

COVID-19: How EAS can support Livestock and Poultry Farmers during Lockdown



COVID-19 pandemic has adversely impacted Indian farmers rearing livestock and poultry. In this blog, Dr Mahesh Chander, M S Kannadhasan and Raj Kumar Patel discuss these new challenges, the interventions being made to address them and more that can be done to support farmers during and after the crisis.

CONTEXT

Lockdown has caused disruptions in livestock and poultry value chains in India, leading to a fall in procurement and sale of animal sourced food. Animals are suffering due to lack of adequate feed and veterinary care. Farmers' problems are further aggravated by rumours and fake news linking animal products and COVID-19. All these are adversely affecting farmers' income and economy at the state/national level (Box 1). Besides farmers, pet lovers are also in need of advice for saving their animals.



Box 1. Hardship reports on livestock and poultry farming**Livestock industry and value chain**

- Milk is selling at about half price. From Kashmir to Kanyakumari suffering is widespread
- Coronavirus impact: Dairy industry faces 30% dip in demand
- Dairy firms witness fall in milk demand due to lockdown
- Coronavirus: Gallons of milk go down the drain amid lockdown
- Are Mother Dairy milk supplies on track? Check what problems the company faces in lockdown

Poultry sector

- Crisis cuts to the bone
- COVID-19 scare hits poultry industry, birds culled in Karnataka
- COVID-19 impact: Buyers chicken out; demand drops 60%
- COVID-19: With projected losses of Rs 22,500 crore, Indian poultry sector seeks Centre's intervention
- Lockdown hits poultry farmers hard

Problems faced by pets and butcheries

- COVID-19: Animal rights advocates want illegal pet, meat marts shut

Problems due to rumours

- COVID-19 rumours hurt India's poultry industry

Due to movement restrictions imposed during lockdown, farmers are unable to collect feed and fodder for their animals. Restricted inter- and intra-state movement of supplies adversely affected feed manufacturing and distribution. Police officers in most places are stopping farmers from taking their animals to veterinary institutions. Transporting and selling animal products is yet another problem. Though veterinary hospitals and dispensaries are exempted during lockdown, veterinarians and the field staff of Animal Husbandry departments are finding it difficult to reach their workplaces due to lack of public transport and restrictions on use of personal vehicles.

Besides these, both farmers and consumers of Animal sourced food (ASF) are fearful and insecure about animals and use of ASF during this period. They often ask:

- Do animals have any role in COVID-19 pandemic?
- How to protect animals, including companion animals, from humans infected or suspected to be infected with COVID-19?
- Is it safe to eat animal sourced food during COVID-19 pandemic?
- What are the precautions to be taken with animals and animal products?

These questions need to be answered for safeguarding animal and human welfare. Early action is needed to invalidate fake news and educate people to take precautions. Livestock and poultry farmers need information about several such aspects during lockdown (Box 2).



Box 2. Farmers' needs on knowledge and skills/practices during lockdown

- **Health emergencies:** Homestead remedies and first-aid
- **Feeding:** Inclusion level of feed from alternative feed resources (AFR) and practices to overcome adverse effects of overfeeding
- **Breeding:** Management practices to deal with estrous, pregnancy, repeat breeders, anestrous and pre-, peri- and post-partum management
- **Housing:** Animal house disinfection and precautions while using disinfectant
- **Marketing:** Sale at farm gate and sale directly to consumers
- **Schemes:** Government schemes to avail eligible benefits
- **Credit and insurance:** Availing/renewing credit and insurance facilities
- **Weather related information:** Advisories such as summer management practices

Livestock extension and advisory services (EAS) are expected to support farmers to overcome these challenges during this difficult period. How successful has EAS been in promoting production and health care practices, alongside provision of marketing information? This blog will attempt to answer.

