New Breeds of Indigenous Livestock

National Bureau of Animal Genetic Resources
Karnal 132001 Haryana

Breed registration Committee in its meeting on 14th May, 2012 at New Delhi approved registration of nine new breeds of livestock species which include three breeds of cattle, one breed of buffalo, two breeds each of goat and pig, and one breed of donkey. The institute has registered first time indigenous pig and donkey breeds. After including these newly registered breeds, total number of registered indigenous breeds in the country has gone up to 144, which include 37 breeds of cattle, 13 of buffalo, 23 of goat, 39 of sheep, 6 of horses and ponies, 8 of camel, 2 of pig, 1 of donkey and 15 of chicken.

New breeds registered

S.N.	Breed	Home Tract	Accession number
CATTLE			
01	Pulikulam	Tamilnadu	INDIA_CATTLE_1800_PULIKULAM_03035
02	Kosali	Chhattisgarh	INDIA_CATTLE_2600_KOSALI _03036
03	Malnad Gidda	Karnataka	INDIA_CATTLE_0800_MALNADGIDDA_03037
BUFFALO			
01	Kalahandi	Odisha	INDIA_BUFFALO_1500_KALAHANDI_01013
GOAT			
01	Konkan Kanyal	Maharashtra	INDIA_GOAT_1100_ KONKANKANYAL _06022
02	Berari	Maharashtra	INDIA_GOAT_1100_ BERARI _06023
PIG			
01	Ghoongroo	West Bengal	INDIA_PIG_2100_GHOONGROO_09001
02	Niang Megha	Meghalaya	INDIA_PIG_1300_NIANGMEGHA_09002
Donkey			
01	Spiti	Himachal Pradesh	INDIA_DONKEY__0600_SPITI_05001

Pulikulam Cattle

I. General Description

1. Name of the breed	**Pulikulam**
2. Synonymes	Palingu maadu, Mani maadu, Jallikattu maadu, mattu maadu, Kilakattu maadu
3. Background for such a name	Originated from Pulikulam village
4. Since when the breed is known	For many centuries
5. Strains (or within breed types)	
6. Most closely related breeds (in appearance)	Kangayam
7. a. Native tract of distribution in terms of longitude and latitude	Longitude 77º47'E and 78º49'E, Latitude 9º30'N and 10º30'N
b. Place(s)	State: Tamil Nadu; District(s): Madurai, Sivagangai and Virudhunagar
8. Estimated population	
a. Year of estimation	2006
b. Population	45,000
c. Source/Reference	Studies on the physical and productive characteristics of Pulikulam breed by SEVA & TANUVAS, Chennai.
9. a. Communities responsible for developing the breed	Konar and Thevar
b. Description of community	Herders/seasonal migrants (Farmers/nomads/isolated/tribals)
10. Herd Book/Register established (Yes/No)	No
11. Herd: Average size	400 (100-700)
11. Utility of the breed (Milk/meat/draught/manure/other specify)	Draught, Game (Jallikattu) and Manure
13. Basic temperament of the breed (docile/moderate/tractable/wild)	Semi wild

14. Any other information

- The animals are well built and bulls are used in Bull riding (Jallikattu) which is very popular game in the area.
- The animals survive well on extensive grazing in the tropical climate of the area in the open housing system.
- The animals are contributing significantly in the organic farming of coconut, grapes, banana and many spices crops of the area by supplying manure and draft power.
- The animals are more resistant to communicable and parasitic

diseases as compared to the crossbreds in that area under hot and wet conditions.

II. Physical Characters

1. Colour	
a. Coat colour	Dark grey in males and white or grey in females
b. Muzzle	Black
c. Eyelids	Black
d. Tail Switch	Black
e. Hooves	Black
2. Horns	
a. Colour	Muddy
b. Size	Male: 34.34cm, Female: 37.22cm
c. Shape (Straight/curved)	Curved
d. Orientation	Outwards, upwards, backwards and inwards ending with pointed tips, tips are wide apart
3. Ears	
a. Length	Short (Cows: 19cm, Bullocks: 22.23cm)
b. Orientation (horizontal/ drooping)	Horizontal
4. Head	
a. Forehead (Convex/ concave/straight)	Straight
b. General description	Fore Head is broad and level with groove at centre
5. Body	
a. Hump (large/medium/ small)	Male: Large; Female: Medium
b. Dewlap (large/medium/ small)	Male: Medium; Female: Small
c. Naval flap (large/medium/ small)	Male: Medium; Female: Small
d. Penis sheath flap (large/ medium/small)	Small
6. Udder	
a. Shape (bowl/round/ trough/pendulous)	Not well developed
b. Udder size (large/ medium/small)	Small
c. Teat shape (cylindrical/ funnel/pear)	Cylindrical
d. Teat tip (pointed/round/ flap)	Pointed
e. Milk vein (prominent/ not prominent)	Not prominent
7. Any other information	Pulikulam cattle are with compact body and short legs. The loin, shoulders and neck are powerful. They are swift and vigorous. Pulikulam cattle are trained for riding events (Jallikattu).

III. Performance

1. Body Weight (kg)	Adult male: 259, Adult female: 208

2. Body measurements (cm)

Parameter	Male			Female		
	Average	Range	N	Average	Range	N
Chest girth	149.69	124-166	35	139.2	122-158	60
Body length	119.17	98-128	35	114.53	101-129	60
Height at withers	117.26	96-126	35	112.27	100-128	60

3. Dairy performance

Parameter	First lactation			Overall	
	Average	Range	N	Average	Range
Daily milk yield (kg)	1.0	0.5-1.5	30	1.25	0.75-2.0
Peak milk yield (kg)	1.5	1-2	30	1.75	1-2
Lactation length (days)	274	182-304	30	365	274-456

4. Reproduction	Average/Range
a. Males	
(i) Age at first ejaculation (months)	30
(ii) Age at first mating (months)	42
b. Females	
(i) Age at first oestrus (month)	38
(ii) Oestrous cycle duration (days)	22
(iii) Oestrus duration (hrs)	24
(iv) Age at first mating (months)	41
(v) Age at first calving (months)	50
(vi) Service period (days)	260-440
(vii) Calving interval (days)	540-720
5. Draught performance	
a. Purpose (ploughing, threshing, power etc.)	All kind of agricultural operations, ploughing, draught bullocks
b. Average duration of work per day (hrs)	4 Hours
6. Drought tolerance (Excellent/Very Good/ Good/Average/Low)	Excellent
7. Heat tolerance (Excellent/Very Good/ Good/Average/Low)	Excellent

Kosali Cattle

I. General Description

1. Name of the breed	**Kosali**
2. Synonymes	-
3. Background for such a name/origin	Predominately seen in the plain area of Chhattisgarh. The ancient name of this region was 'Kowshal', named after the maternal uncle house of Lord Ram.
4. Since when the breed is known	Information regarding origin of this breed is inadequate.

