	<b>14.3 Where a natural climax ecosystem has a tree cover of less than 20%, the farm must have land set aside for conservation or recovery of natural ecosystems that equals no less than 20% of its cattle production area. In all other ecosystems, the farm may meet this requirement by providing a 20% tree canopy cover on all its pastures.</b>

**Principle 15: Additional Environmental Requirements for Cattle Farms**

<i>Version A</i>	<i>Version B</i>
<b>15.1 The farm must reduce the negative impact caused by cattle on aquatic ecosystems by establishing physical barriers and offering sufficient water and feed supply. When cattle moving involves crossing through aquatic ecosystems, the farm must select routes to minimize damage.</b>	<b>15.1 Cattle’s negative impact on aquatic ecosystems must be effectively reduced, including choosing minimally damaging cattle movement routes, providing adequate water and feed and establishing physical barriers.</b>

<i>Version A</i>	<i>Version B</i>
15.2 The risk of predators attacking the cattle must be minimized through the proper placement of cattle and collaboration with local environmental authorities or specialist groups.	15.2 The risk of predators attacking cattle must be minimized, including their protective placement and through activities with environmental authorities or groups.

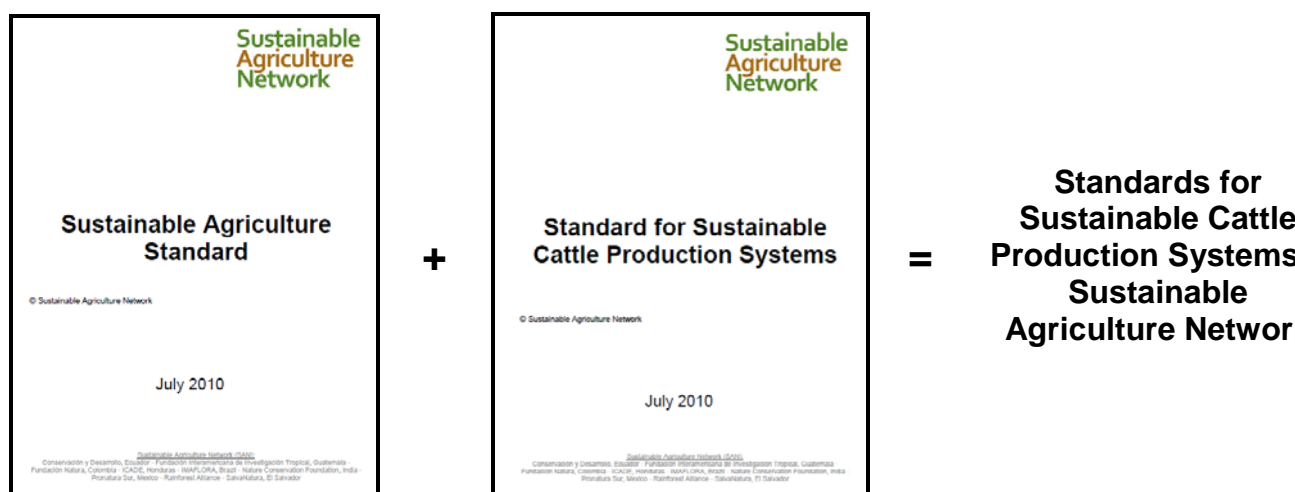
<i>Version A</i>	<i>Version B</i>
15.3 The farm must store medications in a manner that minimizes potential negative impacts on human health and on the environment. Medications must be stored in a safe place in compliance with original label instructions.	15.3 Medications must be stored safely to minimize risks to human health and the environment and in compliance with original label instructions.

<i>Version A</i>	<i>Version B</i>
15.4 Bio-infectious waste on the farm must be lawfully treated and discharged or delivered to an authorized recollection system. a. Bio-infectious waste must be labeled and kept separately in identified sites with restricted access. b. The animals that die on the farm must be promptly disposed to eliminate the risk of contamination.	15.4 The farm must lawfully treat and discharge its bio-infectious waste through labeling, physical separation in identified sites and restricted access. It may choose to deliver it to an authorized recollection system. The farm must treat dead animals by prompt burial or incineration to eliminate the risk of contamination.

