

**A CASE STUDY :**

# Impact of lockdown on agriculture and allied sector in Washim district

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**ARTICLE CHRONICLE :**

**Received :**

01.04.2020;

**Accepted :**

29.04.2020

**SUMMARY :** Study on Impact of COVID-19 lockdown on agriculture and allied sector, best emerging practices in production, processing, value addition and marketing and initiatives of Krishi Vigyan Kendra to update farmer in these circumstances was carried out by KVK in the district. The data on impact of COVID-19 on agriculture and allied sector reveals that 50 per cent *Rabi* crops harvesting delayed due to non-availability of labour and field operations were costlier. 34 per cent farmers faced problem of sale of farm produce, turmeric crop harvesting losses upto 75 per cent mostly small and marginal farmers were affected due to lockdown. Fruit and vegetable growers have to succumb 85 per cent losses during sale, storage and marketing due to district boundaries blocking. Marketing problem has shown the another way of direct marketing through personal contact or use social media group. Similarly due to lockdown best agriculture practices has emerged in the field of production, processing, marketing and supply chain management. 30 per cent losses in dairy and 87 per cent losses in poultry farming enterprise has been indicated in the study.

**KEY WORDS :**

Impact, Best emerging practices, Initiatives of KVK, Skill development

**How to cite this article :** Deshmukh, S.K. (2020). Impact of lockdown on agriculture and allied sector in Washim district. *Agric. Update*, 15(1 and 2): 130-136; DOI : 10.15740/HAS/AU/15.1and2/130-136. Copyright @ 2020: Hind Agri-Horticultural Society.

## BACKGROUND AND OBJECTIVES

Washim district is among aspirational district and entire economy of the district is dependent on agriculture. District is having maximum population of small and marginalized farmers with 75 per cent area is under rainfed farming.

Due to containment of COVID-19 epidemic in the country Honorable Prime Minister Shri. Narendraji Modi has declared Janta curfew on 22 March 2020 and lockdown also declared with effect from 24 March 2020 to 14 April 2020 (21 days period) to control

spread of COVID-19.

In second phase extension of lockdown period was continued to remain prohibited from 15 April to 3<sup>rd</sup> May 2020 across the country during this period relaxation were given to agriculture for Agriculture and related activities were permitted with effect from 20 April 2020, which mainly includes farming operations by farmers and farm workers in the fields beside this procurement of agricultural products, sale of inputs, operations in the fisheries, plantation and animal husbandry activities.

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## RESOURCES AND METHODS

To ascertain the impact of COVID-19 on agriculture and allied sector in the district, KVK Karda Washim after consultation with contact farmers, farmers club volunteers, gram mitra and gram sakhi, telephonic consultation, feed back on social media and news published in local paper has developed google form by providing link to conduct the study. Special efforts were taken to circulate the link to farmers who have registered their name for Gramin Krishi Mausam Sewa advisory services and are in regular contact with KVK. Villagers from KVK adopted villages were also covered under study.

As KVK has expert team of all discipline, help of these subject experts were taken to have proper questions and scoring as 1,2,3,4 and 5 was given to the questions asked to the respondents. In response to shared google link 250 farmers of all categories viz., turmeric grower, dairy farmer, vegetable grower few of them were tenant farmer replied and fill up the form. Similarly we have also collected information about best emerging practices in production, processing, marketing and supply chain adopted by farmers during lockdown period. On the basis responses of farmers analysis was done and based on this findings impact of COVID-19 was studied.

### Impact of lockdown period on agriculture:

#### *Harvesting of Rabi crops:*

Area under Bengal gram crop was 60153 ha. while under wheat crop was 32530 ha. and during lockdown near about 50 per cent area under wheat and Bengal gram was in the field and ready for harvesting and due to lockdown farm workers were not available for harvesting and combine harvesters was not allowed for field operations hence, it has created problems to the farmers.

#### *Problems for sale of farm produce:*

Due to storage problem and non-availability of godowns farmers are in very difficult condition as they have to kept their produce in the field. It is observed that 34 per cent farmers facing problems in sale of produce. Unseasonal rain are also creating additional problem for covering the produce. Because of this situation farmers has to stay whole night in the field and attacks of wild animals are also witnessed.