	Farmers particularly Yadava/ Rawuth community are keeping this cattle generation after generation.
5. Strains (or within breed types)	Light Red & Whitish Gray type
6. Most closely related breeds (in appearance)	-
7. a. Native tract of distribution in terms of longitude and latitude	Longitude 81°38'E and 82°6'E, Latitude 21°14'N and 22°33'N
b. Approximate area of distribution	50,000 sq.km.
c. Place(s)	State: Chhattisgarh; District(s): Bilaspur, Raipur, Durg, Janjgir-Champa
8. Estimated population	
a. Year of estimation	2007
b. Population	Approximately 15 lakh
c. Source/Reference	Estimated from Livestock Census (2007)
9. a. Communities responsible for developing the breed	Farming community of Chhattisgarh mainly Yadava/ Rawauth communities
b. Description of community	Farmers (Farmers/nomads/ isolated/tribals)
10. Herd Book/Register established (Yes/No)	No
11. Herd: Average size	5-6
	Composition Breeding females - 64%, Replacement females (1-3yrs) - 20%, Calves - 16%, Breeding bulls - 64%, Replacement males (1-3 yrs) - 18%, Bullocks - 18 %
11. Utility of the breed (Milk/meat/draught/ manure/other specify)	Manure, Draught and Milk
13. Basic temperament of the breed (docile/moderate/ tractable/wild)	Moderate
14. Any other information	Most of the time local cows are let loose and meet their feed requirements through grazing. Besides grazing, paddy straw is also provided by the farmers. Some amount of concentrate is provided to lactating and advanced pregnant animals.

II. Physical Characters

1. Colour	(Both Male and Female)
a. Coat colour	Mainly light red (60-65%), followed by whitish grey (30-35%). Few animals (3-5%) having black coat colour or red with white patches also seen.
b. Muzzle	Black-89%, Brown-11.0%
c. Eyelids	Black
d. Tail Switch	Black-89%, Brown-11.0%
e. Hooves	Black
2. Horns	
a. Colour	Black
b. Size (cm)	Male: 20.82±0.91 Female: 12.05±0.23
c. Shape (Straight/curved)	Stumpy and Straight. In some cases absent also
d. Orientation	Outward, upward and inward
3. Ears	
a. Length (cm)	20.19±0.08
b. Orientation (horizontal/ drooping)	Horizontal
4. Head	
a. Forehead (Convex/ concave/straight)	Flat and Straight
b. General description	Broad head. Face Length (cm): 39.03±0.09

5. Body	Male	Female
a. Hump (large/medium/ small)	Small to medium	Small
b. Dewlap (large/medium/ small)	Small to medium	Small
c. Naval flap (large/medium/ small)	Small	
d. Penis sheath flap (large/ medium/small)	Small	
6. Udder		
a. Shape (bowl/round/ trough/pendulous)	Bowl shape, tightly attached with the body	
b. Udder size (large/ medium/small)	Small	
c. Teat shape (cylindrical/ funnel/pear)	Funnel	
d. Teat tip (pointed/round/ flap)	Pointed	
e. Milk vein (prominent/ not prominent)	Not prominent	

III. Performance

1. Body Weight (kg)

Weight at	Male			Female		
	Average	Range	N	Average	Range	N
Birth	14.5±1.5	11-17	20	13.2± 1.8	10-16	18
12 months	65.5±3.5	40-75	25	55.4±3.2	30-70	25
24 months	101.5±3.0	70-130	20	87.4±3.8	60-110	20
First mating	150.5±5.0	100-200	20	135±4.8	95-175	20
Adult weight	260.4±3.5	200-300	50	160.5±1.6	80-220	100

2. Body measurements (cm)

Parameter	Male			Female		
	Average	Range	N	Average	Range	N
Chest girth	152.2±1.46	140-166	50	125.39±0.21	85-149	600
Body length	126.0±2.68	107-160	50	102.79±0.26	91-121	600
Height at withers	121.1±1.57	112-140	50	103.09±0.24	88-118	600

3. Dairy performance

Parameter	First lactation			Overall		
	Average	Range	N	Average	Range	N
Daily milk yield (kg)	0.900	0.5-1.0	25	0.955	0.5-1.0	25
Peak milk yield (kg)	1.250	1.0-1.5	25	1.450	1.0-2.0	25
Lactation length (days)	200	180-210	25	220	200-250	25
Lactation milk yield (kg)	180.0	160-200	25	210.0	200-250	25
Fat %	-	-	-	3.5±0.04	3.0-4.5	25
SNF %	-	-	-	9.4±0.11	8.5-10.5	25

4. Reproduction	Average	Range	N
a. Males			
(i) Age at first ejaculation (months)	30	26-36	20
(ii) Age at first mating (months)	36	30-40	20
b. Females			
(i) Age at first oestrus (months)	42	36-48	30
(ii) Oestrous cycle duration (days)	21	20-25	30
(iii) Oestrus duration (h)	24	—	30
(iv) Age at first mating (months)	44	40-50	30
(v) Age at first calving (months)	53	48-60	30
(vi) Service period (days)	180	130-240	30
(vii) Calving interval (days)	-	545-730	

5. Draught performance

a. Purpose (ploughing, threshing, Ploughing, threshing, etc. power etc.)

b. Physiological parameters	Before work	After work	
		After 3 h	*After 5 h*
Rectal temperature (°F)	101.3	102.5	102.85
Respiration rate/min	19.66	33.75	35.75
Pulse rate/min	54.75	79.0	80.0

c. Fatigue score

Frothing	Frothing starts after 2 h of Ploughing
Leg in-coordination	Starts after 3 h of ploughing
Excitement	Not reported
Inhibition of progressive movement	Slow after 3 h of ploughing and very slow after 4 h
Tongue protrusion	Starts after 3 h of ploughing

d. Draught power (HP) 0.72 HP before initiation of work.

e. Average duration of work per day (h) 5-6 h

6. Drought tolerance (Excellent/Very Good/Good/Average/Low) Very good

7. Heat tolerance (Excellent/Very Good/Good/Average/Low) Excellent

8. Any other information specific to the breed Bullocks of this breed are very efficient for paddy field operation after sowing. This method is called "Beeashi" in local language

Malnad Gidda Cattle

I. General Description

1. Name of the breed: Malnad Gidda
2. Synonyms: Gidda, Uradana (Meaning village cow), Varshagandhi (gives one calf every year)
3. Background for such a name/origin: The word Gidda means dwarf and Malnad means a place receiving heavy rainfall, where these cattle are inhabited. Malay means hilly, Nadu means place (Malay+Nadu= Malnad) and gidda means small.
4. Since when the breed is known: Since long, but reported in 1912 by Kristanasameingar and Pease
5. Strains (or within breed types): Not known
6. Most closely related breeds: Vechur cattle in Kerala
7. a. Native tract of distribution in terms of longitude and latitude: Longitude 74º5'E and 75º5'E, Latitude 11º5'N and 14º5'N

b. Place(s)

