Tropical Agriculture and Sustainable Development (EEEB G4136)
Guest lecture: Livestock systems – Ruminants (02)

Eco-Geography of Ruminants

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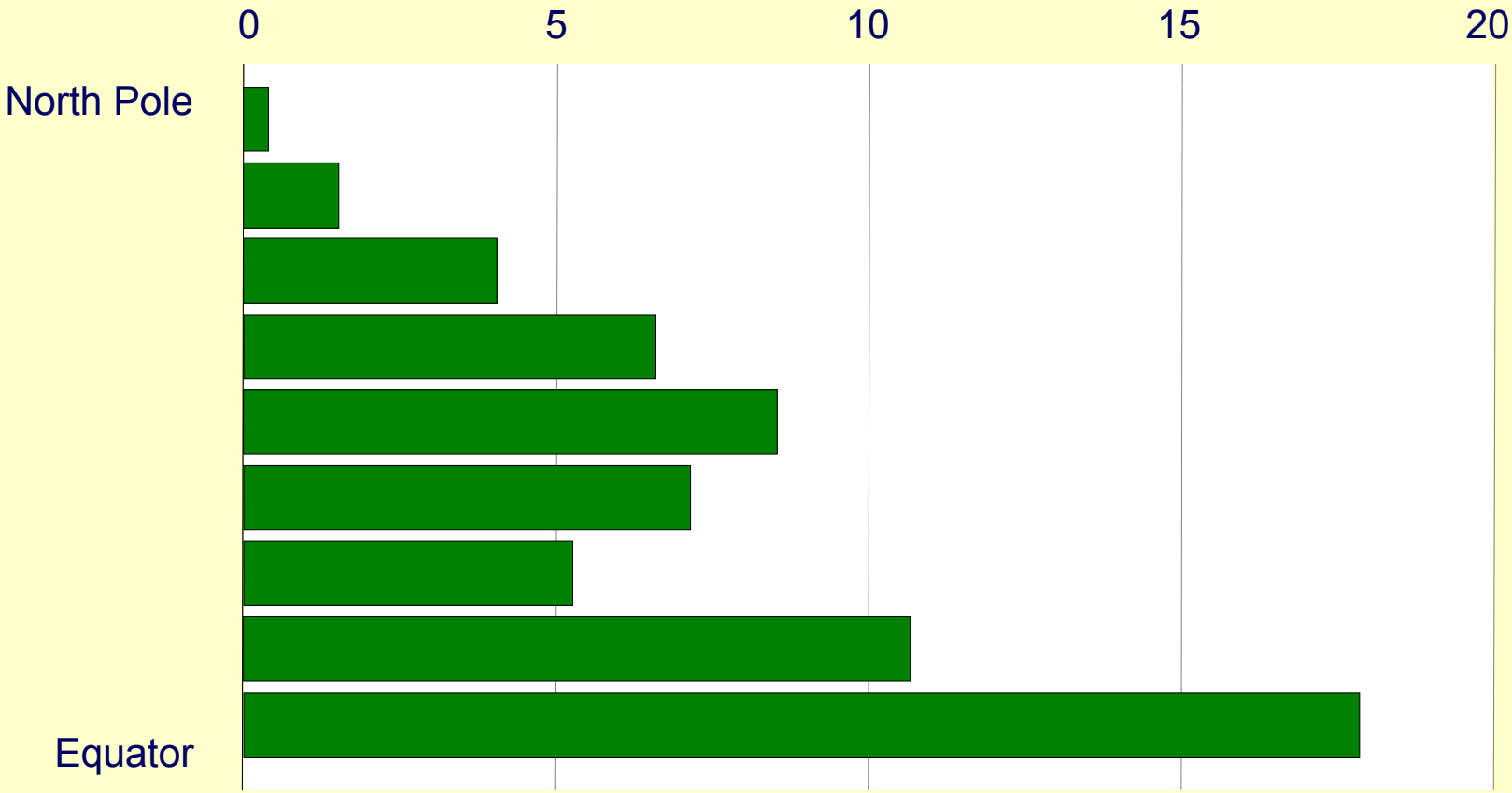
Estimated Net Primary Production [t/ha/year] in the natural vegetation within 10° strips around the Northern Hemisphere



