Progress Through Science

RANCHI DECLARATION

ON

CONSERVATION AND MANAGEMENT OF FARM ANIMAL GENETIC RESOURCES

Trust for Advancement of Agricultural Sciences
Avenue II, Indian Agricultural Research Institute
New Delhi

Progress Through Science

TRUST FOR ADVANCEMENT OF AGRICULTURAL SCIENCES (TAAS)

GOAL

An accelerated movement for harnessing agricultural sciences for the welfare of people.

MISSION

To promote growth and advancement of agriculture through scientific interactions and partnerships.

OBJECTIVES

- To act as think tank on key policy issues relating to agricultural research for development (ARD).
- Organizing seminars and special lectures on emerging issues and new developments in agricultural sciences in different regions of India.
- Instituting national awards for the outstanding contributions to Indian agriculture by the scientists of Indian and other origin abroad.
- Facilitating partnerships with non-resident Indian agricultural scientists visiting India on short leave.

Preamble

Sustainable management of farm animal genetic resources is of vital importance to food, nutrition and environment security. Their conservation and judicious use is critical for the survival as well as improved livelihood of resource poor farmers. India is rich in its farm animal diversity being a mega biodiversity centre. However, currently many unique breeds are facing a threat of extinction for want of an appropriate conservation strategy and its effective implementation at the national/state level.

Being a signatory to the Convention on Biological Diversity (CBD), the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) and the Interlaken Declaration as well as Global Plan of Action on Animal Genetic Resources adopted in September 2007, India urgently needs to have a National Plan of Action, to manage, improve and conserve native/domestic/other valuable farm animal genetic resources.

It is in this context that a select group of experts representing various stakeholders from national and international organizations participated in a brainstorming workshop on "Strategy for Conservation of Farm Animal Genetic Resources" organized jointly by the Trust for Advancement of Agricultural Sciences (TAAS) and the Birsa Agricultural University (BAU) from April 10 to 12, 2009 at Ranchi. Having deliberated at great length and considering the importance of the subject, the participants unanimously adopted the following declaration, to be referred henceforth as Ranchi Declaration:

Declaration

1. We assert that India, without waiting for the stipulated time frame of 2011, should immediately prepare a National Plan of Action on management and conservation of farm animal genetic resources for its speedy implementation in accordance with Interlaken Declaration.
2. Currently, the five livestock and poultry species viz., cattle, buffalo, goat, sheep and chicken are at top in terms of population, diversity and contribution to the national food, environment and livelihood security. Therefore, we propose that these species be immediately declared as BIG FIVE of India.
3. We recognize the enormous contribution of farm animal genetic resources to the national GDP. During 2006-07, the contribution of livestock and fisheries sectors was estimated to be Rs. 2508 billion which is about 5.26% of total national GDP and around 31.7% of our agricultural GDP. Hence, it is urged that current resources be doubled for the livestock R&D sector on priority, and a specific policy directive given in favour of farm animal genetic resources that are so critical for the national food and nutrition security as well as sustainable livelihood of our resource poor farmers.
4. We are convinced that maintenance of diverse animal genetic resources for food and agriculture is essential (especially for the

farmers, pastoralists and animal breeders) to meet the current and future challenges arising out of climate change, increased pressure due to diseases, over exploitation of grazing lands and the changing consumer demands for animal products. Hence, maintenance and further improvement of pure breeds and retaining their valuable characteristics, including those related to adaption to climate change, becomes a national priority.

5. The role of farm men, farm women, pastoralists and rural communities in evolving different breeds of livestock and poultry, adapted to specific ecological niches, is fully recognized since these breeds possess unique traits developed over many years of selection. In this context, we are convinced that a strong legal instrument is urgently needed to deal with the registration of livestock breeds, protection of animal keepers' rights and related issues for effective management and conservation of farm animal genetic resources, on a pattern similar to that of Protection of Plant Varieties & Farmers' Rights Act (2001).

6. We especially recognize the need for capacity building of civil society organizations (NGOs and local livestock community/farmers) for managing the Indian breeds of livestock and poultry and retaining their valuable characteristics and purity. In this context, the currently engaged staff at the Government Livestock Farms and some specialized *Goshalas* be also properly trained.

7. It is acknowledged that major gaps/weaknesses exist in our national and state capacities to inventorize, monitor, characterize, sustainably use, develop and conserve animal genetic resources. These need to be bridged as a matter of priority through a Mission Mode program, and by developing the much needed population data base for animals, their population trends and the risks associated with them in order to establish country based early warning and response systems. Hence, there is an urgency to initiate appropriate action to conserve our valuable livestock and poultry breeds that are currently at risk (see Annexure I and Table 1).