## Annex 4: Final Version of SAN Cattle Standard (July 2010)

### Structure of the Standards for Sustainable Cattle Production Systems

The current document contains 36 additional criteria and five new principles. Seven of these criteria are critical criteria. Cattle farms seeking certification audits will be evaluated based on the 135 criteria (including 22 critical criteria) of both the *SAN - Sustainable Agriculture Standard* and *SAN - Standard for Sustainable Cattle Production Systems* (see Figure below).



#### Document structure of SAN Standards for Sustainable Cattle Production Systems

The *Sustainable Agriculture Standard* consists of ten principles, each of which is based on specific criteria that promote good environmental, labor and agronomic practices. The July 2010 version of the *SAN Sustainable Agriculture Standard* contains 99 criteria that are applicable for cattle farms also. 15 of these criteria are critical criteria. This version of the standard will be binding for audits by January 2011. All binding criteria are identified throughout the text by a two-level numbering system (**1.1, 1.2, etc.**) in **bold type**. The binding criteria proposed in this document follow the same numbering format.

In addition, the *Sustainable Agriculture Standard* will be interpreted for cattle farms through a specific guidance document. The *Standard for Sustainable Cattle Production Systems* will also be accompanied by a specific guidance document, which will provide more details for cattle farms about how to implement the SAN Standards for Sustainable Cattle Production Systems.

#### Scope

This document covers sustainable practices for cattle farming in Africa, Asia/Oceania and Latin America within all climatic regions where semi-confinement and free ranging of cattle is possible, including for example:

1. Tropical and subtropical moist broadleaf forests
2. Tropical and subtropical dry broadleaf forests
3. Tropical and subtropical coniferous forests
4. Tropical and subtropical grasslands, savannas and shrublands
5. Flooded grasslands and savannas

## 6. Mediterranean forests, woodlands and scrub

*Standard for Sustainable Cattle Production Systems* applies to the following species:

- Species of the family Bovidae, subfamily Bovinae, tribe Bovini - with emphasis on the species *Bos primigenius taurus*, *Bos p. indicus* and their cross breeds, as well as water buffalo (*Bubalus bubalis*).
- The certification applies to cattle dairy farms or dual purpose farms under free grazing and semi-confined production systems and covers the products beef, dairy products and leather.
- It does not apply to 100% confined or nomadic production systems.

SAN's *Farm Certification Policy* applies to cattle ranch audit processes also. The scope of the audits is the farm, which is defined as the production unit responsible for both animal breeding and supervision of transport providers. The processing operations outside the farm boundaries that process products coming from the certified farm are covered by the Chain of Custody system of the Rainforest Alliance.

## SAN Scoring System

The following scoring system applies to cattle farms:

- General Compliance: In order to obtain and maintain certification, farms must comply with at least 50% of the applicable criteria of each of the 15 principles and at least 80% of the total applicable criteria of the *Sustainable Agriculture Standard* and the *Standard for Sustainable Cattle Production Systems*.
  - Critical Criteria: *Standard for Sustainable Cattle Production Systems* – *Sustainable Agriculture Network* contains seven critical criteria. The *Sustainable Agriculture Standard* additionally contains 15 critical criteria.
  - A farm must completely comply with a critical criterion in order for the farm to be certified or to maintain certification.
  - These are identified with the words “*Critical Criterion*” at the beginning of the text’s criterion.
  - Any farm not complying with a critical criterion will not be certified, or certification will be cancelled, even if all other certification requirements have been met.
- Not implementing any or some of the practices as defined by the criteria outlined in the *Sustainable Agriculture Standard* and *Standard for Sustainable Cattle Production Systems* will result in the assignment of a non-conformity determined on the basis of each individual criterion. There are two categories of non-conformities: 1) Major Non-Conformity, and 2) minor non-conformity. The level of compliance is as follows:
  1. Major Non-Conformity (MNC): indicates compliance with less than 50% of criterion requirements.
  2. minor non-conformity (mnc): indicates compliance with less than 100% of the of criterion requirements, but equal or more than 50%.

## Sources

Ideas for this document have been adapted from the following sources:

CATIE. Environmental Livestock Management Program.