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Schematic presentation of the ecological potential of the worlds major agro-climatic zones and the domestic and semi-domestic herbivores typical for them

arctic & sub-arctic

temperate

mediterranean & subtropical

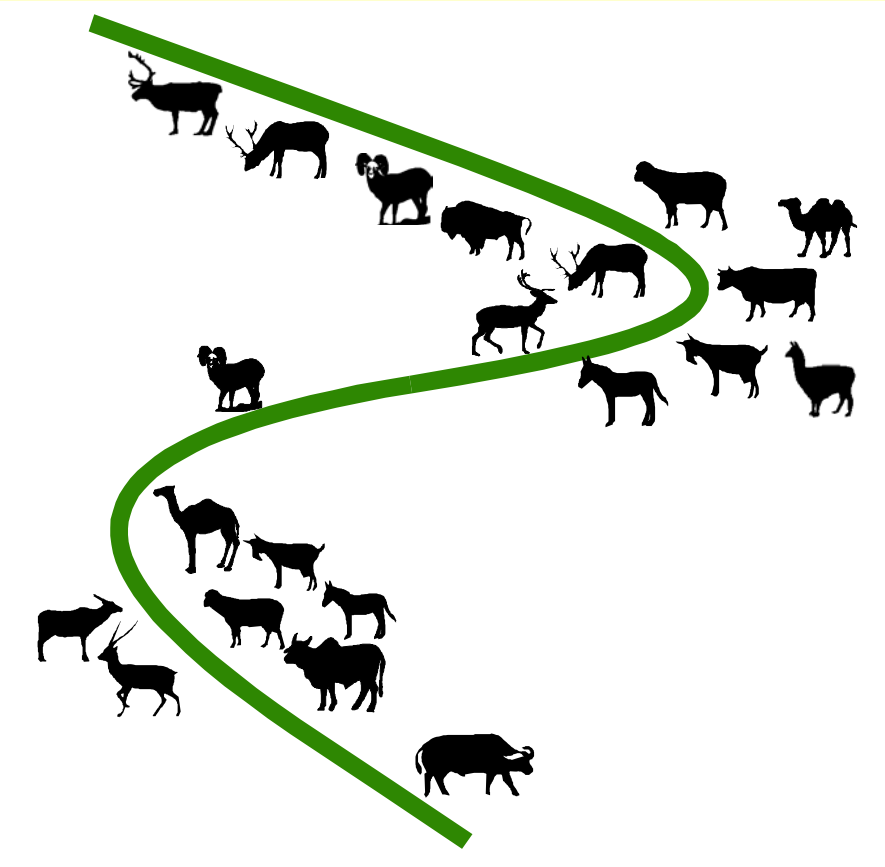
tropical

arid

semi-arid

sub-humid

humid



ecological potential →

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Artic and sub-artic zones of the Northern hemisphere

Domestic reindeer as multi-purpose livestock (meat, milk, skins, furs, antlers, work) in sedentary or migratory production systems

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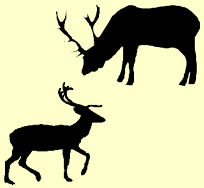

Sub-arctic and cool temperate zones

Semi-intensive production of venison from Red Deer, Fallow Deer, Sika Deer or Muntiac in fenced paddocks with shelter buildings, winter feeding, health programmes and breeding interventions

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Cool temperate zones

Extensive utilisation of natural and improved grasslands with sheep and goats for the production of meat, skins and wool, frequently combined with small home industries and direct marketing