State	District(s)
Karnataks	Shimoga, Chikamagalur, Hassan, Udupi, Dakshina Kannada, Uttar Kannada and Kodagu

8. Estimated population
   a. Year of estimation: 2007
   b. Population: 12.81 Lakh
   c. Source/Reference: Livestock Census 2007. Dept of Animal Husbandry and Veterinary Services, Govt. of Karnataka-http://www.karunadu.gov.in/ahvs-website/breedingspolicy.html)
9. a. Communities responsible for developing the breed: All communities and Castes of Western Ghats region of Karnataka
   b. Description of community (Farmers/nomads/isolated/tribals): Farmers
10. Herd Book/Register established (Yes/No): No
11. Herd: Average size: Commonly 2-3 animals. However number of Malnad Gidda cattle varies widely. Normally good number of animals even upto 100 are kept by land lards (Arecanut growers) in Shimoga and Chikamagalur districts while small number of animals are kept in other districts
12. Utility of the breed (Milk/meat/draught/manure/other specify): Milk and Manure
13. Basic temperament of: Docile

the breed (docile/moderate/ tractable/wild)

14. Any other information

They are very active, lively with an extraordinary power of endurance and resistance to diseases. No special managemental care is given to these animals. During nights animals are housed in traditional shed where in dung and urine is not cleared regularly. Green leaves are spread on the floor everyday as bedding material over the dung and urine. It is cleared once in one to two months which forms good quality compost manure normally. These animals are sent for grazing from morning till evening. They are also fed with small quantities of paddy straw, spear grass and green grass depending on availability. Generally they are bred by natural service when they go for grazing. Mothering instinct is very high among Malnad Gidda cows. These animals are used for cultivation, milk and manure. Generally comparatively well built and good males are castrated and used for cultivation. They thrive mostly on grazing and play a unique role in the farming systems of the heavy rain fall malnad and coastal regions of Karnataka. They are well adapted to the local agro ecological systems of Western Ghats. They play a major role in the rural economy of this region by providing milk, manure and draft power with negligible inputs.

II. Physical Characters

1. Colour (Male and Female)	
a. Coat color	Five different colour variants exist in the breed i.e. white, black, red, brown and fawn. The predominant coat colour is black with light shades of fawn on thigh and shoulder region.
b. Muzzle	Black
c. Eyelids	Black
d. Tail Switch	Black
e. Hooves	Black
2. Horns (Male and Female)	
a. Colour	Black
b. Size	Small to medium. Generally small
c. Shape (Straight/curved)	Straight
d. Orientation	Outward, upward and inward
3. Ears	
a. Length	15.56- 16.38 Cm
b. Orientation (horizontal/ drooping)	Horizontal
4. Head	
Forehead (Convex/concave/ straight)	Straight
5. Body (Male and Female)	
a. Hump (large/medium/ small)	Small
b. Dewlap (large/medium/ small)	Medium
c. Naval flap (large/medium/ small)	Small
d. Penis sheath flap (large/medium/small)	Medium
6. Udder	
a. Shape (bowl/round/trough/ pendulous)	Bowl
b. Udder size (large/medium/ small)	Small
c. Teat shape (cylindrical/ funnel/pear)	Funnel
d. Teat tip (pointed/round/ flap)	Pointed
e. Milk vein (prominent/ not prominent)	Not Prominent
7. Any other information	They are small in size with compact body frame weighing around 80-120 Kg. Malnad Gidda cattle are shorter and smaller than Vechur and Punganur cattle.

III. Performance

1. Body weights (kg)

Parameter	Male	Female
Birth weight		8.56±0.44
Weight at first mating		87.29±2.95
Adult weight		80-120

2. Body measurements (cm)

Parameter	Male	Female
Chest girth	118.47±3.93	118.36±0.67
Body length	86.53±1.93	87.04±0.65
Height at withers	91.00±1.47	90.29±0.46

3. Dairy performance

Parameter	Average/Range
Daily milk yield (kg)	0.87±0.03 (0.5 to 4.0)
Peak milk yield (kg)	3.09±0.24
Lactation length (days)	249.61±3.85
Lactation milk yield (kg)	218.33±8.15

4. Reproduction	
a. Males	
(i) Age at first mating (months)	38.06±1.24
b. Females	
(i) Age at first oestrus (month)	24
(ii) Oestrous cycle duration (days)	21
(iii) Oestrus duration (hrs)	12-24
(iv) Age at first mating (months)	Widely variable. Ranged from 24-48 months depending on nutritional status particularly availability of grass for their grazing
(v) Age at first calving (months)	45.41±1.22
(vi) Service period (days)	254.75±31.31
(vii) Calving interval (days)	517.41±20.67


Pulikulam-Bull


Pulikulam-Cow


Kosali-Bull


Kosali-Cow


Malnad Gidda-Bull


Malnad Gidda-Cow


Kalahandi-Buffalo Bull


Kalahandi-Buffalo

5. Draught performance
   a. Purpose (ploughing, threshing, power etc.) — Ploughing
   b. Physiological parameters before work
      Rectal temperature (°F) — 101.5
      Respiration rate/min — 25-30
      Pulse rate/min — 30-40
   c. Fatigue score
      Frothing — Not observed
      Leg in-coordination — Not seen
      Excitement — Excitement observed during flightiness
      Inhibition of progressive movement — Not observed
      Tongue protrusion — Not observed
   d. Average duration of work per day (h) — 4-6
6. Drought tolerance (Excellent/Very good/Good/Average/Low) — Excellent
7. Heat tolerance (Excellent/Very good/Good/Average/Low) — Excellent
8. Any other information specific to the breed

Malnad Gidda cattle are reared under low input low output system. Some areas it is zero input system where animals sustain solely on grazing. Elite cows give 3-5 kg of milk per day despite small body size. These animals are highly adapted to harsh climatic conditions including heavy rainfall conditions. These animals run fast, jump high and long. These animals show high degree of natural resistance to foot and mouth disease. Even if they suffer they will show only mild tongue lesions which will disappear after 3-4 days.