<http://web.catie.ac.cr/gamma/inicio.htm>

Food and Agriculture Organization of the United Nations. Animal Production and Health Division. <http://www.fao.org/ag/againfo/home/es/index.htm>

GLOBALG.A.P. The Global Partnership for Good Agricultural Practice. <http://www.globalgap.org/>

The International Federation of Organic Agriculture Movements (IFOAM). <http://www.ifoam.org/>

U.S. Food and Drug Administration. U.S. Department of Health and Human Services. <http://www.fda.gov/>

World Organization for Animal Health (OIE). [http://www.oie.int/esp/es\\_index.htm](http://www.oie.int/esp/es_index.htm)

## Terms and Definitions

Refer also to Sustainable Agriculture Standard for additional terms and definitions.

- **Animal by-products:** Animal proteins including meat, blood and bone meal from mammals, as well as specified risk materials (SRM) that don't form part of animal feed. SRM are mammalian tissues that may contain the agent that causes Bovine Spongiform Encephalopathy (BSE), such as skull, brain, eyes, spinal cord, trigeminal ganglia, vertebral column, tonsils and distal ileum, small intestine; dorsal root ganglia of all cattle over 30 months of age; all material from nonambulatory disabled cattle; all material from cattle that are not inspected and passed for human consumption by regulatory authorities.
- **Animal welfare:** Everything related to animal comfort beyond the mere absence of disease, encompassing the complete state of physical well-being, It considers the state of the animal's body and mind and how well its nature fares in its environment, considering the animal's comfort, accommodation, treatment, care, nutrition, disease prevention, responsible care, management and humane euthanasia when necessary.
- **Aquatic ecosystem:** Lagoons, lakes, rivers, creeks, streams, swamps, estuaries, flooded savannahs, peat bogs and other natural water bodies.
- **Bio-infectious waste:** Biological waste, such as body fluids and tissues and any objects that may have been in contact with these, such as sharp objects like needles, blades and syringes.
- **Carbon footprint:** The overall amount of carbon dioxide (CO<sub>2</sub>) and other greenhouse gas (GHG) emissions (e.g. methane, laughing gas, etc.) associated with a product or determined activity and indicated in CO<sub>2</sub> equivalent units.
- **Cattle:** Animals of the family Bovidae, genus *Bos*, especially those of the domesticated species *B. taurus* and *B. taurus indicus* (zebu) raised in many breeds for meat and dairy production. Cattle are raised in most of the subsistent crop production systems as farm power and in some countries for transport (e.g. India). In this SAN definition, domesticated buffalo breeds (*Bubalus bubalis*) are also included.
- **Cattle effluents:** Liquid waste (urine and manure) discharged from confinement structures.
- **Cattle farm:** Cattle raising area, system or operational unit with a defined land use and feeding plan. The unit subject to certification or audit.
- **Cloned animals:** Individuals born from the same cell; or with absolutely homogeneous cell lineage.

- **Colostrum:** Milk produced by the cow and sucked by the calf the first three days after birthing.
- **Competent professional:** An individual with demonstrated professional expertise, skills and experience in the specific area where advice is rendered.
- **Confinement:** Captivity of an animal in a limited or closed place within the framework of a productive system in which the animal spends more than 12 hours in a 24-hour-period confined in stables or areas where natural grazing cannot be performed.
- **Crossing:** Animal crossing through bodies of water is an activity led and accompanied by cowhands or trained staff to keep cattle from going off course and remaining in the water longer than necessary.
- **Death:** Irreversible loss of brain activity demonstrated by the loss of reflexes of the brain stem.
- **Emasculation:** Emasculation is the removal of the testicles (castration) of a male by surgical methods, Burdizzo clamp or elastrador.
- **Enteric Methane:** Methane produced as a result of the enteric fermentation carried out in the rumen of bovine and other ruminants.
- **Euthanasia:** Practice to finish with a life with no pain in order to avoid prolonged suffering.
- **Hot iron process:** Process to impede the growth of the bovine's horn's button (extreme that finishes in round tip) when beginning to develop. The hot iron dehorning is carried out in order to avoid that animals injure each other and to facilitate herd management.
- **Illness:** Functional or morphological alteration with clinical signs caused by biotic or abiotic agents that can be present in animals and vegetable and produces modifications in its morphology or physiology.
- **Irritating substance:** Substance that can cause physical discomfort and pain.
- **Live fence:** Line of closely spaced shrubs and tree species planted in such a way as to separate crop and pasture areas or to define property boundaries supporting barb or plain wire fencing. Live fences cannot consist of dead fence posts only.
- **Loading:** Action of loading animals onto a vehicle, ship or container from the facility they are in before loading.
- **Natural climax ecosystem:** Biological community of plants and animals which, through the process of ecological succession — the development of vegetation in an area over time — has reached a steady state (called mature or old-growth communities). This equilibrium occurs because the climax community is composed of species best adapted to average conditions in that area.
- **Pasture:** A type of grazing management unit enclosed and separated from other areas by fencing or other barriers and devoted to the production of forage for harvest primarily by grazing (Terminology for Grazing Lands and Grazing Animals. 1992. Journal of Production Agriculture 5:191-201).
- **Pest:** An organism which is detrimental to humans or human concerns causing economic damage to people's interests.
- **Physical Barriers:** Obstacles that impede or complicate the physical access to a place. Physical barriers can be live fences, dams, channels or any obstacle that impede access.
- **Predator:** Animal that hunts live animals for its diet or survival.
- **Program:** A planned course of action with a detailed and explicit set of directions for accomplishing a purpose.

