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Impact of COVID 19 in small scale honey producers in Chipinge district, Zimbabwe.

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Abstract

The COVID 19 emergency forced several countries to adopt tight measures to contrast infection. The restrictions caused by the pandemic of COVID-19 have affected nearly every economic sector of Zimbabwe. The level of quarantine and lockdowns, seriously affected the smallholder farmers of horticultural crops, beekeepers and small livestock producers. The whole humanity has been faced with different problems, such as food insecurity being one of them. The current research aims to study the effect of the restraints imposed in Zimbabwe upon COVID-19, in 2020 on the activities of smallholder beekeepers in Zimbabwe. The study period covered April 2020- January 2021, when serious restrictions were working in Zimbabwe. The changes of the customer behavior from the prospect of honey demand throughout the restriction period have been disclosed. The investigations testify that in Zimbabwe, honey production has gone down during the restriction period. Considerable change has been recorded in the customer behavior in honey consumption, particularly during the month of January 2021. The price of honey went up and the production of honey went down. An increase in the purchase rate of honey product per one visit to the shop, as well as a decrease in the visit frequency to the shop was record.

Key words

COVID-19; Honey production; smallholder farmers; flowering plants; lockdown

1.1 Introduction

Disruption through present pandemic is found to almost all the sectors of economy across the global. However, impact on Zimbabwean food and honey industry is largely experienced considering it as the livelihood of small scale farmers, emphasizing small and marginal farmer. Present study is undertaken to examine the small scale honey producers with emphasizing on Chipinge district, Zimbabwe. The research will be important to observe positive and negative

trends of Covid-19 and suggesting appropriate measures for dealing with present and similar situations in near future.

1.2 background

In history of this earth, different diseases have wreaked havoc among continents. The advent of the Coronavirus disease (Covid-19) in this world in December 2019 was so sudden and devastating in every respect of the economy (Akhtaruzzaman, Boubaker, Chiah, & Zhong, 2020). The non-stop and emerging global convergence is also influencing the quick spread of this infectious disease. According to the World Health Organization (WHO), the world has witnessed emergence of several disease outbreaks and epidemics caused several infectious agents, and coronavirus has been rated as the most deadly disease (Bogoch, et al., 2020). The emergence of coronavirus-associated diseases (SARS and MERS) inflicted global challenges to public health systems and economy of several countries. SARS-CoV-2 (the causative agent for coronavirus disease COVID-19) is the latest to the expanding list of serious agents. WHO declared COVID-19 as a public health emergency of international concern on 30 January 2020 and also a pandemic disease on 11 March 2020 in the same period? According to Bogoch et al, (2020) report showed a clustering pneumonia of unknown aetiology in Wuhan, China which is believed to be a potential for international spread of the virus via commercial air and sea travel. It is believed to be one of the worst pandemics in human history with a staggering number of more than 230603 cases, more than 5 366 deaths and 221774 recoveries in Zimbabwe as at 9th February, 2022. (Abayomi A. A., 2021)

In the year 2019, infection with a previously unidentified beta coronavirus was found in people who were exposed to a seafood market in Wuhan, China, where live animals were sold at the market (Wu, Busari, & Jayeoba, 2021). It doctors found out that the disease was caused by SARS-CoV-2 and had a several clinical signs, including cough, fever, malaise, myalgias, gastrointestinal symptoms, and anosmia (Abayomi, Angioha, U., & & Abang, 2021). This disease was agreed to be named the coronavirus disease 2019 (COVID-19) on the 11th of February 2020 by the World Health Organization (WHO) (Guo & Moyo, 2020). Later the disease became a global pandemic with results that are unprecedented in the world of today. Currently, there no treatment for COVID-19, although some drugs are under investigation (Wu et al., 2020). Such cases are not new to this world. The world has witnessed similar epidemics like Spanish Flu (Severe Acute Respiratory Syndrome), Middle East Respiratory Syndrome (MERS) and Ebola along the equator (Gao, et al., 2013).

The pandemic caused unprecedented economic challenges in people's livelihoods in developing world. In Zimbabwe Covid-19 statistics rose and triggered the government to tighten travel movements as well as business operations which caused the loss of business to all the economic sectors of livelihood. The coronavirus pandemic in Zimbabwe pushed the plight of the jobless people to extreme poverty and helplessness (Bogoch, et al., 2020). Several people in Zimbabwe depend on informal business such as venting, carpentry, welding, horticulture, dairy farming, and others for survival. These informal economic sectors were the worst affected by the restrictions because of the pandemic. The negative impacts are more visible in urban set-ups where there is little alternative means of survival for the people (Akhtaruzzaman, Boubaker, Chiah, & Zhong, 2020).

The introduction of lockdown measures brought in many challenges, which include disruption of supply chains across the world. The situation is exacerbated further by the fact that the hardest hit regions are at the Centre of several global supply chains such as China and the United States of America (Seric & Aaron, 2020). Countries with existing humanitarian crises are more exposed to the effects of the COVID-19 pandemic (Okey-Colbert & Aguwamba, 2020).

