

# CAPACITY BUILDING NEEDS OF THE LIVESTOCK SUB-DIRECTORATE



The Livestock Division of the Agricultural Directorates in Al-Hasakeh and Deir-ez-Zor in the Autonomous Authority for Northeast Syria (NES) manage the public sector services and support for livestock producers in their governorate. In both Al-Hasakeh and Deir-ez-Zor, the livestock department is constrained by a lack of staff and financial resources to deliver the comprehensive services that existed pre-conflict. Formerly, there were multiple agencies supporting livestock production including: 1) the General Organization for Animal Health; 2) Agricultural Extension Foundation; 3) Animal Production Corporation; 4) General Organization for Feeding; 5) scientific centers that improved animal breeds; and 6) the General Organization for Refrigeration that provided cooling centers for meat and dairy products. Now, the Livestock divisions provide limited support based upon requests from registered herdowners (and less than 20 percent of herdowners are registered), at their expense. Technical services include animal husbandry advise and veterinary services such as disease identification and treatment advice.

## Supporting Livestock Production in Northeast Syria

Pre-conflict, livestock production and processing accounted for 35 percent of rural livelihoods in Syria. In 2019, after more than \$5.5 billion in losses and 30 percent reduction in herd size, estimates included 1.4 million and 270,000 sheep in Al-Hasakeh and Deir-ez-Zor, respectively. Goats were about 10 percent of that number and dairy cows are mostly raised for household use and neighborhood sales. Climate change, variable pasture quality, food and feed availability, price instability and the high cost of imported medicines and additives suppress production.

The NES livestock industry is a home-based business. Herd/flock sizes range from 30-200 head, mostly ewes raised for milk production and dairy processing. Males are fattened and sold in local markets or to traders that transport them to urban or export markets. In NES, herdowners are the central agents of production. They are the producers of fodder and consumers of feed, and they produce milk and supply butchers with meat. Livestock production varies widely between governorates and villages in NES. For example, in Al-Hasakeh, the average herd size per breeder is 319 animals, nearly all sheep, but four villages averaged 676 head while the remaining towns averaged 148 animals per herdowner. In Deir-ez-Zor, the average herd size was 84. Three towns averaged 157 animals and all others averaged 36.

Livestock herdowners manage a complex, family-run business. They must be reactive to seasonal variations in climate, adapting to wet and dry seasons. In years with good rainfall, animals are able to graze on open pastures and are healthy, prices for live animal sales and milk production is higher. Breeders invest in animals with concentrates and additives to stimulate milk and meat production. In dry years, animals are less healthy and there is less food availability. More animals, in poor condition, are sold and prices drop and breeders invest less in additives, concentrates and medicines.

Pre-conflict, there were numerous services and support structures serving livestock herdowners and meat and dairy value chains. Livestock production had significant subsidies on

feed, fodder, veterinary medicines and vaccines and feed additives. In NES today, there are no significant subsidies and many of the state agencies that provided services have collapsed. Virtually all medical and feed supplies are purchased through the private sector. However, the uncertain quality of medicines due to poor cold chain and exchange rate fluctuation means that animal health supplies are expensive and sometimes poor quality. Breeders also lack the capital for investment in livestock housing and water systems that leave animals exposed to seasonal hot and cold environments.

**Limited response capacity.** The livestock divisions of NES agricultural directorates are constrained by both budget and staff to meet the needs of the livestock industry. In Deir-ez-Zor the livestock department has 1 veterinarian and four veterinary assistants. Al-Hasakeh has limited staff but manages a regional and several sub-regional offices that work directly with farmers. Because services and subsidies are very limited, only 16 percent of breeders register their herds. In addition, NES lacks effective customs control over livestock imports. With limited capacity for animal inspection and veterinary quarantines, there is no effective limit on importation of livestock with infectious diseases entering NES.

Given the current state of institutional capacity, staffing, budgets and ineffective animal health and animal husbandry practices in NES, it is difficult to envision the previous system of government support playing an effective role in livestock production in the near future. Still, there are many 'public goods' that livestock divisions can support while private sector service provision in the livestock industry expands.



Sheep grazing in Al-Hasakeh (Photo Credit: I-APS)

## Adapting Public Livestock Services to Limited Resources

**Managing Livestock Production Challenges.** Under the current circumstances, there is a need to support the livestock industry. While the livestock divisions have proposed concepts to establish a breeding farm, develop a fodder mill and research capacity on feed mixes and to improve artificial insemination support, these initiatives have not been funded by local councils. These are expensive initiatives to develop and maintain. There are other ways to assist the development of the livestock industry that cost less and may be funded.

**Estimating herd size:** Herdowners often exaggerate estimates on herd size to maximize access to benefits based upon numbers. Livestock divisions conduct their own estimates based upon village by village reviews of farm numbers. These estimates may be corroborated by linkages to sales of concentrates, additives, vaccines and medicines. Working with statisticians, it may be possible to develop sentinel indicators and use existing satellite imagery to spot check herd numbers to gauge accuracy.