#### *Marketing:*

All the agencies including mandis engaged in procurement of agricultural product has stopped the procurement of produce.

#### *Harvesting of turmeric:*

Beside Rabi crops turmeric is also one of the important commercial crop in the district having approximately 12000 ha. area in the district. 30 per cent turmeric crop was harvested while remaining was in the field. Farmer those who have harvested the crops can not sold their produce as inter district and inter state movement was blocked.

Every year due to labour shortage problem harvesting was hampered but because of lockdown circumstances their was sufficient availability of field workers those who were earlier working as a driver, cleaner, auto rickshaw driver are working in various companies at Pune or Mumbai.

#### *Vegetable crops:*

Because of sufficient rain fall in the district farmers has cultivated vegetable crops like tomato, onion, brinjal, ladyfinger, cabbage, chilli, palak, bitter gourd, carrot, cluster beans, but due to non-availability of labour for plucking, sale problem due to closure of weekly bazar and transportation availability some of the farmers left the tomato crop in the field and some of them have grazed to cattle's. In some cases farmer has freely distributed to villagers.

#### *Flower cultivation:*

In the Washim district rose, jasmine, chrysanthemum, tulip, marigold are cultivated by the farmers but due to present situation field workers are not available for plucking of flowers and due to ban flowers are not sold to the customer. In lockdown period there was ban on social programmes like, Bhagwatsaptah, Ammlibaras, Ramnavami, Babasaheb Ambedkar Jayanti. Mahavir Jayanti, Hanuman Jayanti sale was stopped. Apart from this all the temples and holy places were shutdown which has reduced demand of flowers has adversely affected and mostly 75 per cent flowers during the period has to kept in the field or grazed to cattles.

Few farmers are undertaking rose cultivation in poly-house and some of them for erection of poly-house has taken loans from bank but due to lockdown and marketing problem farmers can not sale rose flowers in their blossom

period. Repayment of loan is also one of the major problem arise due to such situation.

#### *Fruit crops:*

In Washim district orange, grapes, pomegranate, mosambi, lemon, papaya, water melon, muskmelon, was cultivated in the fields. Even as per agreement with farmers middle man (dalal/ wapari) were not lifting orange from the farmers field. Cold storage facility is not available in the district hence, orange growers has stored 4832 quintal produce in cold storage at Hyderabad and Vadodara before lockdown period and due to ban on inter-state movement it was quite difficult for farmers to lift from other state like Telangana and Gujarat. Water melon and musk melon crop was taken but because of this situation farmer has to sold their produce through door to door marketing or even open grazing to the cattles. Cross border transport of fresh produce is being disrupted.

Central Government after reviewing farmers organization concern and problems of grapes, mango, orange, Sapota has issued notification that as fruits crop are highly perishable and due to unseasonal rains have created problems, if state government purchases fruits from grower central government is ready to borne half expenditure against purchase of fruit crop. For transportation of fruit crops Kisan rail from 600 stations is in progress.

#### **Impact of COVID-19 on Agril. allied sectors:**

##### *Poultry farming:*

Poultry farming, contractual poultry farming and backyard poultry farming is practiced by the rural youths but because of rumors about COVID infestation due to eating of eggs and poultry chicken this rumors has stopped sale of poultry birds and eggs. Hence, poultry farmers has to sale out with great loss or some of the farmer has destroyed by digging pits in their field. Contractual poultry farmers are facing problems of repayment and loss due to COVID. Farmers under taking commercial broiler poultry farming has to face heavy financial losses.

Under such circumstances there was demand for quail farming enterprise and in this period sale of quail bird was boost up.

##### *Dairy farming:*

Dairy farming is practiced as one of the important

allied enterprise but due to problems of milk selling farmers are in difficult situation. Surplus milk and reduced Under such situation Mahananda dairy has decided to procure additional milk from district and taluka milk co-operative societies, state government has agreed to support farmers and prepare milk powder.

##### *Fish farming:*

Subject to guidelines Government has permitted fish farming related activities like fish netting and harvesting, feeding stocked fishes and transportation of fish feed. Rumor about poultry birds and eggs has attracted consumers to purchase fishes and as a result KVK beneficiary farmer has witnessed record sale of fish directly from his pond at the rate of Rs.200/kg and earned good profit.

