

Original Research Article

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Farmers Loss Assessment in Nagaon District of Assam during Lock Down Period (24th March to 14th April, 2020)

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ABSTRACT

The present study is to examine the impact of Lockdown based on the information collected through convenient sampling in the district of Nagaon, Assam, India. We deliberately selected 49 individual farmers, 1 FPO where 600 farmers member had faced the problem in marketing. Thus a sample size of 649 used to examine the impact of Lockdown. The schedule was prepared by penalized group of Assam Agricultural University, Jorhat and sent to each Krishi Vigyan Kendra's situated in Assam. Data were collected through telephonic conversation. Collected data were analyzed using percentage method and was used to determine the economic impact of Covid-19 pandemic. The various crops harvested but could not able to sell were Pumpkin, Water melon, Tomato, Chilli, Ladies finger, Bottle gourd, Ridge gourd, Cucumber, Spiny gourd, La lab, Brinjal, French bean, Capsicum, Sponge gourd, Pointed gourd, Cabbage, Bitter gourd etc. in Nagaon district. Supply chain of horticultural produced viz., Chili, Watermelon, Tomato etc. have been drop off due to the lack of transportation facilities in order to maintain social distancing norms. Total loss was 72555.91q during this period where total actual loss was 72375.41 q. The percent loss of Fishery sector was seen 42.85 which was much lower than the Crop sector but higher than the Animal sector.

Keywords

Perishable, Percent loss, Fishery sector, Horticultural crop

Article Info

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Introduction

Being aware Covid-19 spread, the Government of India as well as Government of Assam as part of driving out the pandemic declared a nationwide 21 days lockdown on 24th March, 2020 to 14th April, 2020 which subsequently extended. During the first stage of full lockdown farmers faced a huge Crop

and Allied sectors loss and wastages as there is restriction in people movements in order to maintain social distancing norms. Farmers loss was mainly pertains to perishable commodities such as vegetables and fruits, as the chaos and lack of coordination during the initial days of the lockdown, announced on March 21, saw large-scale wastage of produce. Sujathan and Azad (2020) also

investigated the social impact due to Lockdown in Kerela and advocate to the government measures to overcome the virus crisis (1). Therefore, the present study is to examine the impact of lockdown based on the information collected through convenient sampling in the district of Nagaon, Assam, India.

Materials and Methods

The present study was conducted in Nagon district of Assam. We deliberately selected 49 individual farmers, 1 FPO where 600 farmer members had faced the problem in marketing. Thus a sample size of 649 used to examine the impact of lockdown. The schedule was prepared by penalized group of Assam Agricultural University, Jorhat and sent to each Krishi Vigyan Kendra's situated in Assam. Data were collected through telephonic conversation Collected data are analyzed using percentage method and is used to determine the economic impact of Covid-19. The following tools were used to examine the impact of Lockdown due to Global pandemic of Covid-19

Loss (in terms of quantity) = Total production – (Family consumption + Quantity sold in market);

Loss (in terms of Rs.) (A_1) = Total loss × Selling price

Loss (in terms of Rs.) (A_2) = (Total loss × Selling Price) + (Quantity sold (Expected price – Actual selling price))

Percent Loss = $\frac{\text{Total Loss}}{\text{Total Production}} \times 100$

Farmers Expected Return = Last year price (Total Production - Family Consumption)

Where,

Expected price is the Expected selling price without lockdown or last year's price (Rs./q)

Selling price is the price where quantity have been sold

Results and Discussion

In this chapter there is an attempt to analyses loss incurred in agricultural and allied sectors during Lockdown period.

Crop sector

Horticultural crops

Agricultural produced are mainly perishable in nature and because this is the time of various activities to be running within the sector like harvesting and post harvesting activities of various crops such as, storage, value addition, marketing of farm produce etc. The various crops harvested but could not able to sell were Pumpkin, Water melon, Tomato, Chilli, Ladies finger, Bottle gourd, Ridge gourd, Cucumber, Spiny gourd, La lab, Brinjal, French bean, Capsicum, Sponge gourd, Pointed gourd, Cabbage, Bitter gourd etc. in Nagaon district

Field crops

Barman and Deka (2019) found that there was positive impact of farm mechanization on productivity and income (2). But approximately 7 ha of land under Boro rice grower farmers were unable to provide irrigation as well as fertilizer application due to lack of diesel oil along with scarcity of labour during that period as a result farmers estimated yield will max 2.8t/ha whereas last year yield was 5 t/ha as a result of these. Kharbikar *et al.*, (2020) mentioned in his study on Scarcity of labour for various activities in the fields due to migration of labour, lack of transportation facilities during lockdown period in First phase (24th March to 14th April, 2020) in different parts of India. (3).

