JUNAGADH AGRICULTURAL UNIVERSITY

RESEARCH RECOMMENDATIONS FOR FARMERS COMMUNITY

VII. ANIMAL HEALTH & ANIMAL PRODUCTION

Eighteen recommendations developed by Animal Health & Animal Production disciplines are described herein.

Year: 2004-05

Animal Feed

Jowar straw and groundnut gotar in 70:30 ratios instead of Jowar straw alone can meet the daily maintenance need of Gir bullocks.

(*Cattle Breeding Farm, JAU, Junagadh*)

Afforestation

Under rainfed Agro-climatic situation of South Saurashtra, tree species *Azadirechta indica*, *Acacia nilotica*, *Ziziphus mauritiana* and *Tectona grandis* have fairly good survival and growth rate on barren, degraded and wasteland. Therefore, these tree species can be planted to conserve afforestation and improve such land.

(*Cattle Breeding Farm, JAU, Junagadh*)

Year: 2006-07

Milk replacer

Milk replacer containing the following ingredients is useful to replace 50 per cent of whole milk for feeding weaned Gir calves, without any adverse effect on body growth. Ingredient composition for one kg milk replacer is wheat flour 100g, soybean meal 120g, groundnut cake meal 400g, skim milk powder 130g, coconut oil 100g, butyric acid 3g, molasses/jaggary 65 % 100g, mineral mixture 32g and citric acid 15g.

(*Cattle Breeding Farm, JAU, Junagadh*)

Year: 2009-10

Replacement of groundnut *gotar* (haulm) with urea treated straw in composite feed blocks for Gir heifers

The farmers and livestock owners of Saurashtra are recommended that in the ration of Gir heifers, inclusion of four per cent urea treated wheat *bhusa* in place of groundnut *gotar* (haulm) results in 19 per cent higher live weight gain at 23 per cent lower cost of feeding.

(*Cattle Breeding Farm, JAU, Junagadh*)

Milk production in Gir cows on no green rations

Feeding of 4 per cent urea treated wheat straw as sole roughage source to lactating Gir cows could sustain milk production up to 3.4 lts/day economically with 139 per cent higher returns compared to feeding *ad. Lib*. wheat straw and five kg green jowar fodder/cow/day.

(*Cattle Breeding Farm, JAU, Junagadh*)

Year: 2011-12

Impact of herd composition on herd performance traits in Gir cattle

On a large farm of Gir cattle in South Saurashtra region, herd structure of 330-345 heads with 100-110 (30-33%) cows, 65-70 (18-21%) breedable heifers and 245-250 (72-75%) total female proportion in the herd is optimum to achieve higher wet average (7.3-7.7 lit), herd average (4.2-4.7 lit), % milch cows (55-60%) and higher return over feed cost (140 %) in the herd.

(*Cattle Breeding Farm, JAU, Junagadh*)

Impact of herd composition on herd performance traits in Gir cattle

Dairy farmers/gaushalas of Gir herd in South Saurashtra region desiring to improve herd performance and return should set optimum targets of herd performance traits of 7.6 lit. wet average, 4.3 lit. herd average and more than 64 % milch cows for economical and sustainable dairy farming.

(*Cattle Breeding Farm, JAU, Junagadh*)

Breeding and lactation efficiencies of Gir cows

Dairy farmers of large herd of Gir cattle in South-Saurashtra region should set the target of age at first calving < 44 months and calving interval of 14 months to improve these traits for maximum return. They can maintain Gir cows up to 8 lactations for economical dairy farming. However, high yielding cows may be maintained for more than 8 lactations also.

(*Cattle Breeding Farm, JAU, Junagadh*)

Breeding and lactation efficiencies of Jaffrabadi buffaloes

Dairy farmers of large herd of Jaffrabadi buffaloes in South-Saurashtra region should set age at first calving of 47 months and calving interval of 15 months as targets to improve these traits for maximum return. They can maintain Jaffrabadi buffaloes upto 6 lactations for economical dairy farming, however, high yielding buffaloes may be maintained for more than 6 lactations also.