Kalahandi Buffalo

I. General Description

1. Name of the breed — **Kalahandi**
2. Synonymes — Deshi
3. Background for such a name — Named after its native tract i.e. Kalahandi district in Odisha.
4. Since when the breed is known — Not known
5. Strains (or within breed types) — Not known
6. Most closely related breeds (in appearance) — -
7. Estimated population (Approx)
   a. Year of estimation — 2009
   b. Population — 80,000
   c. Source/Reference — Project on survey, evaluation and characterization of Kalahandi Buffalo, implemented by OLRDS, and OUAT, Odisha.
8. a. Native tract of distribution in terms of longitude and latitude — Longitude 82º30'E to 83º74'E Latitude 19º03'N to 21º05'N
   b. Approximate area of distribution — 9000 sq.km.
   c. Place (s) — Kalahandi distrtict and adjoining area in Rayagada district, heavy concentration is in Bhawanipatna, Junagarh, Dharmagarh, Kodsara and Golamunda blocks of Kalahandi district.
9. a. Communities responsible for developing the breed — Not specific
   b. Description of community (Farmers/nomads/isolated/tribals) — Farmers
10. Herd: Average size — 20-40
    Composition Breeding females 47.5%, Replacement females (1-3 years) 25%, Calves 12.5%, Breeding bulls 5%, Replacement males (1-3 years) 5%, Bullocks 5%
11. Utility of the breed (Milk/meat/draught/manure/other specify) — Milk, draught, manure

12. Basic temperament of the breed (docile/moderate/tractable/wild) — Moderate

II. Physical Characters

1. Colour	Name		Male (%)	Female (%)
a. Coat colour	Blackish grey		80	80
	Grey		20	20
b. Muzzle	Black		95	90
	Grey		05	10
c. Eyelids	Black		100	100
d. Tail	Black		90	90
	Grey		10	10
e. Hoofs	Black		100	100
2. Horns				
a. Colour	Black		10	10
	Greyish black		90	90
b. Size (cm)			49.3±0.51	50.1±0.57
c. Shape (Straight/ curved)	Curved			
d. Orientation	Horizontal going backwards, upward, and inwards			

3. Ears
a. Length (cm) — 23.40 ± 0.35 cm
b. Orientation — Horizontal
4. Head
a. Forehead — Convex
b. General description — Proportionate to body size.
5. Body
a. Hump — Small
b. Naval flap — Small
c. Penis sheath flap — Medium
6. Udder
a. Shape — Round
b. Udder size — Medium
c. Teat shape — Cylindrical
e. Teat tip — Round
f. Milk vein — Not prominent

III. Performance

1. Body Weight (kg)

Weight at	Male	Female
Birth	23.12±0.38	22.23±0.43
Pre-weaning weight	48.76±0.72	46.56±0.66
12 months	184.45±1.65	172.22±1.43
Adult weight	377.63±3.36	350.90±3.24

2. Body measurements (cm)

Measurements	Male	Female
Chest girth	177.13±1.25	172.11±1.31
Body length	124.12±1.39	122.16±1.41
Height at withers	125.94±1.46	123.77±1.56

3. Dairy performance

Parameter	Lactation			
	I	II	III	IV
Daily milk yield (kg)	2.46	2.86	3.14	3.22
Peak milk yield(kg)	3.2	3.4	3.6	3.7
Lactation length (days)	276.44	282.32	284.44	283.23
Lactation milk yield (kg)	680.64	807.44	893.14	912.00
Fat%	7.86	8.12	8.18	8.12
SNF%	8.64	8.67	8.66	8.65

4. Reproduction
a. Males
(i) Age at first mating (months) — 35.71±0.26
b. Females
(i) Age at first oestrus (months) — 37.92±0.27
(ii) Ostrus cycle duration (days) — 21
(iii) Ostrus duration (h) — 18-20
(iv) Age at first mating (months) — 38.70±0.22
(v) Age at first calving (months) — 49.74±0.22
(vi) Service period (days) — 224.15±2.22
(vii) Calving interval (days) — 532.05±2.34
5. Drought Performance
(i) Purpose (ploughing, threshing, power etc.) — All Agricultural Operations.
(ii) Physical parameters
Rectal temperature (°F) — 100.5±0.1
Respiration rate/min. — 20.31±0.3
Pulse rate/min — 71.2±0.3
(iii) Average duration of work per day (h) — 6-7
6. Drought tolerance — Excellent
7. Heat tolerance — Excellent

Konkan Kanyal Goat

1. General Description

1 Breed name — **Konkan Kanyal**
2. Breed name synonyms — Kanyal
3. Background for such a name/origin — Name derived from the typical white bands on black face and black ear with white margin, locally called as "Kanyal goats".
4. Since when the breed is known — Since 2001
5. Strains (or within breed types) — -
6. Most closely related breeds (in appearance) — Kanniadu goat breed of Tamilnadu is phenotypically similar in appearance
7. Classification
a. Size (Small/Medium/ Large) — Medium
b. Utility (Mutton/Milk/Dual/ Fibre/Hair or any other) — Mutton
8. a. Native tract of distribution in terms of longitude and latitude — Longitude 73°19'E to 74°18'E Latitude 15° 37'N to 16°40'N
b. Approximate area of distribution (sq km) — 5,207 sq. km.

c. Place(s)	State: Maharastra	District: Sindhudurg (South Konkan Coastal Zone)
9. Estimated population		
a. Year of estimation	2005	
b. Population	11,500	
c. Source/reference	Survey work done by Cattle Breeding Farm, Nileli	
10. a. Community responsible for developing the breed	Dhangar	
b. Description of community (Farmers/nomads/isolated tribals)	Nomads	
11. Flock: Average size	70	
Composition	Doe: 60% Bucks: 10% Kids 30%	
12. Any other information	This breed is well sustained in hilly tract of Konkan coastal region, having high rain fall and hot and humid climate	

II. Physical Characters

1. Colour, distinctive colour markings, if any	
Body	Black with white marking on collar, lower jaw and ventral surface
Legs	Long, laterally black, medially white and white from knee to fetlock joint
Tail	Dorsally black and ventrally white
Head	Bilateral white strips from nostrils to ear
Forehead	Flat and broad, black in Colour
Ear	Black with white margin
2. Head profile (straight/ convex/slightly convex)	Convex
3. Ears (erect/pendulous/ horizontal)	Pendulous
4. Wattles (present/absent)	Absent
5. Horns	
a. Number	Two
b. Shape	Cylindrical
c. Orientation	Backward
d. Size (Small < 15/medium 15-25/large > 25 cm)	Medium
6. Coat type (hair/cashmere/ pashmina/mohair)	Hair
7. Beard (present/absent)	Present in male
8. Tail	Length Male: 16.32cm; Female: 14.71cm
9. Udder shape and size	Bowl shaped
10. Specific visible characteristics	Breed is physically found sturdy. The body coat of the animal is smooth and silky so that rain water gets quickly drained off.