It can be inferred in Table 1 that the supply chain of horticultural produced viz., chili,

watermelon ,tomato etc. have been drop off due to the lack of transportation facilities in order to maintain social distancing . Total loss was 72555.91 during this period where total actual loss was 72375.41 q. It has seen that loss per farmer was Rs. 54630 if we express the loss value in the current selling rate. The percent loss was seen 57.30 under agricultural

sector. Fig 1 and Fig. 2 Represents the relative share of farmers produce in crop sector and deviation in farmers income due to Lock Down. However Anagah (2020) reported in his study that a few farmers had been affected positively as a result of Lockdown as farmers sold their produce at vey higher rate in Nigeria (4).

Table.1 Loss Assessment of Crops in the harvesting stage

Sl. No	Particulars	Amount
1	Total production in terms of quantity	126631.50 q
a)	Average production (q/farmers)	195.18
2	Total loss in terms of quantity	72555.91q
a)	Average loss of produce (q/farmer)	111.80
b)	Actual loss in terms of quantity	72375.41 q
c)	Average Actual loss in terms of quantity (q/farmers)	111.51
3	Total loss in terms of Rs.(A₁)	354555189
4	Total loss in terms of Rs.(A₂)	70441507
5	Average loss of the produce (Rs.) w.r.t A₁	54630
6	Average Loss per farmer(Rs.) w.r.t A₂	108538
7	Percent Loss	57.30 %

Table.2 Loss Assessment of Animal produced during 1st phase of Lockdown

Sl. No	Particulars	Amount
1	Number of farmers	14
2	Total production in terms of quantity	109.74 q
a)	a)Average production (q/farmers)	7.84
3	Total loss in terms of quantity	19.24 q
a)	Average loss of produce (q/farmer)	1.37
4	Total loss in terms of Rs.(A₁)	60813.50
5	Total loss in terms of Rs.(A₂)	383403
6	Average loss of the produce (Rs) w.r.t A₁	4343.82 q/unit farm
5.	Average Loss per farmer(Rs.) w.r.t A₂	27385.96 q/unit farm
8	Percent Loss =	17.53 %

Table.3 Loss assessment of fish during 1st phase of Lockdown

Sl. No	Particulars	Amount
1	Number of famers	4
2	Total production in terms of quantity	2.1 q
3	Total loss in terms of quantity	0.90 q
4	Total loss in terms of Rs.(A ₁)	22500
5	Total loss in terms of Rs.(A ₂)	22950
6	Average loss of the produce (Rs./ha) w.r.t A ₁	5610040
7	Average Loss per farmer(Rs./ha) w.r.t A ₂	5748133
8	Total Loss	42.85 %