- **Structures (Farm Structures):** Buildings on farms, such as corrals, stables, chutes, loaders, storages or any other built structure.
- **Tipping:** Cutting off of the pointed end of the horn.
- **Trained Personnel:** Individuals with acquired knowledge and skills to conduct specific tasks.
- **Transportation:** Procedure associated to the movement of animals for commercial purposes from one place to another by land (road and rail), sea or air.
- **Transgenic Organism:** A genetically modified organism (GMO) or genetically engineered organism (GEO), whose genetic material has been altered using genetic engineering techniques. These techniques are generally known as recombinant DNA technology. With this technology, DNA molecules from different sources are combined into one molecule to create a new set of genes. This DNA is then transferred into an organism, giving it modified or novel traits.
- **Travel:** Movement of a vehicle, ship or container to transfer animals from one place to another.
- **Unloading:** The procedure whereby animals are unloaded from a vehicle, ship or container.
- **Vulnerable area:** Area that is susceptible to the risk of infiltration, stoniness, or slope exceeding 40 %.
- **Water suitable for cattle consumption:** Drinkable water is of a pH of 6.5 to 8.5 and contains less than 4000 ppm (or mg/l) of Total Dissolved Solids, but less than 1,000 ppm of sulfate. Coliform counts must be below 50 per milliliter of water and chloride content of less than 1600 mg/l for dairy cattle and less than 4000 mg/l for beef cattle. Safe levels of potentially toxic nutrients and contaminants in water for livestock are for Aluminum 5.0 ppm, for Arsenic 0.2, Boron 5.0, Cadmium 0.05, Chromium 1.0, Cobalt 1.0, Copper 0.5, Fluorine 2.0, Lead 0.05, Mercury 0.01, Nickel 1.0, Nitrate-Nitrogen 100.0, Nitrite-Nitrogen 10.0, Selenium 0.05, Sulfate 1,000.0, Vanadium 0.1 and Zinc 25.0 respectively (based on: Greg Lardy and Charles Stoltenow, North Dakota State University 1999 / Greg Curran and Sarah Robson. 2007. Water for livestock: interpreting water quality tests. State of New South Wales through NSW Department of Primary Industries).
- **Wildlife:** Wildlife includes all non-domesticated plants, animals and other organisms. Wildlife can be found in all ecosystems. Deserts, rain forests, plains, and other areas including the most developed urban sites, all have distinct forms of wildlife.
- **Withdrawal period:** The amount of time during which an animal (or its products in the case of lactating cows) cannot be used for consumption. Animals cannot be sacrificed when they have been given medication. While the withdrawal period printed on the product label has not elapsed, the animal or its products must not be used for consumption.

## STANDARD FOR SUSTAINABLE CATTLE PRODUCTION SYSTEMS

### 11. INTEGRATED CATTLE MANAGEMENT SYSTEM

Summary of the principle (not binding for audit purposes): Certified farms plan their land use respecting the conservation of ecosystems and vulnerable areas. Farms keep track of animals and have herd health and nutrition programs respecting SAN prohibited substances. The cattle feed is produced on farms and pests in farm's structures are controlled with Integrated Pest Management techniques.