III. Performance

1. Body weight (kg)

Weight at	Male			Female		
	Average	Range	N	Average	Range	N
Birth	2.23	1.7-2.9	290	2.05	1.5-2.5	296
Weaning/3 months	9.40	6.5-12.8	286	8.22	6-10	284
6 months	15.63	12-18	215	14.01	11-16	284
1 year	25.36	20-30	240	21.09	18-25	266
First kidding	—	—	—	24.50	22-26	204
6 teeth (Adult)	49.99	45-60	188	31.77	28-35	281

2. Body measurements (cm)

Measurement	Male			Female		
	Average	Range	N	Average	Range	N
Chest-girth	83.22	78-85	188	73.29	70-75	281
Body length	81.57	75-85	188	72.73	65-75	281
Height at withers	84.17	80-90	188	74.24	70-78	281

3. Carcass characters

Trait	Male			Female		
	Average	Range	N	Average	Range	N
Age at slaughter (months)	12	10-14	30	12	10-14	15
Weight at slaughter (kg)	26.86	24-28	30	20.2	18-22	15
Dressing % Hot	53.37	50-54	30	51.2	49-53	15
Cold	51.01	50-52	30	49.42	48-50	15

4. Dairy performance

Average	N	Average	N
Daily milk yield (lit)	0.6	0.5-0.8	408
Total lactation milk yield (lit)	59.02	40-80	408
Lactation length (days)	96.97	75-110	408
Fat %	3.01	2.8-3.2	50

5. Reproduction

Trait	Average	Range	N
Age at first mating in males (days)	309	272-368	278
Age at first mating in females (days)	329.25	248-350	204
Age at first oestrus (days)	262.4	238-300	204
Oestrus cycle duration (days)	21.20	17-22	580
Age at first kidding (days)	507.67	480-545	704
Kidding interval (days)	239.85	200-275	204
Service period (days)	61.80	30-90	350
Litter size	-	1-3	350
Twining %	40.85	-	-
Lifetime number of kidding	12	10-14	350


Konkan Kanyal-Ram


Konkan Kanyal-Doe


Berari-Ram


Berari-Doe

6. Any other information specific to the breed

1. Goat breed having good height, weight and typical black and white colour, and it is preferred by people for meat type.
2. Konkan Kanyal has strong legs and tough hooves, so easily moves in hilly tract during browsing.
3. Konkan Kanyal breed is also suited to the stall feeding.
4. Disease incidence and mortality is negligible.

Berari Goat

1. General Description

1	Breed name	**Berari**
2.	Breed name synonyms	Lakhi, Gaorani
3.	Background for such a name/origin	Originated from 'Berar' region of Central Province and Berar, which is recently known as Vidarbha region of Maharashtra state.
4.	Since when the breed is known	From last century
5.	Strains (or within breed types)	-
6.	Most closely related breeds (in appearance)	-
7.	Classification	
	a. Size (Small/Medium/ Large)	Medium
	b. Utility (Mutton/Milk/Dual/ Fibre/Hair or any other)	Mutton
8.	a. Native tract of distribution in terms of longitude and latitude	Longitude 75º57'E to 80º59'E Latitude 17º57'N to 21º46'N
	b. Approximate area of distribution (sq km)	97,321 sq. Km.
	c. Place(s)	State: Maharastra; District: Nagpur, Wardha, Amravati and Akola however also occurs in rest of the districts of Vidarbha region
9.	Estimated population	
	a. Year of estimation	2011
	b. Population	Around 2.5 lakhs (Approximately 10% of total goat population of Vidarbha region)
	c. Source/reference	As per the sample survey conducted by the Department of Animal genetics and Breeding , PGIVAS, Akola
10.	a. Community responsible for developing the breed	Farmers of Backward communities of Vidarbha
	b. Description of community (Farmers/nomads/isolated tribals)	Farmers
11.	Flock: Average size	5.40
	Composition	Doe: 65%; bucks: 01%; kids 34%

II. Physical Characters

1.	Colour	Light to dark tan
	Distinctive colour markings, if any	
2.	Head profile (straight/ convex/slightly convex)	Convex head, slightly roman nose, light to dark strip on lateral sides from base of horn to nostrils
3.	Ears (erect/pendulous/ horizontal)	Flat, leafy, pendulous (drooping)
4.	Wattles (present/absent)	Rarely present
5.	Horns	
	a. Number	Two
	b. Shape	Flat
	c. Orientation	Upward, backward
	d. Size	Small (Small < 15/medium 15-25/ large > 25 cm)
6.	Coat type (hair/cashmere/ pashmina/mohair)	Hair
7.	Beard (present/absent)	Rarely present
8.	Tail	Length Male: 18.50cm; Female: 15.62cm
9.	Udder shape and size	Bowl shaped mostly
10.	Specific visible characteristics	Black coloured ring around neck (i) in adult male. (ii) Black hair line along with the vertebral column extending up to tail in both sexes.

III. Performance

1. Body weight (kg)

Weight at	Male			Female		
	Average	Range	N	Average	Range	N
Birth	2.46±0.03	1.5-3.5	98	2.36±0.04	1.5-3.5	109
Weaning/3 months	9.22±0.23	5-14	87	8.70±0.15	5-13	116
6 months	15.41±0.34	10-23	69	14.65±0.29	10-21	71
12 months	22.64±0.66	14-34	64	20.41±0.38	12-29	94
First kidding	31.39±0.98	24-42	23	22.69±0.27	16-30	149
Adult (6 teeth)	36.00±1.98	24-72	30	29.95±0.21	20-52	741

2. Body measurements (cm)

Measurements	Male			Female		
	Average	Range	N	Average	Range	N
Chest-girth	76.17±1.51	58-101	30	74.31±0.21	54-93	741
Body length	70.16±1.37	55-89	30	64.35±0.27	51-89	741
Height at withers	75.67±1.78	55-99	30	72.23±0.25	52-94	741

3. Carcass characters

Trait	Male			Female		
	Average	Range	N	Average	Range	N
Age at slaughter (months)	22.35±2.70	9-48	17	24.67±2.54	18-36	9
Body weight (kg)	32.82±1.93	22-45	17	29.56±1.47	23-35	9
Weight of carcass (kg)	15.82±0.97	10-22	17	13.83±0.69	11-17	9
Dressing%	48.20%	46-49	17	46.82%	45-48	9

4. Dairy performance

Trait	Average	Range	N
Daily milk yield (g)	533.28±33.15	91-1025	397
Total lactation milk yield (kg)	77.72±1.85	54-113	43
Lactation length (days)	132.84±0.76	110-150	123
Fat (%)	5.72±0.38	4.0-7.8	24
SNF (%)	11.15±0.30	9.96-13.01	24