Fig.1 Relative share of farmers produce (crop) during Lock down period

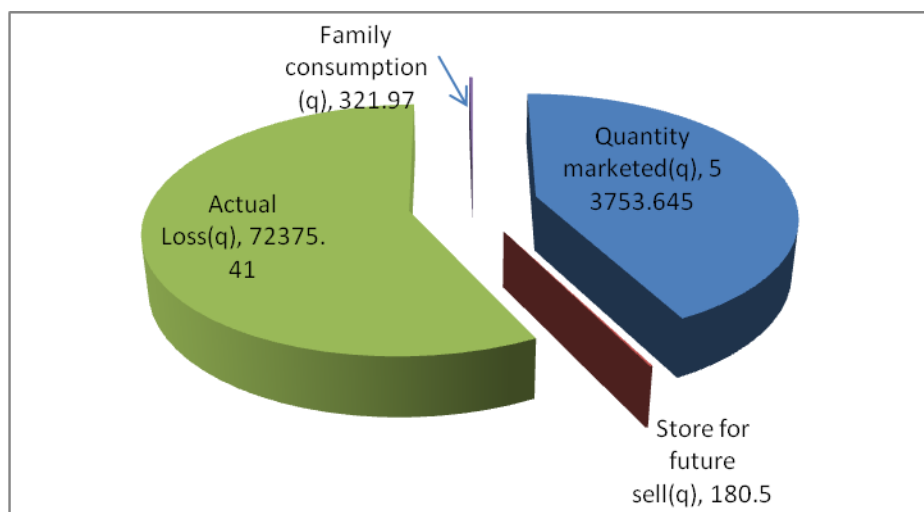


Fig.2 Deviation in Farmers Income due to Lock Down

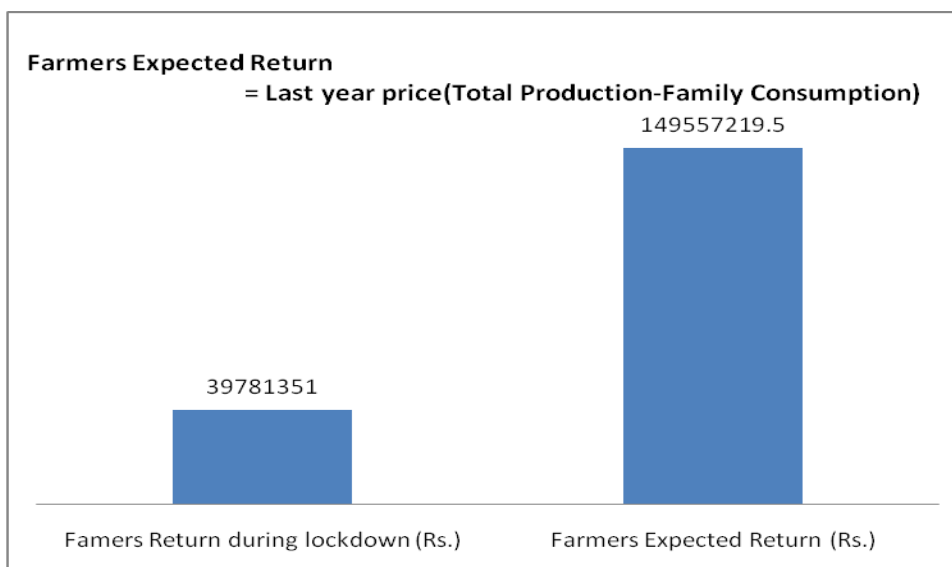
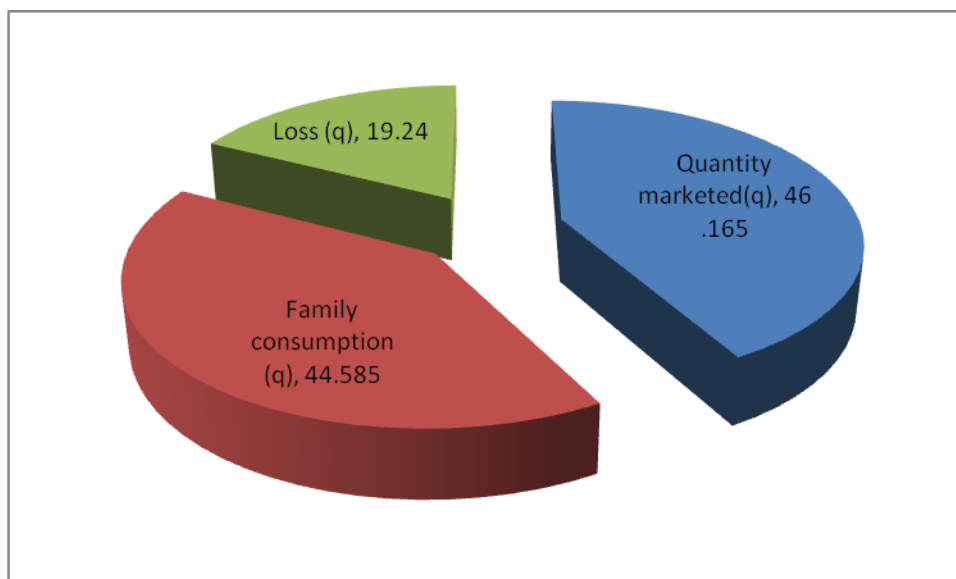


Fig.3 Percent share in utilization of produce from animal and poultry during Lock down



From the above discussion we may conclude that there is significant loss of famers as their primary source of income was from agriculture. Farmers were not able to sell their products due to market and transportation due to lockdown and social distancing norms and again unavailability of labour farmers are unable to provide irrigation as well as fertilizer application due to lack of diesel oil along with scarcity of labour during that period as a result farmers estimated yield will max 2.8t/ha whereas last year yield was 5 t/ha. This findings is consistent with the findings by Abraham and Emmanuel(2020) and further hey suggested that floor price fixation, trade promotion in agricultural sector is the only way to minimize the loss incurred by farmers (5). Padheeand Carberry (2020) suggested immediate challenges, mitigation measures for impact of lockdown due to Covid -19 pandemic (6). They further advised framers in their article that to follow State wise guidelines issued by Indian Council of Agricultural Research (ICAR) during the lockdown period where specific practices during harvest and threshing of various *rabi* crops, post-harvest management , storage and marketing of the farm produce in

order to cope up with the loss faced by farmers.

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