EXTENSION INTERVENTION AND INITIATIVES DURING LOCKDOWN

Initiatives by Government of India

The Government of India exempted veterinary services from lockdown restrictions. Addendum to guidelines, annexed to the Ministry of Home Affairs' [Order No 40-3/2020-DM-I \(A\) dated 24 March](#), released 25 March, 2020, permitted veterinary hospitals under Clause 3 and directed authorities to implement.

The Government of India, Ministry of Home affairs, issued consolidated [revised guidelines](#) on the measures to be taken during lockdown 2.0 across the country except in containment zones from 20 April to 3 May, 2020, vide its [order No. 40-3/2020-DM-I\(A\) dated 15 April, 2020](#). This makes several animal husbandry activities permissible (Box 3).



Box 3. Lockdown 2.0 guidelines for animal husbandry activities from 20 April, 2020

Under 5. All health services (including AYUSH) to remain functional, such as:

- v. Veterinary hospitals, dispensaries, clinics, pathology labs, sale and supply of vaccine and medicine
- ix. Movement (inter and intra state including by air) of all medical and veterinary personnel, scientists, nurses, paramedical staff, lab technicians, midwives and other hospital support services, including ambulances.

Under 6. Agricultural and related activities and (D). Animal husbandry

- i. Collection, processing, distribution and sale of milk and milk products by milk processing plants, including transport and supply chain
- ii. Operations of animal husbandry farms including poultry farms, hatcheries and livestock farming activity
- iii. Animal feed manufacturing and feed plants including supply of raw material such as maize and soya
- iv. Operation of animal shelter homes including *Gaushalas*.

Under 13. Supply of essential goods is allowed, as under:

- ii. Shops and carts dealing with dairy and milk booths, poultry, meat and fish, animal feed and fodder etc. should be allowed to operate while observing strict social distancing, without time restrictions of operation.

Under 17. Movement of persons is allowed

- i. Private vehicles for emergency services including medical and veterinary care.

In many places, livestock farmers are not yet aware of the exemptions and activities permitted during lockdown.

State level initiatives

Comparison of [state level notes on advisories to farmers on livestock and poultry farming](#) is presented below:

Table 1. A comparison of advisories to farmers during lockdown

Permission / advice	Gujarat	Manipur	Mizoram	Nagaland	Rajasthan	Sikkim	Tamil Nadu	Tripura	West Bengal
Feed/fodder	√	-	-	-	-	√	√	-	-
Medicine and treatment	√	-	-	-	-	√	√	-	-
Movement of animal & products	-	-	√	-	-	-	√	-	√
Animal products' shops and establishments	-	√	-	-	-	-	-	-	-
Shelter hygiene	-	√	√ ¹	-	√	√	-	-	-
Drinking water	-	-	-	-	√	-	-	-	-
Advice on feeding	-	√ ²	-	√ ³	√	√ ⁴	-	-	-
Feed collection from forest	-	-	√	-	-	-	-	-	-
Social distance by staff	-	-	-	-	-	-	-	√	-

¹Changing litter material in poultry shed

²Feeding advice on pig

³FVWs to animals and tapioca to pig

⁴Mineral mixture and tree fodder

Though it is a nation-wide lockdown, inter-state variations aggravate problems and constraints on farmers. Some state governments have taken specific measures to support livestock and poultry farming (Box 4).

Box 4. State level initiatives to support livestock and poultry farmers

- In Uttar Pradesh: Corona Virus Spread Has No Relation To Consumption Of Poultry: Animal Husbandry Department
- Haryana to revive the distressed poultry industry, becomes a model to educate residents of the state on consumption of eggs and chicken
- Government of Tamil Nadu plans to sharpen abattoir norms for safer meat
- Fodder for cattle soon: Minister Talasani, Telangana
- Maharashtra govt to organise 'chicken parties' to dissipate fear of coronavirus
- COVID19: SOP prepared for Nagaland farmers
- Amid coronavirus scare, Meghalaya govt says poultry products safe

Guidelines shared by National Dairy Development Board (NDDB)

NDDB has disseminated essential advisory material to dairy federations across the country. It has developed and shared guidance documents including [Measures to contain the spread of the COVID-19 virus](#), [Guidelines for prevention of COVID-19](#) and [Ethno-veterinary medicine \(EVM\)](#). It issued an [advisory](#) and [directed dairy cooperatives to make suitable arrangements](#) for ensuring uninterrupted functioning and fodder availability in villages.