Jacob sheep


feral goats


Foula sheep

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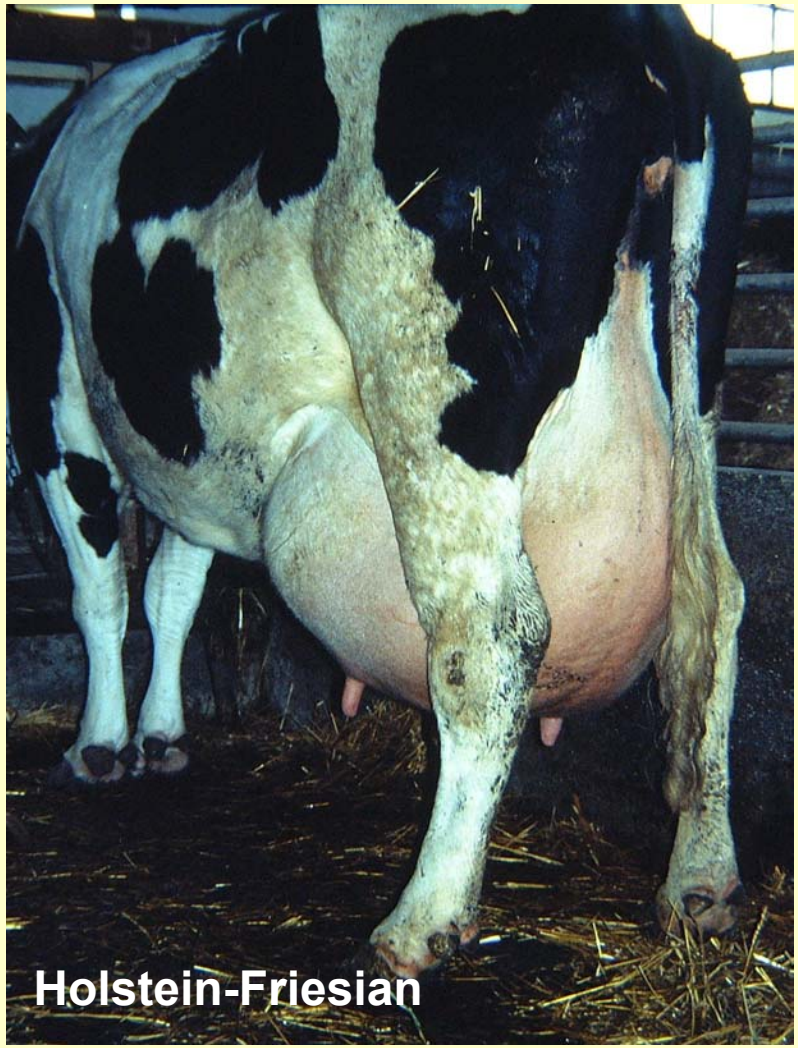
Mild temperate zones



Black-and-white dairy cattle yielding from 6000 to 10000 litres of milk in a lactation of 9 months

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Mild temperate zones

Dairy goats like the Saanen or the German White breeds yielding 600 to 800 litres of milk in a lactation of only 5 to 6 months

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Clydesdale horses

Mediterranean zone

Small breeds in all domestic species, adapted to scarce and seasonally fluctuating feed supply and water shortages in summer time; frequent utilisation of animal draught power in small holder agriculture


Mediterranean Donkey


Black Bedouin Goat


Anatolian Black Cattle

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Mediterranean zone

The Near East is the most important region for the domestication of livestock species; here lies the origin of domestic cattle, sheep, goat, donkey, dromedary and the cat; even today it is a region with high genetic diversity in livestock and many breeds which have become very important world wide come from here.