- 11.1 The farm must have a land use plan, which identifies and maps areas for:**
- a. **Cattle: pastures and other feedstock;**
  - b. **Ecosystem conservation and restoration;**
  - c. **Restricted and vulnerable areas;**
  - d. **Other land use.**
- 11.2 *Critical Criterion.* The farm must demonstrate that:**
- a. **The cattle were born and raised on a SAN certified farm; or**
  - b. **It purchases cattle born and raised on non-certified farms that do not violate the following SAN criteria:**
    - i. **Destruction of a high value ecosystem after November 1, 2005 (critical criterion 2.2);**
    - ii. **Child labor (critical criterion 5.8);**
    - iii. **Forced labor (critical criterion 5.10);**
    - iv. **Discrimination (critical criterion 5.2);**
    - v. **Mistreatment of animals (critical criterion 13.3);**
  - c. **Cattle purchased from these non-certified farms must stay a minimum of six months on the certified farm.**
- 11.3 *Critical Criterion.* The farm must implement an individual identification record system of its cattle from birth or arrival, until sale or death.**
- 11.4 *Critical Criterion.* The presence of transgenic or cloned animals on certified farms is prohibited.**
- 11.5 The farm must implement a feeding plan to ensure animal nutrition conforming with cattle's wellbeing, physiological and production requirements.**
- 11.6 The farm must supply water suitable for cattle consumption in sufficient quantity and continuity. The water supply system must include:**
- a. **Measures to protect the water sources from damage and pollution;**
  - b. **Maintenance activities.**
- 11.7 *Critical Criterion.* The following products must not be supplied to cattle:**
- a. **Products or by-products prohibited by national livestock feeding laws or regulations.**

**b. Any animal by-product originating from mammals or birds or animal excrement.**

**11.8 The farm must implement a cattle herd health program endorsed by veterinarians or authorized veterinary service providers or professionals, including vaccinations required by animal health regulatory authorities.**

**11.9 *Critical Criterion.* All medications must be administered strictly according to label instructions, including withdrawal periods and expiration dates. Dosage variations are permitted only when approved by veterinarians or authorized veterinary service providers or professionals.**

**11.10 *Critical Criterion.* The farm must only use cattle medications approved by and registered with the respective animal health regulatory authorities. Use of the following substances is prohibited:**

- a. Substances for pasture management included in SAN's Prohibited Pesticide List;**
- b. Organochlorinated substances;**
- c. Anabolics to promote weight gain;**
- d. Hormones to stimulate higher production;**
- e. Antibiotics as preventive medication, except for surgery;**
- f. Clenbuterol, Diethylstilbestrol (DES), Dimetridazole, Glicopeptids, Iprnidazole;**
- g. Chloramphenicol, Fluoroquinolones, Furazolidone.**

**11.11 The farm must manage a reproduction program including records of reproduction periods and activities. The farm must avoid inbreeding within their reproduction herds.**

**11.12 The farm must implement an integrated pest control management program for its buildings and infrastructure.**

## **12. SUSTAINABLE RANGE AND PASTURE MANAGEMENT**

Summary of the principle (not binding for audit purposes): In tropical regions, sustainable pasture management is a key element to ensure maximum yield in cattle ranching operations. Pastures are selected and managed by the farm based on agro-ecological parameters, characteristics such as resistance to pests, nutritional value and production rates to ensure optimum growth, availability and avoid pasture degradation.

**12.1 The farm must implement and document a range and pasture management plan.**

**12.2 Farms must produce most of their feed and fodder on farm, except when impossible due to atypical adverse conditions.**

- 12.3 The farm must select forage species for sustainable cattle production that avoid those that negatively affect other ecosystems and include consideration of:**
- a. Agro-ecological conditions;
  - b. Production rates;
  - c. Nutritional value;
  - d. Resistance to pests or adverse climatic conditions.
- 12.4 The farm must prevent pasture degradation including consideration of:**
- a. Quantity and quality of vegetative cover;
  - b. Reducing soil erosion, particularly on crossing areas and steep slopes.
- 12.5 Grazing on slopes steeper than 30 degrees is permitted only where there are no signs of soil erosion generated by cattle. Otherwise, grazing pressure must be reduced.**

### **13. ANIMAL WELFARE**

Summary of the principle (not binding for audit purposes): The farm practices responsible animal husbandry through an animal welfare program including safe transportation. The farm and its handling facilities do not mistreat the cattle. Animals are provided with shelter, food and water in sufficient quantity and quality to ensure good health and productivity. Farms have adequate physical facilities for the responsible management of cattle.