#### **Other problem includes:**

- Non-availability of diesel for field work and field operations.
- Delay in repayment of crop loan because of un availability of talathi and documents to be submitted
- Field work like pipe line maintenance work ,installation of new pipe line, dumping and transportation of farm yard manure and major soil and water conservation activities.
- Field related activities like ploughing of land and *Kharif* land preparation work etc.
- Sudden drop in market and unpredictable rainfall has hits the farmers.
- Despite loss of work labours prefer to stay at home and avails the benefits of government welfare scheme to sustain their livelihood.

#### **Social activities:**

- All the marriage functions and social programmes were done in simple way which has saved the time and money of the farmers. CORONA effect has created positive impact and proved importance of saving money.
- Some of the farmers child has learned tractor driving and farm work.
- Circumstances has forced to sale their produce directly to consumers or door to door marketing.
- Government through NAFED has started to purchase farm produce and even APMC's has permitted farmer to sale produce by adopting social distancing measures and use of mask during sale of farm produce.

**Best emerging practices in producing, storage, processing, supporting and marketing to fight against Covid-19 by the farmers in the Washim district of Maharashtra state:**

*Farmer and his wife excavated irrigation well in lockdown period:*

Irrigation through wells is commonly done in the district and for irrigating the field farmers excavate wells in the field. In lockdown situation by utilizing time. Farmer Gajanan Pakhmode and his wife Pushpa Pakhmode from village KarkhedaTq. Manora Dist. Washim excavated 25ft. irrigation well in 21 days period and created source of irrigation for their 1 ha land holding. After end of lockdown period they will dug well 10ft. and do construction work of the well.

*Sale of quails in lockdown period:*

Because of misunderstanding and rumors about spread of COVID virus through poultry birds and eggs under such circumstances demands for quail bird has raised and has good days for quail farming enterprise. Gajanan Daberao farmer from village Khadkha has sold 300-400 quail birds/day @ rate of Rs.60/bird and got fetched better income from quail farming.

*Door to door and direct marketing of vegetable and fruits:*

In lockdown period sale of tomato, cabbage, brinjal and other vegetables and fruits crops like papaya, grapes, watermelon and muskmelon was very difficult. Mostly farmer's sale produce through weekly bazaar or middle man but under such circumstances farmers has effectively utilized whatsapp group and few of the farmers during relaxation period sold their produce to the consumer at their door step. Beside this in some cases farmers having their field on road side has kept fruit for sale.

KVK, ATMA and Agriculture department has also played key role in marketing the farmer produce. As an impact now farmer has gain confidence to sale the produce directly to the farmers.

*Farmer trained two daughters in tractor driving:*

In lockdown period staying at home was very difficult hence, farmer has trained his elder daughter in tractor driving during the leisure period. And his elder daughter has trained tractor driving to his sister as a result both the daughters are supporting farmers in doing field

operations through tractor operated equipments.

*Farmer family has purchase house hold flour machine:*

Deokar family family residing near the Risod city has purchase house hold flour machine costing Rs.8500/- and provided services of wheat flouring and atta making of other pulses and earned good income during the lockdown period.

*Pulse processing and cleaning grading of grains by SHGs:*

Savitribai Phule SHG of KVK adopted village Deolgaonbanda this year has setup cleaning grading and pulse processing unit and got training at KVK. Because of lockdown period this village based enterprise has got good days and they have done 100qts wheat cleaning grading and produce 10qts of tur and channa dal and has got good opportunity of earning from these services at village level due to lockdown period. Beside this *Trupti papad uddyog* has also done record production of papad and provided opportunity of earning to the 15 women's through their unit.

*Cultivation of greengram, summer groundnut and vegetables:*

Because of satisfactory rainfall in the district and lockdown circumstances has encourage farmer to go for cultivation of summer green gram, groundnut and vegetable as farmer during this period can stay in their field and save crop from wild animals beside this farmer can spend good time and earn amount from sale of the produce and purchase input for next *Kharif* season. *Rabi jowar* is also having good area and stand in the district.