Awassi sheep


Angora goats

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Arid zones

hot tropical lowlands (Africa, Near & Middle East) Dromedary

continental lowlands with cold winters (Central Asia) Bactrian Camel

cold alpine regions (South America) Lama & Alpaca

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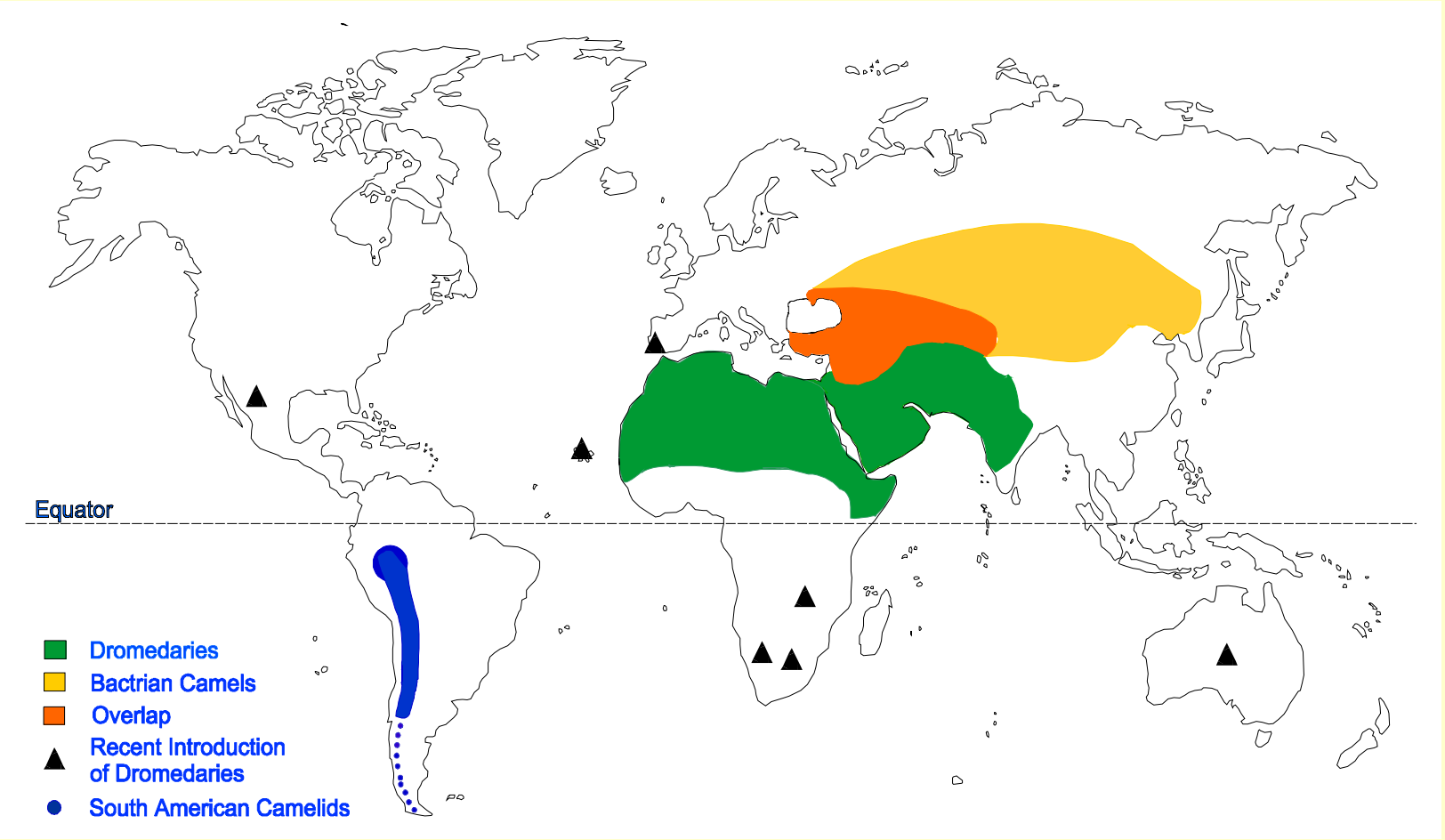
World wide distribution of Camelids