- 13.1 The farm must document its animal welfare program including provision of space, prevention of disease, avoidance of hunger and thirst, and minimization of fear, stress and pain.**
- 13.2 Cattle handling facilities must minimize animal stress and the risk of accidents, including:**
- a. Sufficient and clean space;
  - b. Isolation of injured or sick animals;
  - c. Natural ventilation;
  - d. Protection from sun and rain.
- 13.3 *Critical Criterion.* The farm must not mistreat animals, including:**
- a. Use of sharp objects;
  - b. Misuse of irritating substances, including potash for branding;
  - c. Moving animals in a pain inflicting way.
- 13.4 Animal identification techniques must minimize animal suffering and must be done by trained personnel.**
- 13.5 The farm must perform swift and accurate euthanasia on incurable animals.**

- 13.6** The farm must guarantee that newborns get fed with colostrum. Calves must consume milk until their development allows for their digestion of fodder or other food sources. Weaning practices must be unstressful.
- 13.7** Castration must be done at the earliest age possible to minimize pain and only using surgical methods or emasculation. Animals castrated after two months of age must be treated with pain relief medication.
- 13.8** Calves under five months of age may be dehorned by chemical or hot iron processes. If older, only tipping of horns is permitted.
- 13.9** When artificial insemination is practiced and identification of cows in heat is required, detection methods must not negatively affect animal wellbeing.
- 13.10** There must be an inspection by competent personnel before an animal is deemed fit to travel. Except for emergencies and medical treatment, animals with the following conditions must not be transported:
- a. Sick or severely injured animals, including those with open surgical wounds;
  - b. Females separated from their offspring less than 48 hours after birth;
  - c. Cows in the last month of pregnancy.
- 13.11** The animal loading and unloading structures must ensure animal safety.
- 13.12** Farm transport vehicles and procedures and those contracted externally must ensure animal safety and wellbeing.

## **14. REDUCING THE CARBON FOOTPRINT**

Summary of the principle (not binding for audit purposes): Certified cattle ranching operations seek to reduce greenhouse gas emissions through improved diet, optimized productivity, manure and urine processing, and agroforestry systems.

- 14.1** The digestibility of feed and fodder must be improved and feeding practices must be changed to reduce methane emissions from cattle's enteric fermentation.
- 14.2** Cattle effluents produced in farm installations must be controlled, contained and treated to reduce methane emissions.
- 14.3** Where a natural climax ecosystem has a tree cover of less than 20%, the farm must have land set aside for conservation or recovery of natural ecosystems that equals no less than 20% of its cattle production area. In all other ecosystems, the farm may meet this requirement by providing a 20% tree canopy cover on all its pastures.

## **15. ADDITIONAL ENVIRONMENTAL REQUIREMENTS FOR CATTLE FARMS**

Summary of the principle (not binding for audit purposes): Certified cattle farms minimize the access of cattle to ecosystems and establish a balance between the presence of wildlife and cattle. Farms dispose hazardous waste without negative impacts on human health and the environment.

- 15.1 Cattle's negative impact on aquatic ecosystems must be effectively reduced by ensuring that cattle receive adequate water and feed within pastures and that there are physical barriers between cattle and aquatic ecosystems. Routes where cattle cross aquatic ecosystems must be selected and managed in ways that minimize damage.**
- 15.2 The risk of predators attacking the cattle must be minimized through the proper placement of cattle and collaboration with local environmental authorities or specialist groups.**
- 15.3 Medications must be stored safely to minimize risks to human health and the environment and in compliance with original label instructions.**
- 15.4 The farm must lawfully treat and discharge its bio-infectious waste through labeling, physical separation in identified sites and restricted access. It may choose to deliver it to an authorized recollection system. The farm must treat dead animals by prompt burial or incineration to eliminate the risk of contamination.**