

**Livestock Feed and Fodder Advisory for the States of Karnataka, Maharashtra, Gujarat,
Rajasthan, Punjab and Haryana**

The Rainfall anomaly in the last fortnight has further deteriorated in many parts of the country. Even though, the overall rainfall deficit in the Country has been reported to continue at - 22%, the deficit in states of Punjab, Haryana, Karnataka, Maharashtra, Gujarat and Rajasthan has increased. Further, it has also been reported that the states of Karnataka and Maharashtra are facing a severe shortage of livestock feed and fodder. For managing the shortage of feed and fodder in the coming months and to tackle drought like situation effectively, the following state specific advisory is being recommended

Karnataka:

- i. It has been reported that the state government has proposed for procurement of dry fodder from Punjab to tide over the shortage. Considering the time frame required for actual arrival of the dry fodder in deficit districts, it is advisable that a short term contingency plan be formulated on priority. Surplus dry fodder available in other districts within the state or from neighbouring states may be procured on priority.
- ii. Fodder Banks may be established in all the affected districts for storage and distribution of dry fodder. Establishing a **Hub and Spokes** arrangement would facilitate efficient and timely transport of fodder at all levels.
- iii. List of *Gaushalas* and their capacities could be updated, their managers informed and financial assistance assured for setting up fodder/feed banks and livestock camps at short notice.
- iv. Simple storage facilities with raised platform and covering dry fodder/ fodder blocks with polythene sheets at Tehsil level may be created.
- v. Fodder Block making machines be installed at the fodder banks for densifying the dry fodder in form of Fodder Blocks. This would facilitate storage and transport of large quantities of material at cheaper cost.
- vi. Maize cobs after removal of grains available in large quantity in Davangere district can be effectively utilized by incorporating them (up to 40%) in the Total Mixed Ration (TMR). The milch animals could be given TMR for sustaining the production.
- vii. Similarly de-seeded Sunflower heads available from Raichur and other neighbouring districts could be efficiently utilized.

- viii. Distribution of Urea Molasses Mineral Blocks (UMMB) in the affected districts for feeding to all animals would help in overcoming mineral deficiency and maintain fertility even if the drought like situation prolongs.
- ix. Short duration *Pearl millet* (AVKB-19, Giant Bajra, CO 8 varieties) crop which is hardy and requires less moisture may be cultivated if there are small rains. Cowpea (Bundel Lobia -2, KBC 2, COFC 8) as fodder crop may also be cultivated and fed to cattle and buffaloes as protein source. If adequate moisture level is available, farmers may be advised for cultivating maize crop (*African Tall & Pratap Makka* varieties).
- x. Perennial sorghum cultivation may be taken in canal command areas. Farmers growing this crop may be adequately compensated and green fodder after harvest may be transported to areas of deficit.
- xi. Wherever feasible, cultivation of fodder grasses like *Bothriochloa intermedia*, *Cenchrus setigerus*, *Dichanthium annulatum*, *Pennisetum pedicellatum*, *Panicum maximum* and fodder legumes like *Arachis hagenbackii*, *Stylosanthes hamata*, *S. Scabra* may be promoted.
- xii. Cattle camps may be set up at strategic places with adequate provisioning of dry fodder, water and veterinary care. Cattle owners may prefer to send only the dry and scrub animals to these camps and retain the milking animals in their houses. As such, a mechanism for ensuring supply of feed and fodder at their door steps may be put in place. “**Cattle cards**” similar to ‘Kisan cards’ may be distributed to such farmers so that they can draw their quota of feed and fodder from the nearby fodder depots established by the State government.

Maharashtra

- i. The State Government has already initiated contingent plan for ensuring supply of fodder for livestock feeding in the affected districts. Provision has been made for procurement of sugarcane crops from sugarcane growers, transporting of the same and distribution to livestock owners in deficit areas at subsidised rates. It is a **win-win situation** for all stakeholders.
- ii. The availability of sugar cane crop for feeding animals may last for the next 1.5 to 2 months. If the drought like situation continues, alternate contingency plans need to be drawn and operationalised.
- iii. Advance action for procurement of dry fodder, their storage and distribution may be initiated as a contingent plan in case of prolonged drought like situation. The ‘Hub and Spokes’ model may be adopted for efficient implementation of the whole process.
- iv. Sugarcane baggase and press mud available from sugar factories may be treated and transported to deficit areas for survival feeding.