5. Reproduction

Trait	Average	Range	N
Age at first mating in males (days)	531.72±4.53	450-540	31
Age at first mating in females (days)	313.25±1.42	294-360	85
Age at first oestrus (days)	292.10±1.66	273-360	86
Oestrus cycle duration (days)	20.56±0.38	20-23	86
Age at first kidding (days)	460.74±1.56	442-510	73
Kidding interval (days)	240.86±1.94	180-327	97
Service period (days)	91.65±2.08	34-177	112
Litter size	1.61±0.04	1-4	806
Lifetime number of kidding	5.30±0.50	1-8	156

6. Any other information specific to the breed
The breed is performing well in Vidarbha region of Maharashtra where temperature is extremely high in the summer season**.**

Ghoongroo Pig

I. General Description

1. Name of the breed	**Ghoongroo**
2. Synonyms	Nil
3. Background for such a name/origin	Not known; originated in the breeding tract
4. Since when the breed is known	First reported in 2000
5. Strains (or within breed types)	Nil
6. Most closely related breeds (in appearance)	Nil
7. Classification	
a. Short -eared	Broad
b. Snout-length long or short	Short
c. Belly type Pot or flat	Flat
8. a. Native tract of distribution in terms of longitude and latitude	Longitude 88ºE to 90ºE Latitude 26º3ʾN to 27º3ʾN
b. Approximate area of distribution (sq km)	18,121
c. Place(s)	State: West Bengal; District: Darjeeling, Jalpaiguri, Cochbehar, North and South Dinajpur
9. Estimated population	
a. Year of estimation	2007
b. Population	15 000 (approx)
c. Source/Reference	18th All India Livestock Census, WB
10. a. Communities responsible for developing the breed	Pig keepars of the breeding tract
b. Description of community (Farmers/nomads/isolated/ tribals)	Farmers and Tribals
11. Flock: Average size	-
Composition	Sows-40%; Boars-20%; Piglets-40%
12. Utility of the breed (Pork/Hair/Manure/ Others(specify)	Pork and Manure

II. Physical Characters

1. Colour	Black
Distinctive colour markings	Occasionally hooves and metapodials are white
2. Snout profile (straight/convex/slightly convex/concave)	Concave
3. Ears (erect/pendulous/ horizontal)	Pendulous
4. Coat	
a. Bristle (long/medium/ short)	Medium
b. Fineness (bristle diameter)	Not Done

5. Hoof placement (partial/full)	Full
6. Top line (Straight/concave)	Straight
7. a. Number of teats	Seven pairs
b. Teat position	Thoraco-Abdominal
8. Any other information	Thick coarse and long hair coat, long tail, upwardly curved snout, broad and flattened face with large and heart shaped ears resembling those of elephant

III. Performance

1. Body weight (kg)

Weight at	Male			Female		
	Average	Range	N	Average	Range	N
Birth	1.12	0.9-1.3	100	1.07	0.8-1.3	100
Weaning	14.0	10-16	100	14.0	10-16	100
3 months	32.0	26-37	100	32.0	25-37	100
6 months	67.0	59-72	80	67.0	58-72	80
1 year	112.0	86-125	80	111.0	85-122	80
Slaughter	125.0	90-135	80	123.0	90-135	80
First furrowing	-	-	-	82.0	68-92	80
Adult weight	251.0	180-260	30	190.0	152-220	30

2. Body measurements (cm)

Body measurement	Male			Female		
	Average	Range	N	Average	Range	N
Chest-girth	146	121-152	80	140	116-148	80
Body length	124	108-130	80	115	97-126	80
Height at withers	84	66-95	80	78	59-92	80
Neck girth	120	94-134	80	108	88-128	80

3. Carcass characters

Carcass characters		Male			Female		
		Average	Range	N	Average	Range	N
Age at slaughter (days)		400					
Carcass weight (kg)	Hot	85	63-90	30	82	61-90	22
	Cold	82	60-88	30	79	58-88	22
Length (cm)							
Dressing %	Hot	69	67-72	30	68	66-70	22
	Cold	68	65-72	30	67	65-69	22
Meat: bone ratio		79:21		15	75:25		12
Fat thickness (cm)		3	2-4	15	3	2-4	12
Lean %		55	50-60	15	56	50-61	12
Fat %		31	23-34	15	33	25-37	12
Bone %		14	12-16	15	11	8-14	12
Feed conversion Efficiency (0-90 days)		2.805 (2.25-3.70)					

4. Reproduction	Average	Range	N
a. Males			
(i) Age at first mating (days)	200	180-240	50
b. Females			
(i) Age at first oestrus (days)	180	150-200	100
(ii) Oestrous cycle duration (days)	21	18-24	100
(iii) Oestrus duration (h)	51.7	48-60	100
(iv) Age at first mating (days)	180	150-200	100
(v) Age at first furrowing (days)	300	272-320	100
(vi) Furrowing interval (days)	218	210-235	100
(vii) Litter size at furrowing	12	8-18	200
(viii) Litter weight (kg)	14	7-15	200
(ix) Litter size at weaning	11	6-16	200
(x) Lifetime number of furrowing	8	3-12	100
(xi) Productive life span (months)	60	20-100	100
5. Bristle production	Not relevant		

Niang Megha Pig

I. General Description

1. Name of the breed	**Niang Megha**
2. Synonyms	Meghalya Local, Khasi Local
3. Background for such a name/origin	Associated with the name of dwelling tribe
4. Since when the breed is known	Since time immemorial
5. Strains (or within breed types)	Breed with unique character
6. Most closely related breeds (in appearance)	NA
7. Classification	
Short-eared	Short ear
Snout-length long or short	Long snout
Belly type Pot or flat	Pot bellied
8. a. Native tract of distribution in terms of longitude and latitude	Longitude 91° 30'E Latitude 25° 30'N
b. Approximate area of distribution (sq km)	22,429 sq. km
c. Place(s)	Meghalya
9. Estimated population	
a. Year of estimation	2005-06
b. Population	3,90,689
c. Source/Reference	Livestock census
10. a. Communities responsible for developing the breed	Khasi, Garo, Jayantia
b. Description of community (Farmers/nomads/isolated/ tribals)	Tribal farmers
11. Flock: Average size	6
Composition	Sows-30%; Boars-20%; Piglets-50%
12. Utility of the breed (Pork/Hair/Manure/ Others(specify)	Pork, Bristle and Manure
13. Any other information	Formed by geographical isolation of the breeding tract

II. Physical Characters

1. Colour	Mostly black
Distinctive colour markings	Star shaped white patches at forehead and sometimes hock joint

2.	Snout profile (straight/convex/slightly convex/concave)	Medium tapering partially white at nostril
3.	Ears (erect/pendulous/ horizontal)	Small and erect
4.	Coat	
	a. Bristle (long/medium/ short)	Long on midline, uniformly other places
	b. Fineness (bristle diameter)	20 to 24 micron
5.	Hoof placement (partial/full)	Partial
6.	Top line (Straight/concave)	Straight in male, concave in female
7.	a. Number of teats	4-6 pairs
	b. Teat position	Mid ventral region
8.	Any other information	Wild appearance of the pigs