Advisories from ICAR – Indian Veterinary Research Institute (IVRI)

ICAR-IVRI has released advisory for livestock owners during COVID-19 Lockdown in English and Hindi in public interest. These advisories are on do's and don'ts, homestead health care, preventive and protective measures to be taken across the value chain and by consumers, value addition and FAQs, myths and facts about COVID-19 etc.



Krishi Vigyan Kendras (KVKs)

KVKs are issuing location specific advisories on crop, livestock, fisheries and related matters using information and communication technologies (ICTs). Also, they are sharing information on markets, availability of critical inputs, maintaining social distance, facilitating the installation of Aarogya Setu app, immunity enhancing protocol, etc. Also, a few KVKs are engaged in specific activities to respond to COVID-19 (Table 2). However, KVKs may not have subject matter specialists in Animal Sciences, Extension and Fisheries, which can restrict their advisories to crops.

Table 2. KVK interventions amid COVID-19 lockdown

SNo.	Institute	Extension intervention
1	KVK, Ernakulam, under ICAR-Central Marine Fisheries Research Institute (CMFRI)	Door delivery facility for the fish lovers of Kochi
2	The Sahbhagita, a self-help group formed by the ICAR-Central Institute for Subtropical Horticulture(CISH), Lucknow, Uttar Pradesh (Box 5)	Promotes egg and chicken production in the mango belt of Malihabad
3	ICAR-Indian Veterinary Research Institute including KVK of ICAR-IVRI, Izatnagar, Uttar Pradesh	Timely information to livestock farmers via WhatsApp (Figure 6), YouTube (Figure 7&8), Facebook (Figure 9), mobile apps, KVK portal, All India Radio including presentation via Zoom

Box 5. Shri Mohammad Shafiq's experience

Sharing his experience of poultry production, Shri Mohammad Shafiq stated that during the lockdown he is earning Rs 300 per tray or Rs 30 per egg in the case of eggs from *Kadakhnath* breed. Trained farmers and Senior Research Fellow (SRF) of CISH, Lucknow, who are posted in the village proved to be very helpful in educating farmers about social distancing and hygiene.

The scope of social media in offering EAS is tremendous during COVID-19 lockdown. [Social media such as WhatsApp, Telegram, Facebook and YouTube are successfully used by extensionists to offer EAS.](#) Also, social media can be used to disseminate truthful and factual information to counter fake news (Box 6). While disseminating information including input dealers is beneficial.

Box 6. Myth busters from authentic sources

- Myth busting by Government of India
- Questions and answers on the 2019 Coronavirus Disease (COVID-19) by World Organization for Animal Health (OIE)
- [Coronavirus disease \(COVID-19\) advice for the public: Myth busters by World Health Organization \(WHO\)](#)
- No evidence that animals can transmit the coronavirus to humans by Food and Agriculture Organization (FAO)

Strength and limitations of livestock extension system in India

Box 7. Strength of livestock extension system in India

- Multiple agencies involved brings pluralism
- Potential and boon of using ICT tools
- Gaining attention of policymakers
- State departments started establishing exclusive extension wing/department
- Fit for Public-Private-Partnership (PPP) model of convergence and sharing of resources
- Potential of farmer-to-farmer extension

Box 8. Limitations of livestock extension system in India

- Grossly neglected: State Departments of Animal Husbandry (SDAH) focus on animal health with negligible extension
- Lack of exclusive livestock extension policy, system and regulatory network
- Not fit for agriculture extension model
- Poor and inadequate infrastructure
- Lack of investment in livestock extension activities
- Shortage of technical manpower in extension (Only 34,500 veterinarians against the requirement of 67,000)
- Lack of demarcated role and responsibilities of extensionists
- Lack of nutrition-centric approach
- Very little flexibility to modify extension programmes
- Poor linkage between veterinary university and SDAH
- Lack of extension research

This in turn reflects in poor performance at the field levels. Despite the [large number of livestock in India](#), livestock extension remains grossly neglected. The outnumbering of strengths (Box 7) by limitations (Box 8) reflects poor EAS at field level. Hence, mission mode approach is needed to deliver EAS amid COVID-19 lockdown.