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Subhumid tropics

Hair sheep in small holder mixed farming systems and in nomadic pastoral systems


Fat tailed sheep


Long tailed hair sheep


Fat rumped sheep

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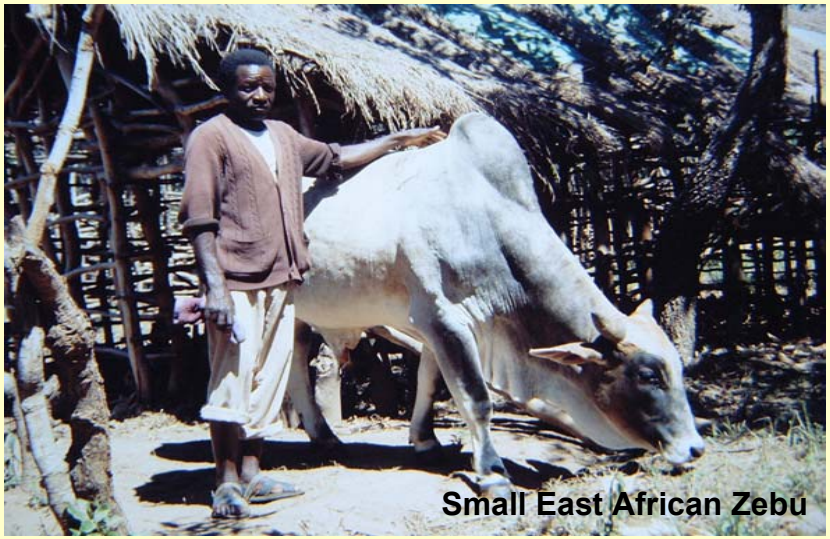
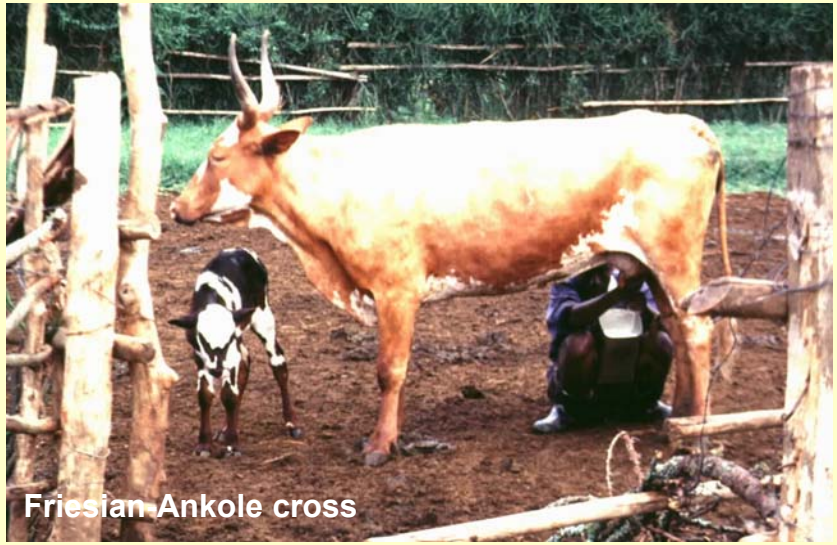
Subhumid tropics

Zebu cattle, zebu crosses and Sanga cattle in small holder mixed farming systems and in nomadic pastoral systems


Ankole Longhorn


Small East African Zebu


Friesian-Ankole cross

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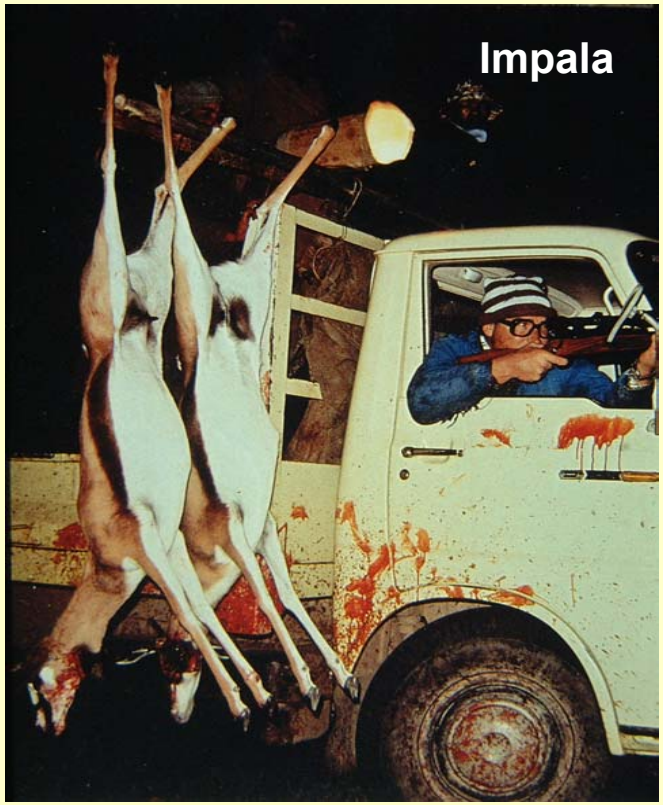
Subhumid tropics