III. Performance

1. Body weight (kg)

Weight at	Male			Female		
	Average	Range	N	Average	Range	N
Birth	0.57	0.4-0.7	29	0.74	0.5-0.8	22
Weaning	5.39	4.5-6.0	27	5.59	5.5-6.2	19
3 months	7.5	5.0-8.0	25	8.50	5.0-9.0	23
6 months	15.5	12-20	20	20.0	18-30	18
1 year	58.0	40-70	16	63.0	45-75	14
First furrowing	-	-	-	60.0	43-72	4
Adult weight	63.0	45-75	8	68.0	49-79	18

2. Body measurements (cm)

Body measurement	Male			Female		
	Average	Range	N	Average	Range	N
Chest-girth	93.2	90-97	5	109.06	90-117	15
Body length	77.6	75-82	5	92.6	70-104	15
Height at withers	51.4	48-54	5	48.2	45-52	15
Neck girth	50.0	40-60	5	55.0	45-70	15

3. Carcass characters

Carcass characters		Male			Female		
		Average	Range	N	Average	Range	N
Age at slaughter (days)		365					
Carcass weight (kg)	Hot	40.60	30-58	5	44.10	32-60	5
	Cold	39.59	29-56.5	5	43.00	31-57.3	5
Length (cm)		58	45-60	5	61	50-65	6
Dressing %	Hot	70			70		
	Cold						
Meat: bone ratio		2.81	2.6-2.85	5	2.67	2.6-2.8	6
Fat thickness (inches)		0.25	0.21-0.28	5	0.27	0.22-0.30	6
Lean %		44.3	40-46	5	42.2	39-46	6
Fat %		29.5	26-31	5	30.5	26-32	6
Bone %		26.2	23-29	5	27.3	23-30	6
Feed conversion efficiency		4.5			4.5		

4. Reproduction

		Average	Range	N
a. Males				
(i)	Age at first mating (days)	240	180-300	4
b. Females				
(i)	Age at first oestrus (days)	220.5	200-300	10
(ii)	Oestrous cycle duration (days)	21	20-23	30
(iii)	Oestrus duration (h)	36	30-40	40
(iv)	Age at first mating (days)	228.3	210-250	10
(v)	Age at first furrowing (days)	342.6	320-365	10
(vi)	Furrowing interval (days)	207.05	180-250	22
(vii)	Litter size at furrowing	6.09	3-10	33
(viii)	Litter weight (kg)	4.21	1.5-6.0	33
(ix)	Litter size at weaning	5.63	3-10	32
(x)	Lifetime number of furrowing	4.2	3-6	5
(xi)	Productive life span (months)	36	30-40	5

5. Bristle production

a. Number of cutting per year NA

b. Bristle colour Black

Trait	Cutting	Age	Male			Female		
			Average	Range	N	Average	Range	N
Bristle weight (g)	1st	1y	90	60-110	10	80	50-100	8
Bristle length (cm)	1st	1y	8.25	6-11	10	8.05	5-10	8
Bristle diameter (μ)	1st	1y	22.51	22-24	10	21.35	20-22	8

Spiti Donkey

I. General Description

1.	Name of the breed	**Spiti**
2.	Synonyms	Nil
3.	Background of the such name	Geographical location of the breed
4.	Since when the breed is known	Time immemorial
5.	Strains (or within breed types)	No strains described as yet
6.	Most closely related breeds	Donkeys of Ladakh area in Jammu & Kashmir.
7.	a. Native tract of distribution in terms of longitude and latitude	This area lies to the north of greater Himalaya between 31°5' and 33° North latitude and 77°5' and 78°8' East longitude. The breeding tract of Spiti donkeys is a high altitude, mountainous area situated between 3000 to 4200 m above mean sea level.
	b. Places	State: Himachal Pradesh; District(s): Lahaul-Spiti (Spiti subdivision), Kinnaur (Pooh subdivision)
8.	Estimated population	4368 (As per 2007 livestock census).
9.	a. Communities responsible for developing the breed	Spiti donkeys are reared by Bodh (Budhisht) community inhabiting their distribution area


Ghoongroo-Boar


Ghoongroo-Sow


Niang Megha-Boar


Niang Megha-Sow


Spiti Megha-Ass


Spiti Megha-Jenny

b. Description of the community	Farmers
10. Herd book register established:	No
11. Stud/herd size	1-3
12. Utility of the breed	Transportation
13. Any other information	The Spiti donkeys are very strong and sure footed animals with incredible stamina. They can survive well in scarcity of feed and fodder during harsh winter months when this area is completely snow bound. The Spiti donkeys are able to carry upto 100kg of load in high altitude mountainous area with thin atmosphere having lesser oxygen. Usually, they are very calm, easy to handle and are rarely bad tempered.

II. Physical Characters

1. Coat colour	Mainly brown, also brown-black and black
2. Head marking	Major white markings mostly around muzzle and sometimes around eyes
3. Head	
a. Forehead	Slightly convex
b. General description	The face is also covered with long hairs like rest of the body. The head is comparatively broader and shorter
4. Ears	Straight, either completely erect or with slightly lateral orientation
5. Eyes	Eyes are brown or dark brown
6. Back	Straight
7. Canon	Average canon lengths for fore and hind limbs are 20 and 26 cm, respectively.
8. Fetlock, pastern and hoof	Hoofs are strong, meet at an angle of about 45° with the ground. Average hoof circumference is about 20 cm.
9. Tail setting	Tail extends up to hocks. The tail switch is not distinguishable due to presence of long hair on rest of the tail.

III. Performance

1. Body weight	The approximate estimated average weights of Spiti donkeys of <1 year: 24 kg 1-2 years: 37 kg 2-3 years: 53 kg

2. Body measurements (cm)

Young Spiti donkeys

Age	Sex	Body length	Height at withers	Heart girth	Face length	Canon length (FL)	Canon length (HL)
<1 year	Male	65.0± 2.3	60.5± 2.7	66.5± 2.7	22.0± 0.4	17.0± 0.4	21.5± 0.7
	Female	64.5± 2.5	60.2± 2.2	65.9± 2.3	21.3± 0.6	16.5± 0.6	20.8± 0.8
1-2 year	Male	76.1± 2.0	71.3± 1.5	77.3± 2.9	25.0± 1.7	18.0± 0.6	22.7± 0.6
	Female	75.5± 0.7	71.5± 0.7	75.5± 0.7	25.0± 0.0	18.2± 0.7	22.0± 0.0
2-3 year	Male	84.5± 2.7	77.0± 3.4	87.5± 3.5	29.5± 0.7	19.2± 0.7	24.0± 2.8
	Female	84.0± 4.2	83.5± 4.9	86.0± 2.8	29.0± 0.2	19.0± 0.5	24.5± 0.7