(*Cattle Breeding Farm, JAU, Junagadh*)

Year: 2012-13

Effect of restricted suckling on lactation and reproductive performance of Gir cows

Dairy farmers keeping Gir cows are advised to practice restricted suckling of calves to reduce the incidences of short lactations and low lactation milk yields due to short lactations. There is increased overall milk production in suckled cows as compared to non-suckled cows. Even though there is delay in service period by one cycle, it is off-set by over-all benefits in production performance of suckled cows.

(*Cattle Breeding Farm, JAU, Junagadh*)

Effect of restricted suckling on growth performance of Gir calves

Dairy farmers keeping Gir cows are advised to practice restricted suckling up to 5 months of age (daily 2 to 2.5 lit during birth to 1 mo., 3 to 4 lit during 1 to 3 mo. and 1 to 1.5 lit during 4 to 5 month age) and then stop suckling of the calves. This improves growth performance (412 vs. 312 g/d) and body weight of calf at 3 months of age (59 vs. 51 kg) with lesser milk consumption (319 vs. 279 lit per calf) over that in weaning.

(*Cattle Breeding Farm, JAU, Junagadh*)

Effect of age and body weight at calving on lactation performance of primiparous Gir cows

Farmers keeping Gir animals are advised to maintain 300 to 350 kg. body weight at first calving in Gir heifers for obtaining higher lactation milk yield.

(*Cattle Breeding Farm, JAU, Junagadh*)

Year: 2013-14

Morbidity and mortality in Gir cattle herd

In South Saurashtra region, in organized dairy farm of Gir cattle:

1. Overall annual mortality averages around 6 per cent in the herd. Higher mortality occurs from birth to 1 month of age especially, during November–December months on account of colibacillosis and pneumonia.
2. Mastitis, colibacillosis, fever and pneumonia are major health disorders in Gir cattle.

Therefore, dairy farmers of Gir cattle are advised to take all possible care and precautions during first month of calfhood especially during November-December months to keep incidence of diseases and mortality at the minimum.

(*Cattle Breeding Farm, JAU, Junagadh & Dept. LPM, Vet. Coll., JAU, Junagadh*)

Morbidity and mortality in Jaffrabadi buffalo herd

In South Saurashtra region, in large dairy farm of Jaffrabadi buffaloes:

1. Overall annual mortality averages around 11 per cent in the herd. Higher mortality occurs from birth to 1 month of age group especially, during September-October months on account of colibacillosis and pneumonia.
2. Colibacillosis, fever, mastitis and gastroenteritis are major health disorders in Jaffrabadi buffaloes.

Therefore, dairy farmers of Jaffrabadi buffalo are advised to take all possible care and precautions during first month of calfhood especially during September-October to keep incidence of diseases and mortality at the minimum.

(*Cattle Breeding Farm, JAU, Junagadh & Dept. LPM, Vet. Coll., JAU, Junagadh*)

Year: 2016-17

Hydrocyanic concentration during different stages of growth in Gundri jowar (*Sorgum vulgare*) and Baru (*Sorgum halepense*)

Sorgum vulgare (jowar) and *Sorgum halepense (baru)* fed at 25 per cent flowering stage is safe for ruminants as the HCN content is below the toxic level.


(Cattle Breeding Farm, JAU, Junagadh)

Year: 2017-18

Seroprevalence of Infectious Bovine Rhinotracheitis (IBR) in dairy animals with reproductive disorders

Seroprevalence of Infectious Bovine Rhinotracheitis (IBR) in dairy animals is above 30%. Hence dairy farmers of Saurashtra region are recommended to vaccinate their animals against Infectious Bovine Rhinotracheitis (IBR).

(*Department of Veterinary Public Health, CVSc & AH, JAU, Junagadh*)

Clinical studies of foot affections in unsound working horses

Horse rearers are informed that the prevalence of laminitis is higher during winter; hence they are advised to take appropriate care of the hooves.

(*Department of Veterinary Surgery and Radiology, CVSc & AH, JAU, Junagadh*)

Effect of fogger cooling on body comfort, milk yield and milk composition in Jaffrabadi buffaloes during summer season

It is recommended to dairy farmers that fogger cooling system in loose housing buffalo shed is beneficial in sustaining milk production.


(*Cattle Breeding Farm, JAU, Junagadh*)