*Good days for dish sale to the villages:*

Under COVID-19 circumstances Shri. Keshav Paighan KVK contact farmer and beneficiary of NFDB sponsored FLD of Jayanti Rohu breed from KVK adopted village has stocked fish seed after sizeable growth has come to harvest during lockdown period. But lockdown period has provided good demand to fish and consumer has purchase the fish @ 200/kg. As such farmer is earning Rs.3000/day from sale of fish because earlier farmer was engaged in mandap decoration work but as all social programme has stopped hence fish farming has bring good days and hopes in the farmers family.

*Use of raincoat as a protection kit:*

It is observed that even after government appeals about social distancing and use of mask, citizen avoiding the instructions under such circumstances dairy farmer from village Sonala Shir. Gopal Ashok Wankhade who regularly supply home to home milk has also used rain coat as a protection kit and has given message of social distancing to the other citizen.

*Protection of mango fruits:*

Unseasonal rains and winds created heavy losses of mango fruit drops in the district. But under lockdown circumstances to protect mango fruits from monkey farmer M.K. Jadhav from village Wasari has wrapped

mango trees by thorny plants. Because of this monkey can not climb the mango trees and as such farmer has protected his deshi mango trees from monkey and wild animals.

Keshav Paighan from Kawtha has wrap green net where it is possible to mango tree and also done bagging of mango fruit to protect from birds and wild animal attack.

In nut shell it is concluded that because of active role support of KVK farmers has got sale confidence of direct selling and circumstances has given message about self sufficiency and new ways of marketing their produce. Organised retail chain is need of the hour to sale the produce as only 2 per cent produce is sale through



Mr. Keshav Paighan directly sales fish from his farm pond



Excavation of 25 feet well by poor family during lockdown period



Provide technology to summer grower farmers through CRS, News paper, Whats up group etc.



Protection of mango fruits

retail chain, wherein in progressive districts it is upto 15 per cent. CORONA effect taught lesson of self sufficiency in processing, value addition and export of farm produce. For every nation food security is on top priority to tackle such circumstances. Adverse effect on farm activities, labour, retail chain and created uncertainty atmosphere in agriculture field. In addition to farmer in the adopted village as per the KVK messages has down loaded, Aarogya Setu application followed social distancing, sanitizing their own home and even cattle sheds. Inspiring through situation farmers from village Kekatumra has supplied food grain to poor 46 labour families in this period.

### Initiatives by KVK, Washim:

Krishi Vigyan Kendra Karda is taking several measures to facilitate the farmers and farming activities at the field level during the lockdown period to prepared:

- Circulated the national advisories issued by ICAR and share among the KVK contact farmers and other stake holders.

- Necessary need based and district specific agro advisories were forwarded on whatsapp group linked with KVK.

- Downloading of Arogyasetu mobile application and information to farmers and take full advantage of the app.

- Issued agro advisories about wheat harvesting, pest management in lady's finger, brinjal, summer ground nut, chilli, tomato, use of pheromone traps, disease management in papaya,

- Similarly advisory about disease management of in pigeonpea, harvesting and storage of turmeric, field activities to be undertaken during the month of April-2020, preparation of field for orange plantation.

- Supported contact farmer for sale of their produce through whatsapp area based groups. Some farmers availed the papaya and watermelon for sale in the city under pandemic were supported by KVK expert team through dissemination of information about farmers market produce saler contact information on whatsapp groups. Farmers replied their thanks for this support.

- Daily market rates were circulated to farmers

- DAMU unit has issued biweekly agro-meteorological advisories

- Published news paper articles on pest management in chilli, importance of trap crops in pest

management, management of cattle in summer season, pest management in orange crop.

- Video message of KVK head to farmers regarding cares during COVID pandemic.

- Issued radio talks on clean milk production care and management of livestock in summer.

Soyabean seed germination test, post-harvest processing and handling of farm produce, summer groundnut crop pest disease protection, pre sowing seed treatment, turmeric storage, soil testing, pest management of chilli, protection of stored grain from pest, pest management in papaya, use of improved recommended crop varieties for *Kharif* season, cares during use of selecting household seed for sowing and use of farm waste for composting.

- Sharing of farmers innovative activities and success stories.

- Seed processing for input availability during *Kharif* season.

- The KVK experts also addressed and advised on the telephonic queries related to farm operations received from farmers.

- Kisan Rath App found helpful for transportation and movement.

- WhatsApp messages being multi facilities has helped the more than other social media tools.

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