Pasture and Livestock Practices and Technologies to Promote Sustainable, Climate-Resilient Livestock Farming Systems

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Priority Ranking of Actions by Stakeholders (from June Meeting)

Right stocking rate (#1 = 12 votes)
- Match livestock numbers to carrying capacity
- Herd composition

Improve Herd Composition (#2 = 10)
- Cull unproductive breeding animals
- Sell livestock sooner (3)
- Limit horse numbers (3)

Proper distribution of livestock over the pasture (#3 = 10)
- Watering points; Salt and mineral points
- Seasonal use
- Daily herding of animals over pasture

Improve livestock productivity and quality (#4 = 9 votes)
- Improve genetics for more productive animals
- Provide supplementary feed – hay, fodder

Winter feeding & Improve animal health (#5 = 8 votes)

Find new/better markets (#6 = 5 votes)

Pasture Monitoring (#6 = 5 votes)
- Herder participation in pasture monitoring

Pasture Improvement (2)
- Reseed good native plant species

Rest and recovery (1)

Proper grazing system (1)
- Deferred grazing (protect spring pasture)

Rotational grazing (1)
- Otor pastures

Proper timing and intensity of grazing (0)
- Month of year
- Rest and rotation
- Otor pastures

Leave 50% of the plant

The most appropriate pasture and livestock management practices and associated technologies for promoting sustainable, climate resilient livestock farming would include:

Pasture related:

- Rangeland monitoring;
- Rangeland planning to identify areas that need improved management which could include: resting from grazing for a year or more, deferred grazing in the spring, identifying *otor* pastures, areas for reseeding pastures, areas for hay cutting, sites for water development, fencing;
- Determining carrying capacities and recommended stocking rates for the range;
- Rangeland planning for biodiversity conservation (working with nature reserves in Bayantumen sum to manage the rangelands for both livestock and wildlife);
- Forage and fodder development (with annual (i.e. oats, wheat, or barley for "green nutrition") and perennial forages (alfalfa, etc.);
- Training for *aimag* and *sum* officials and herders in rangeland monitoring and planning; and
- Production of rangeland and forage/fodder-related extension material that is practical for herders.

Livestock related

- Animal health and disease control;
- Training of veterinarians and provision of supplies and equipment;
- Training of herders in animal health and disease control and proper protocols to follow (with special attention to the role of women);
- Genetic improvement of cattle, sheep, and goats through raising and distribution of breeding stock and artificial insemination (AI);
- Herd restructuring to reduce numbers of unproductive animals and increase off-take of younger animals;
- Promoting raising beef cattle as cow-calf producers and selling weaned calves in the fall;
- Herders keep a small number of improved milk cows (i.e., Alatau, Black & White) to provide milk needs for the household;
- Sell lambs in the fall at 8-9 months of age or at 15-18 months of age;
- Improved livestock shelters for winter; and
- Training for herders on livestock production and management, with special consideration to training needs of women and children.

Market related:

- Strengthen linkages between herders and markets (direct marketing by herders to buyers, which bypass changers);
- Sale barns where weekly or bi-weekly auctions are held in the fall to market cattle and sheep for meat;
- Strengthen all the links in the meat value chains;
- Promotion of grass-raised beef and lamb;
- Promotion of feedlots (intensive livestock raising); and
- Promotion of milk-production and small scale dairying (intensive and semi-intensive livestock raising)

Policy related:

Analyze current range, livestock, and market policies that are hindering more sustainable, climate-resilient livestock farming systems;
Provide policy recommendations that are needed to promote sustainable, climate-resilient livestock farming.