8. Considering the available institutional strength and competent human resources, India could serve as a regional focal point for the management and conservation of farm animal genetic resources for South Asia. It would, therefore, be worth exploring this option through regional fora/organizations such as SAARC, APAARI etc.

9. We recognize the need to strengthen research aimed at scientific management, genetic enhancement, sustainable use and conservation of farm animal genetic resources. This has to be accomplished through effective coordination/linkage mechanisms among various Ministries/Departments and the partnership with regional and international organizations/institutions such as FAO and ILRI.

This Ranchi Declaration was adopted on 12th day of April, 2009.

Annexure I

Domestic Animal Diversity in India

1. BUFFALO- 23

Local	:	Assamese, Banni, Bhadawari, Chilka, Diyara, Godavari, Jerangi, Kalahandi, Manda, Manipuri, Marathwada, Nagpuri, Pandharpuri, Parlekhemundi, Sambalpur, South Kanara, Toda.
Regional Transboundary	:	Mehsana, Nili -Ravi, Surti, Tarai.
International Transboundary	:	Jaffarabadi, Murrah

2. CATTLE- 64

Local	:	Alambadi, Amritmahal, Bachaur, Bargur, Binjharpuri, Cutchi, Dangi, Deoni, Frieswal, Gangatiri, Gaolao, Ghumsuri, Gujamavu, Hallikar, Jersind, Kankrej, Kappiliyan, Karan Fries, Karan Swiss, Kenkatha, Khamala, Khasi, Kherigarh, Krishna Valley, Kumauni, Ladakhi, Malnad Gidda, Malvi, Mampati, Manapari, Mewati, Mhaswad, Motu, Nagami, Nagori, Nimari, Ponwar, Pullikulam, Punganur, Red Purnea, Ramgarhi, Rathi, Red Kandhari, Sanchori, Shahabadi, Son Valley, Tarai, Taylor, Tho Tho, Umblachery, Vechur, Zosial.
Regional Transboundary	:	Hariana, Hissar, Kangayam, Khillari, Siri, Sunandini.
International Transboundary	:	Sahiwal, Red Singhi, Gir, Ongole, Nelore, Tharparkar

3. GOAT- 34

Local	:	Andaman Feral Goat, Assamese Hill, Attapady Black, Baigani , Barren goat, Bidari, Changthangi, Chegu, Dalua, Ganjam, Gohilwadi, Himalayan Ibex, Himalayan Tahr, Indian Mohair, Jhakrana, Kannai Adu, Kutchi, Malabari, Marwari, Mehsana, Nilgiri Tahr, Osmanabadi, Ramdhan, Sangamneri, Sirohi, Surti, Teressa, Zalawadi.
Regional Transboundary	:	Bengal, Gaddi, Tibetan.
International Transboundary	:	Barbari, Beetal, Jamunapari

4. SHEEP- 62

Local	:	Avikalin, Avimanns, Avivastra, Bagri, Balangir, Bellary, Berari, Bhakarwal, Bharat Merino,

Biangi, Bonpala, Changthangi, Chokla, Chotanagpuri, Coimbatore, Dakshini, Deccani, Desi, Dhamda, Dumba, Gaddi, Ganjam, Garole, Godavari, Gurez, Hassan, Indian Karakul, Jaisalmeri, Jalauni, Karanah, Kashmir Merino, Kashmir Valley, Kenguri, Kheri, Kilakarsal, Magra, Malpura, Mandya, Marathwada, Marwari, Mecheri, Munjal, Muzaffarnagri, Nali, Nellore, Nilgiri, Patanwadi, Pugal, Ramnad White, Rampur Bushair, Sangamneri, Sardarsamand, Shahabadi, Shapo, Sonadi, Telengana, Tiruchy Black, Vembur.

Regional Transboundary : Hissardale, Madras Red, Poonchi, Tibetan

5. YAK- 05

Local : Arunachal, Chour-gau, Himachal, Ladakhi, Sikkim

6. PIG- 08

Local : Andaman wild pigs, Ankamali, Boer, Deshi, Doom, Ghungroo, Nicobari

Regional Transboundary : Ghori

7. HORSE- 07

Local : Deccani, Kathiawari, Manipuri Pony, Marwari, Spiti Pony, Zaniskari Pony.