WHAT MORE NEEDS TO BE DONE?

Various stakeholders in the livestock and poultry sector need to stay connected through social media, follow etiquette and collaborate their efforts in EAS by playing their roles as mentioned in Table 3.

Table 3. Role of varied stakeholders

SNo.	Stakeholder	Roles during COVID-19 lockdown
I Policymaking (National and State level)		
1	Ministries and departments	<ul style="list-style-type: none"> Formulating and circulating guidelines on EAS which should also be nutrition-centric and consumer-centric Knowledge management/guidelines to frontline EAS institutions Updating guidelines based on problems addressed through call history of Kisan Call Centre (KCC) and browsing history on search engines
2	National Institute of Agricultural Extension Management (MANAGE)	
3	ICAR	
4	Centre for Research on Innovation and Science Policy (CRISP)	
II Planning (District level)		
1	District administration	<ul style="list-style-type: none"> Planning and implementing district EAS action plan involving stakeholder departments, private, voluntary and farmers' organizations Circulating orders and guidelines to implementing departments Addressing problems and needs through mass and social media and EAS Representing farmers' problems with proposed solutions Communicating marketing information Using digital opportunities to offer EAS
2	Department of Animal Husbandry (DAH) and allied departments	
3	Extensionists/SMSs/faculties from ICAR /SAU/SVU/CAU	
4	Supporting actors such as FPOs, CIGs, co-operatives, input dealers and NGOs	
5	District level National Information Centre (NIC)	
III Implementation (District to village level)		
1	Local panchayats and Municipalities	<ul style="list-style-type: none"> Implementing action plan Using government machineries for EAS Following action plan and guidelines Offering EAS including marketing information at work place, field and through social media Using supporting para-EAS providers Motivating farmer-to-farmer extension (F2FE) Acting as para-EAS providers Providing market information Keeping information link with extensionists
2	Extensionists and veterinarians	
3	Input dealers, NGOs, volunteers, FPOs, CIGs and co-operatives	
IV End-users/beneficiaries (Grass-roots level)		
1	Farmers, farm women and youth	<ul style="list-style-type: none"> Communicating needs and problems Following/practicing EAS Self-awareness on fake news Educating others against fake news Performing F2FE
2	Other core actors of value chain such as aggregators, middlemen, traders and butchers	
V Active supporters		
1	Press and media	<ul style="list-style-type: none"> Reporting actuals and needs of farmers directly from farmers' field Disseminating information on EAS Trusting authentic information Reporting doubtful news to authority Educating others against fake news
2	Non-farmers including consumers	

There is no real livestock extension in the country as the emphasis has been mostly on treatment and vaccination. The roles of stakeholders mentioned in Table 3 are, predominantly, irrespective of lockdown. However, these would be useful for future interventions.



Specific roles for Livestock EAS

Enhancing EAS delivery through online and social media

- Webpages of official websites of EAS offering institutes, containing advisory information on animal keeping and management during lockdown, should be made directly accessible without sign up at free of cost
- Options for online feedback
- Periodical short brief on extension talks should be circulated in social media.

Potential of FPOs and cooperatives

The potential of FPOs and cooperatives needs to be effectively utilized by EAS to help farmers sell their products and share information and updates on farming. But FPOs, despite efforts made, are not in good numbers, particularly in livestock and poultry sector. Cooperatives carryout EAS as one of their mandates. Similarly, cooperatives in livestock and poultry sector, except dairy cooperatives, are also few in number.