МОНГОЛ УЛС: ҮХРИЙН МАХНЫ НЭМҮҮ ӨРТӨГИЙН СҮЛЖЭЭ
ТҮҮХИЙ ЭД
ҮЙЛДВЭРЛЭЛ
БОЛОВСРУУЛАЛТ, ТҮГЭЭЛТ
БОРЛУУЛАЛТ, МАРКЕТИНГ
ХЭРЭГЛЭГЧИД
Үүлдэр (цэвэр үүлдэр)
Малын тэжээл/тарималтэжээл, бэлчээр
Тоног төхөөрөмж, хашаа саравч
Мал эмнэлгийн үйлчилгээ
Эрдэм шинжилгээ, сургалт
ҮНЭЭ-ТУГАЛ (малчид)
МАХНЫ ҮХЭР ҮРЖҮҮЛЭГЧИД (цэвэр махны үүлдэр)
ЭРЧИМЖСЭН СААЛИЙН ФЕРМ (эр тугал)
ТУГАЛ, БЯРУУ ТЭЖЭЭХ (эхээс нь салгасан тугалыг өсөлтийн жороор тэжээх; 8-30 сартай)
ҮХЭР БОРДОХ АЖ АХУЙ (дарш, үр тариагаар 90-100 өдөр бордож таргалуулах; амьдын жинг 400 кг хүргээд нядлах)
НЯДЛАХ
БОЛОВСРУУЛАХ
БӨӨНИЙ ХУДАЛДАА
СҮЛЖЭЭ ДЭЛГҮҮР
РЕСТОРАН
ХҮНСНИЙ ХАНГАН НИЙЛҮҮЛЭГЧИД
(Хэрэглэгчдээс үйлдвэрлэгч нарт хандсан санал)
ТААТАЙ ОРЧИН БҮРДҮҮЛЭХ: Хууль, бодлого, зохицуулалт, зээл, санхүүгийн үйлчилгээ гэх мэт.

Restructuring of Herds

Current Cattle Herd Structure	New Cattle Herd Structure
Herd structure (in September of the year): **20 Mongolian cows being milked** **20 calves born this year** **18 one-year old cattle (assuming 2% death loss)** **17 two-year old cattle (both male and female)** **8 three-year old oxen** **7 four-year old oxen** **1 local bull** **55 total head of adult cattle plus 20 calves**	Herd structure: (in September of the year): 40 Selenge or Hereford/or Angus cross cows. 40 calves born this year. 5 Alatau cows to provide milk for herder family. 5 Alatau-Holstein or Simmental calves born this year. 5 one-year old replacement heifers 5 two-year old replacement heifers 2 good breeding bulls 57 total head of adult cattle plus 45 calves
Assumptions: **Pastures are overstocked and cattle do not receive adequate nutrition, especially in the period November through May.** **Calves do not reach their potential because they are not getting all the cow's milk.** **Cows give first calf at three years of age.** **Oxen are slaughtered at 4 ½ years of age with live weight of about 425kg.** **Poor quality breeding bull is used.** **Poor animal health practices.** **Pasture degradation is widespread.** **Native grass hay harvested but is of poor quality and limited amounts fed to cattle in winter/spring.** **No "green feed" raised to feed cattle.** **55 head of adult cattle (including yearlings) to manage through the winter, plus 20 calves.** **Total sheep units – about 444 Sheep Units to winter (assume 1 cow is 5 sheep units)** **Selling 7 oxen of 425kg @ MNT 3000/kg.** **Total annual revenue from cattle sold = MNT 8,925,000.**	Assumptions: Cows are not milked except for the 5 Alatau cows. The calves get all the milk from their mothers. Weaned calves weigh 200 kg at 8-9 months. All weaned calves (35+5) sold for backgrounding and feedlots except for 5 replacement heifers. Pastures not overstocked and there is sufficient forage in summer and for winter grazing; Health of pastures is improving. Green nutrition is grown and fed in winter. Cows giving first calf at three years of age. Proper use of minerals and salt. Good breeding bulls used. Proper animal health protocols, good animal husbandry and pasture management. 57 head of adult cattle plus 5 replacement heifers to feed in winter. Total sheep units – about 335 sheep units to winter (assume 1 cow is 5 sheep units) Selling 40 calves of 200 kg @MNT 3,000/kg. Total annual revenue from sold calves = MNT 24 million.