Regional Transboundary : Bhutia

8. ASS- 03

Local : Indian, Indian wild, Kiang

9. DROMEDARY (CAMEL)- 09

Local : Bikaneri, Jaisalmeri, Kutchi, Malvi, Marwari, Mewari, Mewati, Shekhawati, Sindhi

10. BACTRIAN CAMEL- 01

Local : Indian Bactrian

11. RABBIT- 03

Local : British Angora, Grey Giant, Russian Angora

12. CHICKEN- 28

Local : Cari Gold, Debendra, Dhanraja, Gramalakshmi, Gramapriya, Kadaknath, Kalinga Brown,

Kashmir Faverolla, Krishna–J, Miri, Mrityunjay, Nicobari, Vanaraja, Yamuna, Ankleshwar, Bursa, Chittagong, Danki, Daothigir, Ghagus, Haringhatta black, Kalasthi, Punjab brown

Regional Transboundary : Girraja

International Transboundary : Aseel, Brahma, Cochin, Indian game

13. DUCK- 06

Local : Chemballi, Kuttanadu Chara, Nageshwari, Sythetemete

International Transboundary : Indian Runner, Khaki Campbell

14. QUAIL- 02

Local : Button Quail, Grey Quail

(Note: The breeds highlighted above require priority attention for their conservation).

Table 1. Farm Animal /Poultry Breeds in India

S.N	Species	Number of breeds			Total
		Local	Regional Trans-boundary	International Trans-boundary	
1	**Buffalo**	17	4	2	23
2	**Cattle**	52	6	6	64
3	**Goat**	28	3	3	34
4	**Sheep**	58	4	0	62
5	**Yak**	5	0	0	5
6	**Pig**	7	1	0	8
7	**Horse**	6	1	0	7
8	**Ass**	3	0	0	3
9	**Dromedary camel**	9	0	0	9
10	**Bactrian camel**	1	0	0	1
11	**Rabbit**	3	0	0	3
12	**Chicken**	23	1	4	28
13	**Duck**	4	0	2	6
14	**Quail**	2	0	0	2
	TOTAL	218	20	17	255

Source: SOW-AnGR, FAO, 2007 with addition of some more breeds and deletion of duplication/synonyms.

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List of TAAS Publications

Following publications/reports have been brought out based on various activities organized by TAAS:

1. Regulatory Measures for Utilizing Biotechnological Developments in Different Countries - First Foundation Day Lecture, delivered by Dr. Manju Sharma, Secretary, Department of Biotechnology, Government of India, October 17, 2003.
2. Enabling Regulatory Mechanisms for Release of Transgenic Crops - Brainstorming Session, October 18, 2003.
3. Challenges in Developing Nutritionally Enhanced Stress Tolerant Germplasm- Special Lecture, delivered by Dr. S.K. Vasal, Distinguished Scientist, CIMMYT, Mexico, January 15, 2004.
4. Role of Science and Society Towards Plant Genetic Resources Management - Emerging Issues - Brainstorming Session, January 7 - 8, 2005, Highlights and Recommendations.
5. Role of Information Communication Technology in Taking Scientific Knowledge/Technologies to the End Users - National Workshop, January 10 - 11, 2005, Recommendations.
6. Public-Private Partnership in Agricultural Biotechnology - Second Foundation Day Lecture, delivered by Dr. Gurdev S. Khush, Adjunct Professor, University of California, Davis, USA, October 17, 2005.
7. First Dr. M.S. Swaminathan Award for Leadership in Agriculture, March 15, 2005 – Highlights.
8. Farmer-Led Innovations for Increased Productivity, Value Addition and Income Generation - Brainstorming Session, October 17, 2005 - Highlights & Recommendations
9. Strategy for Increasing Productivity Growth Rate in Agriculture" - Strategy Paper by Dr. R.S. Paroda, August, 2006.
10. The Second Dr. M.S. Swaminathan Award for Leadership in Agriculture, October 9, 2006 - A brief report.
11. Farmer-Led Innovations Towards Plant Variety Improvement, Conservation and Protecting Farmers' Rights", November 12 - 13, 2006, National Dialogue Highlights & Recommendations.
12. Brainstorming Session on "Models of Public-Private Partnership in Agricultural Biotechnology ", April 7, 2007 - Highlights & Recommendations
13. Symposium on “Farmer-Led Innovations for Sustainable Agriculture”, December 14-15, 2007 – Proceedings
14. National Symposium on Quality Protein Maize for Human Nutritional Security and Development of Poultry Sector in India and Presentation of the Third Dr. M.S. Swaminathan Award for Leadership in Agriculture, May 3, 2008 – Proceedings and Highlights.
15. Overcoming the World Food and Agriculture Crisis through Policy Change, Institutional Innovation and Science– Fourth Foundation Day Lecture, delivered by Dr. Joachim von Braun, Director General, International Food Policy Research Institute, Washington, March 6, 2009
16. Brainstorming Workshop on “Emerging Challenges before Indian Agriculture - The Way Forward”, March 6, 2009 - Proceedings & Recommendations.
17. Brainstorming Workshop on 'Strategy for Conservation of Farm Animal Genetic Resources' 10th – 12th April, 2009 – Ranchi Declaration.