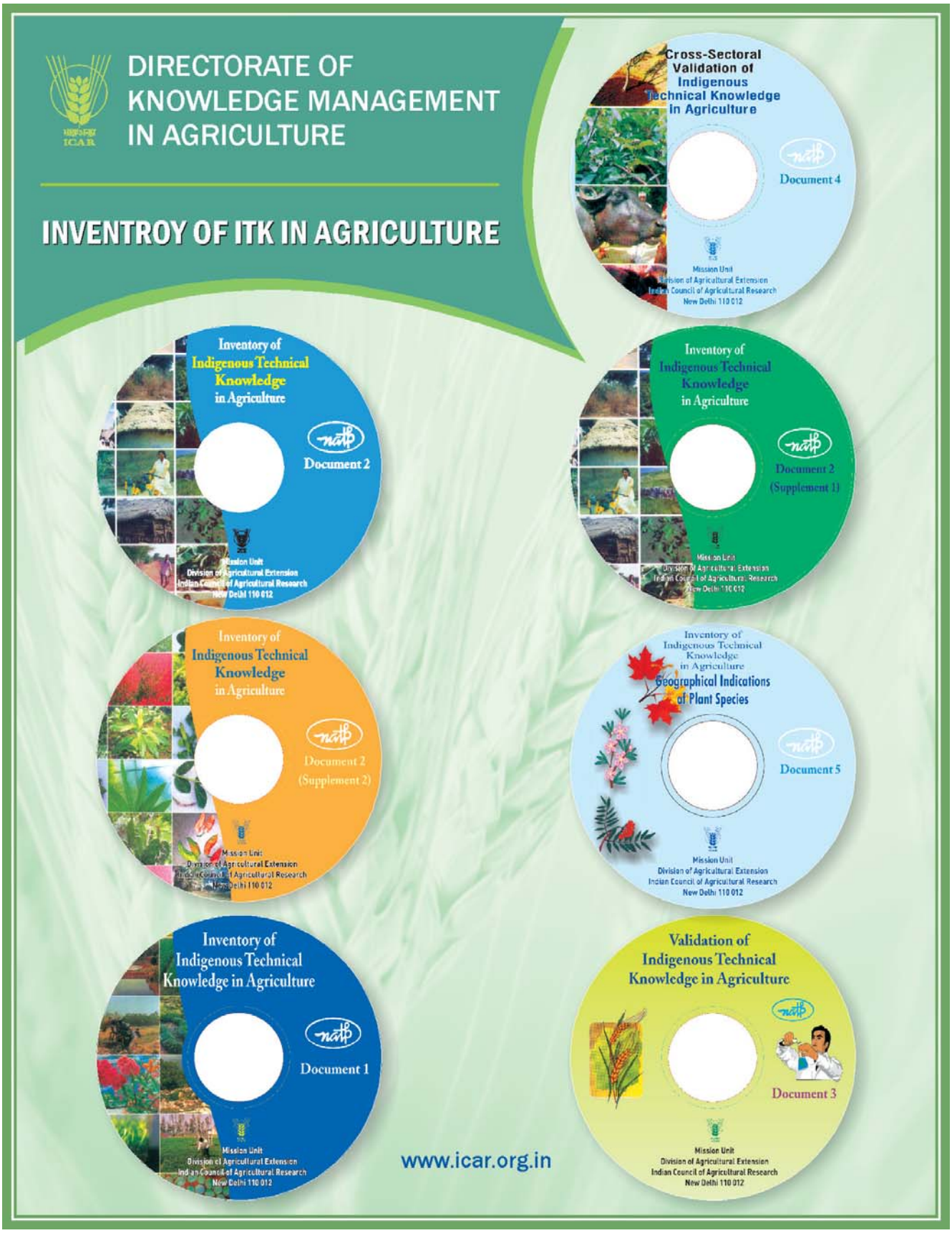
* FL-fore leg, HL-hind leg

Adult Spiti donkeys

Trait	Male			Female		
	Average	Range	N	Average	Range	N
Body length	91.0	29	86-97	90.96	26	85-95
Height at withers	88.59	29	84-95	88.65	26	80-94
Heart girth	100.5	28	90-115	98.58	26	90-107
Neck length	31.10	29	27-36	30.15	26	28-33
Face length	32.10	29	29-35	31.50	26	30-34
Ear length	21.39	28	19-23	21.50	26	20-23
Tail length without switch	30.07	28	26-35	31.52	25	27-35
Tail length with switch	54.21	28	39-68	55.56	25	37-70
Leg length (FL)	80.0	7	76-87	81.00	8	77-86
Leg length (HL)	87.71	7	84-91	87.50	8	85-90
Canon circumference (FL)	12.04	27	11-13	11.57	26	10-13

Trait	Male			Female		
	Average	Range	N	Average	Range	N
Canon circumference (HL)	12.79	19	11-14	12.70	20	11-14
Canon length (FL)	19.93	29	18-21	19.96	26	19-22
Canon length (HL)	26.10	29	23-28	26.40	25	24-28
Pastern circumference (FL)	11.51	27	10-13	11.27	26	10-13
Pastern circumference (HL)	12.36	11	10-15	11.94	18	10-15
Pastern length (FL)	8.66	29	7-10	8.62	26	8-10
Pastern length (HL)	8.68	25	8-10	8.60	25	8-10
Hoof length (FL)	5.83	29	5-7	5.73	26	5-6
Hoof length (HL)	5.53	19	5-6	5.45	21	5-6
Hoof circumference (FL)	20.88	25	19-23	20.25	24	18-22
Hoof circumference (HL)	20.67	12	18-26	19.18	17	17-21

3. Reproduction	Range
a. Males	
(i) Age at first puberty (months)	18-24
(ii) Age at first service (months)	24-30
b. Females	
(i) Age at puberty (month)	18-24
(ii) Oestrus duration (days)	4-10
(iii) Age at first conception (months)	24-36
(iv) Age at first foaling (months)	36-48
(v) Gestation period (days)	365-380
4. Type of work	Work as a pack animal for transportation of crops, grains, fruits, wood, manure and other items to road heads.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Inventory of Indigenous Technical Knowledge in Agriculture
Document 2
Inventory of Indigenous Technical Knowledge in Agriculture
Document 2 (Supplement 1)
Inventory of Indigenous Technical Knowledge in Agriculture
Document 2 (Supplement 2)
Inventory of Indigenous Technical Knowledge in Agriculture
Geographical Indications of Plant Species
Document 5
Inventory of Indigenous Technical Knowledge in Agriculture
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