Game utilisation on ranches and game farms and control hunting in national parks and reserves



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Subhumid tropics

Non-consumptive game utilisation through tourism in public and private parks and sanctuaries


Impala-Antilope


Eland-Antilope


Burchell‘s Zebra

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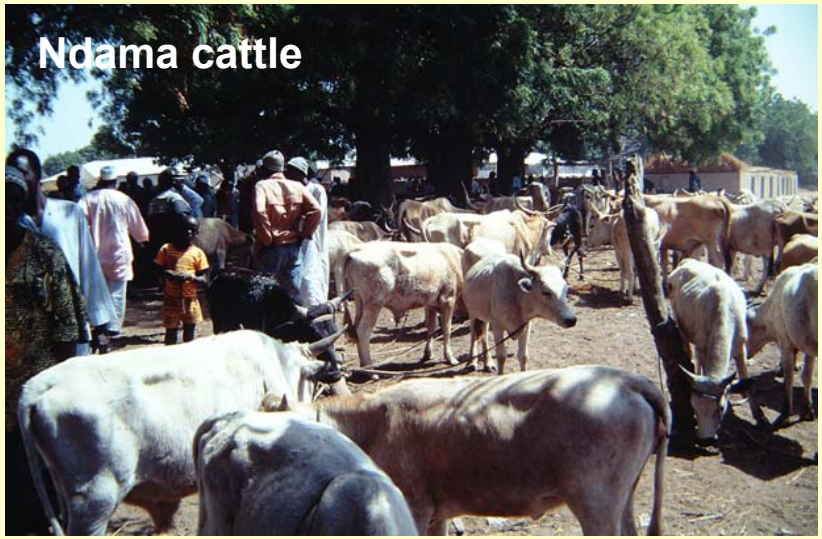
Humid tropics

Dwarf breeds of the conventional livestock species, mainly because of their resistance or tolerance to endemic parasites and diseases


West African dwarf goats


East African dwarf zebu


Ndama cattle

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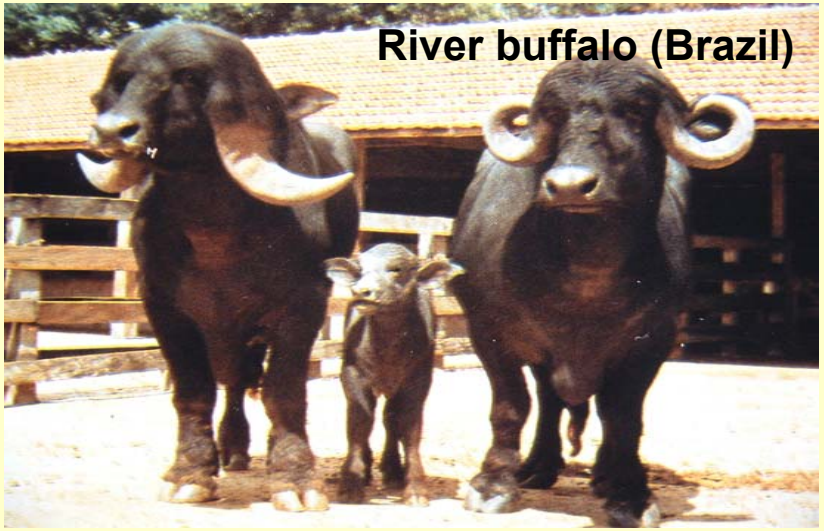
Humid tropics

Water buffalos for production of milk and meat and for work. Among the domestic ruminants buffalos are the best converters of coarse tropical grasses


River buffalo (Brazil)


Swamp buffalo (Thailand)


River buffalo (Sri Lanka)

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Humid tropics

Utilisation of tropical forages through unconventional species like the Indian elephant, the Capybara or giant snails

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