Strategies for using traditional mass media

- Information broadcast on radio and television to harness the flexibility and ubiquity of mass-media technologies effectively
- Volunteerism by newspapers in allotting exclusive page or column for information on livestock and poultry farming written by SMSs/extensionists/faculties of EAS offering institutes is desirable
- Community radio is a good means to connect with farmers because of their strengths in local dialects, local issues and solutions with community participation. But, only a few institutions are effectively running these.

EAS to pet animal owners

The fear of COVID-19 has been reflected by pet lovers too. Extensionists should alleviate their fear and depression by giving advisory services and counselling as per 'One health' concept that explains human health and animal health are interdependent and bound to the health of the ecosystems in which they exist.

LESSONS FOR THE FUTURE

- **Extensionists' competency development:** Extensionists need to be trained on next generation extension tools and [New Extensionist Learning Kit \(NELK\)](#) for providing EAS during crisis. [The Module 13: Risk Mitigation and Adaptation in Extension](#) could be particularly useful to handle crisis situation.
- **Alternative Feed Resources (AFR) origin:** Extensionists should [disseminate information on level of feeds of AFR origin such as commonly available fruits and vegetable wastes \(FVWs\)](#). EAS providers in livestock sector can become acquainted with the [utility of various FVWs](#) to guide farmers in making good use in animal feeding. Policymakers need to consider AFR while formulating livestock and poultry extension policies and programmes.
- **Need for technology:** Problems which need new technology to confront crisis have to be addressed and communicated as feedback to researchers. Such feedback in general is often missing.
- **Inclusive social network:** Developing a social network involving all the stakeholders of EAS for timely information dissemination to all agricultural subsectors.
- **Farmer Producer Organization (FPO):** Livestock and poultry farmers have to be supported to form FPOs by [Small Farmers' Agribusiness Consortium \(SFAC\)](#) and [National Bank for Agriculture and Rural Development \(NABARD\)](#). FPOs need to be trained to play their role in EAS.
- **Marketing intelligence:** Training in marketing intelligence needs to be imparted to face new customers and new markets.
- **Farm tours:** Animal products from commercial farms are susceptible to fake news. To overcome this, commercial farmers should organize farm tours showing their farm hygiene.
- **Awareness exercise:** Awareness through social media on related law and regulations for all the stakeholders of EAS needs to be conducted with more emphasis on farmers.
- **Data mining perspective for social media:** To curb rumours, data mining perspective needs to be inculcated.
- **Extension and education never end:** Stakeholder meetings need to be conducted to document their experience and feedback. The reason, factors and resources responsible for EAS delivery need to be discussed for better EAS during future crisis.

We know ASF is crucial for healthy human life. In India, difficulties faced by farmers in availing timely EAS is more severe during COVID-19 lockdown. Therefore, it is important to collaborate and coordinate with stakeholders to disseminate timely EAS to farmers and consumers.

Dr Mahesh Chander is Principal Scientist & Head, Division of Extension Education at ICAR- Indian Veterinary Research Institute, Izatnagar-243 122, UP, India. (Email: drmahesh.chander@gmail.com)
M S Kannadhasan, Assistant Professor, VUTRC (TANUVAS), Dharmapuri-636701, Tamil Nadu, is currently pursuing PhD in Veterinary Extension Education at Division of Extension Education, ICAR- Indian Veterinary Research Institute, Izatnagar-243 122, UP, India. (Email: vetmskdhasan@gmail.com)
Raj Kumar Patel, Veterinary Assistant Surgeon, Madhya Pradesh State Department of Animal Husbandry, is currently pursuing PhD in Veterinary Extension Education at Division of Extension Education, ICAR- Indian Veterinary Research Institute, Izatnagar-243 122, UP, India. (Email: patel.drraj2019@gmail.com)

**AESA Secretariat: Centre for Research on Innovation and Science Policy (CRISP),
Road No 10, Banjara Hills, Hyderabad 500034, India
www.aesanetwork.org Email: aesanetwork@gmail.com**