Sheep eating hay in Al-Hasakeh (Photo Credit: I-APS)

**Revisit livestock standards and protocols.** The Government of Syria had multiple livestock policies, protocols and legislation in place governing the livestock industry. Livestock divisions in NES can review these decrees and laws and update the regulations to reflect current realities. As these are updated, they can be published and supported through a communications campaign. Training of customs and border officials as well as livestock industry stakeholders will be important. Emphasis will be on self-regulation and the overall benefits to the industry rather than potentially ineffective enforcement mechanism.

**Coordinate Livestock Extension Systems with Agricultural Directorate Programs.** As part of possible new agricultural directorate extension advisory programs, the livestock division can coordinate with extension work through Komin agricultural committees, agricultural cooperatives and lead farmers to expand the outreach of the agricultural department at relatively low cost. Livestock divisions can create seasonal extension messages and digital programs that can be disseminated through an Agricultural Directorate SMS or WhatsApp list. Short videos or specific extension messages may also be developed and transmitted to breeders. Similarly, the livestock division can create a network of lead herdowners and, through them, expand outreach among herders.



Sheep drenching for parasite control (Photo Credit: Dreamstime.com)

**Adapt Market Visits to Villages with Lower Herd Sizes.** The livestock division should plan direct visits to groups of breeders in towns that have large herds. Direct visits to larger farms will prioritize access to the highest number of animals. These visits will provide herd assessment, recommendations and animal health treatment plans for owners of large herds. For towns with smaller average herd sizes, livestock division visits to local markets and development of lead farmer networks will facilitate direct contact with more herdowners and provision of advisory services for the most animals at the lowest cost. Farmers in these villages with emergencies may also arrange for direct visitation if needed. Tailoring animal health and animal husbandry messages for each season with market visits will expand outreach and advice to farmers in the region. These visitation practices will also support disease surveillance and data for early disease detection and emergency response to infectious diseases.

**Digital Animal Health Diagnostics.** Because the livestock division has few qualified veterinarians, it is challenging to conduct diagnostic visits to diagnose animals. The use of videos taken at the village level and transmitted to veterinarians will facilitate increased numbers of cases that veterinarians can diagnose. Once videos are uploaded and diagnosed, treatment instructions can be forwarded to clients via text message or WhatsApp. If satellite phones are available or a site that has internet access, then it is possible to conduct video diagnostics in real time and ask follow up questions of the client.

**Establish a Veterinary Lab in Each Governorate.** To facilitate and confirm diagnoses of parasites and bacterial and viral diseases, each governorate requires a laboratory with trained technicians that can confirm diagnoses of diseases of individual animals and support epidemiological surveillance of animal diseases. The lack of reliable laboratory facilities makes disease diagnosis less accurate.



Livestock market in Al-Hasakeh (Photo Credit: i-APS)



## Livestock Division Capacity Development Needs

Support Needed	Capacity Building Activities Identified	Priority
Planning for Livestock Production and Health Programs	Conduct increasingly reliable livestock herd estimates using new statistical and remote-sensing methods. Requires development of sentinel indicators and remote sensing	High
	Review and update the past GoS decrees, regulations and laws governing the livestock industry in NES. Develop and support self-regulatory mechanisms to build compliance	Medium
	Develop animal husbandry and livestock health extension messages with planned rollout through an annual cycle of production.	High
	Training in goal setting, setting objective and work plans linked to a realistic budget	Medium
	Support in developing a training plan for livestock division staff	Low
Technical Assistance and Training to Support Livestock Production Systems for Dairy and Meat	Training in basic animal nutrition for Livestock Division staff	Medium
	Training in managing animal health for Livestock Division staff	High
	Training and technical assistance in forage and green fodder crop production	Medium
	Training of trainer and extension agents that enable generalist Livestock Division staff to work with farmers on improved practices .	High
	Investigate the most appropriate mechanisms to manage digital and video diagnostic tools to expand the outreach of veterinarians	Medium
	Provide training on new methods for animal feed rations using locally available feed components	Medium
Quality Control and Food Safety for Dairy and Meat Products	Strengthen capacity for digitization and use of data systems to manage information and statistics	Medium
	Each governorate must establish its own laboratories for disease and parasite diagnosis and to aid surveillance of infectious diseases.	High
	Establish facilities and train staff in conducting appropriate animal health diagnostics.	High
Financial management support	Develop improved budgeting and budget management controls to maximize use of funds and prioritize the expansion of key livestock division services.	Low
	Train finance staff in bookkeeping and accounting skills	Medium
Administrative Support	Build capacity for electronic data collection and management	Medium
	Build data entry and management and general computer skills	Low
Other Capacity Needs	Prepare realistic staffing needs assessment based upon a revised, public service delivery agenda for livestock divisions	High
	Access to new information and training to upgrade skills in modern livestock production animal health, and dairy and meat processing systems.	Medium