- v. Fodder Block making machines be installed at fodder banks for densifying the dry fodder in form of Fodder Blocks. This would facilitate storage and transport of large quantities of material at cheaper cost.
- vi. Distribution of Urea Molasses Mineral Blocks (UMMB) in the affected districts for feeding to all the animals would help in overcoming mineral deficiency and maintain fertility even if the drought like situation prolongs.
- vii. Setting up of cattle camps and fodder banks at the District and Thesil level may be prioritized.
- viii. Short duration crops of *Pearl millet*, cowpea, and maize may be taken up in case of some rains in the coming weeks.

Rajasthan

- Out of 10 Districts in Western Rajasthan, four districts i.e. Barmer, Bikaner, Jodhpur and Nagaur have scanty rainfall (60 to 99 % departure from normal); five Districts have deficient rainfall (20% to 59% departure from normal) and the remaining district of Hanumangarh has normal rainfall up to 18.7.2012.
- The Districts with scanty rainfall are predominantly the ones which are prone to frequent drought like situations.
- From livestock perspective, farmers of these districts in such situations are well versed with the coping mechanism for sustaining their livestock wealth and maintaining production levels.
- In case of prolonged drought like situation necessary steps have to be initiated for ensuring adequate fodder supply for livestock. Some of the general strategies which can be adopted are
 - i. Establishment of Fodder Banks for storing and distribution of dry fodder need to be strategized.
 - ii. A large number of *Gaushalas* exist in the State. The list of *Gaushalas* and their capacities could be updated, their managers informed and financial assistance assured for setting up fodder/feed banks and livestock camps at short notice.
 - iii. Sheep herders migrate with their flock for long distances in search of fodder. Provision for supply of mineral mixture and for de-worming of the animals during migration would ensure maintaining body weight and lower mortality.
 - iv. Along the traditional migratory routes, water feeding troughs may be erected and supply of drinking water ensured.
 - v. Fodder Bajra varieties of *RBC-2*, *Giant Bajra*, *Raj-171*, *JBV-2* may be promoted.

- vi. Buffel grass (*Cenchrus ciliaris*); Guinea Grass (*Panicum maximum* var. Macuni) may be propagated in *gochar* lands and other common grazing areas
- vii. Dual purpose crops like barley (varieties RD 2715, RD 2035, RD 2522 and BH 75) may be sown in October. One cutting may be taken for fodder at 50-60 days after sowing and subsequent regenerated crop left for grain production.

Punjab and Haryana

- During the current year, both the states have deficit rainfall and majority of the districts had scanty rainfall (60 to 99 % departure from normal) up to 18.7.2012.
- Both Punjab and Haryana are traditionally considered as surplus states for livestock fodder. However, continued drought like situation may alter this situation in the current year.
- If the rainfall deficit persists, the state has to initiate advance action to ensure that livestock production is maintained. The following recommendations are being made
 - i. Traditionally paddy straw is not fed to cattle and buffaloes. In case of feed shortage in the coming months, paddy straw may have to be utilized for feeding. With the technology of feeding Total Mixed Ration, paddy straw could be incorporated up to 25-30% and utilized effectively.
 - ii. Progressive dairy farmers in both the states have adopted in a big way the practice of conserving green maize crop as silage for feeding animals during lean months when green fodder is not available. The farmers adopting this technology need to be suitably incentivised.
 - iii. Many of the operations in hi-tech dairy farms are power dependent. Adequate power supply to these farms needs to be ensured.
 - iv. Feed Block making machines may be provided for densifying wheat bhusa and other bulky dry fodders and storing the feed blocks at strategic locations.
 - v. Growing of fodder maize and *Pearl millet* varieties of green fodder may be encouraged and incentivised.

Gujarat

- The arid regions Saurashtra and Kutch have been experiencing drought like situation.
- Livestock rearing, especially small ruminants are predominant in these regions. For sustenance of livestock production and livelihood of resource poor farmers, it is

essential to ensure proper supply of feed and fodder during the scarcity period. The following actionable points are suggested.

- i. Establishment of Fodder Banks for storing and distribution of dry fodder need to be strategized.
- ii. The existing *Gaushalas* in the region should be made use of for storing and distribution of dry fodder/ feed blocks. More *Gaushalas* may be setup immediately to offer support to small/ marginal farmers.
- iii. Urea Mineral Molasses Block (UMMB) can be effectively utilized as a combined source of protein, energy and minerals during drought situations. They also help in preventing loss of fertility in case of prolonged drought. These blocks can be easily transported over long distances.
- iv. Fodder varieties of maize and *Pearl millet* may be planted where water is available.
- v. Fodder grasses and legumes of *Cenchrus ciliaris*, *Chloris gayana*, *Dichanthium* *Stylosanthes*, *Clitori* needs to be propagated especially in the common grazing lands.