1.3 The Zimbabwean perspective

The COVID-19 pandemic has posed a serious threat to an already critical food shortage situation experienced from the prevailing poor macroeconomic conditions and consecutive droughts in Zimbabwe. By the end of 2019, 62.6 % of Zimbabweans were surviving below the datum poverty line (World Bank, 2019). Serious poverty is estimated to have increased from 29% in 2018 to 34% in 2019, which is an increase from 4.7 to 5.7 million people (World-Bank, 2019). Poor agricultural seasons due to El Nino-induced droughts have undermined the agricultural sector, since 80% of the population survive on rain-fed agriculture and livestock production (Otache, 2020). Cyclone Idai which affected Manicaland province in 2019 worsened the situation of output (World-Bank, 2019). The onset of the COVID-19 pandemic brought in a new set of challenges to the country that was already crippled by hyper-inflation, health system deficiencies, production stagnation, crop failure, mass unemployment and basic service delivery failures (UNDP., 2020).

Despite the challenging economic situation Zimbabwe has, Zimbabwe had to align with the guidelines set by World Health Organization (WHO) to fight the ongoing COVID-19 global pandemic. On the 27th of March 2020, the president of Zimbabwe announced the starting of a

21-day lockdown which started on the 30th of the same month. The government forced a national lockdown, which saw non-essential business closed and stated that all citizens should remain in their homes for 21 days, began on 30 March 2020, 48 hours after the statute was announced (Macias & Zuniga-Blanco, 2020). The restrictions included ban on gatherings around nightclubs, bars, beer halls, movie houses, swimming pools, gymnasiums and sporting activities at any given time. This was done under the Statutory Instrument 83 of 2020 which gives power to do so to the President. All the country's borders were closed for non-essential travel for both in-bound and out-bound traffic with immediate effect on the same date. The President of the Republic of Zimbabwe alluded to the importance of borders to remain open to essential traffic, such as, movement of cargo, both in the interest of the economy and that of the corresponding economies of the region. The ban on non-essential human excluded returning residents. The returning residents were subjected to strict screening procedures, including rigorous enforcement of the 21-day self-quarantine. On travelling within the country, the government banned unnecessary travel within the country including unnecessary movements within communities unless one is an essential services worker (Nyagadza, 2021a).

Several firms' reduced financial liquidity in Zimbabwe due to consumer demand which has plummeted as a result of unemployment, reduced remittances from the diaspora, closures of local markets, and closures of hotels and restaurants (Nyagadza B. , 2021b). Financial lenders have become more risk-averse, and access to capital has been frozen for firms in farming sector. Beef cattle, dairy cattle and small ruminant feedlot and abattoir in Zimbabwe, shows that they have experienced a reduction in revenue from domestic consumers within the country and abroad. The market closures has meant that they are unable to source live beef cattle, sheep, and goats from rural and pastoral areas for slaughter and processing (Nyagadza, Dzenga, & & Vingirayi, 2019). This suggests that small-scale producers and pastoralists who rely on live animal sales for their livelihoods are faced with limited domestic and international market access. The honey industry was heavily affected to the extent that it needs to be qualified. This qualitative study focuses on how honey enterprise sector of Zimbabwe has been affected (Abayomi A. A., 2021).

1.4 Statement problem

Firms in Zimbabwe have faced logistical supply chain bottlenecks that have hampered honey production and marketing. Institutional unpreparedness and inadequate resources at the honey processing centre has caused supply chain disruptions. Chipinge Honey Processing Plant with a daily capacity to process over 0.5 tons of honey per day, has experienced logistical barriers to

sourcing raw honey from rural areas, and the quantity of honey products they are able to purchase from small-scale producers has declined. This research seeks to come up with the extent at which the honey industry was affected in Chipinge district of Zimbabwe.

1.5 Objectives

(a) The key objective of the study:

To examine the impact of COVID-19 pandemic on the performance of honey industry in Chipinge district.

(b) The specific objectives are:

1) To examine the effect of lock down on the performance of honey business in Chipinge district in terms of honey yield and marketing.

2) To determine the effect of COVID-19 infection on the financial performance of beekeeping business in Chipinge district.

3) To determine the coping strategies for the beekeeping performance of honey business in Chipinge district.

1.6 Research questions

The following research questions were raised in line of the statement of the problem and research objectives.

1) To what extent has lock down affect beekeeping performance of small scale business in Chipinge district?

2) To what extent has COVID-19 infection affected financial performance of small scale beekeeping business in Chipinge district?

3) How can the coping strategies ameliorate financial performance of small scale beekeeping business in Chipinge district?

1.7 Significance of the study

The study will be of great significance to both policy makers and small scale honey producers in general.

Specifically,

1. To the policy makers, it would provide the basis for effective policies for the sector's survival of the covid-19 challenges and also adopt strategies to mitigate likely future occurrence.

2. To the beekeepers, it would provide an opportunity for diversification, business opportunities and coping strategies now and in the near future.

1.8 Limitations

The researcher is an employee in the ministry of Agriculture under the department of Agricultural Technical and Extension in Chipinge district. In carrying out the research, the researcher faced some limitations or constrains. These were as follows.

There was limited time to conduct the research since the researcher is a full time employee. He had to make use of weekends and vacation leave days.

The researcher also faced difficulties in questionnaire administration as some of the beekeepers were always busy working in their fields given that the study was conducted during the rainy season.

During the focus group discussions with beekeepers, a major limitation was organizing the focus group and resources for the participants, however the researcher made use of monthly meetings and during the input distribution gatherings

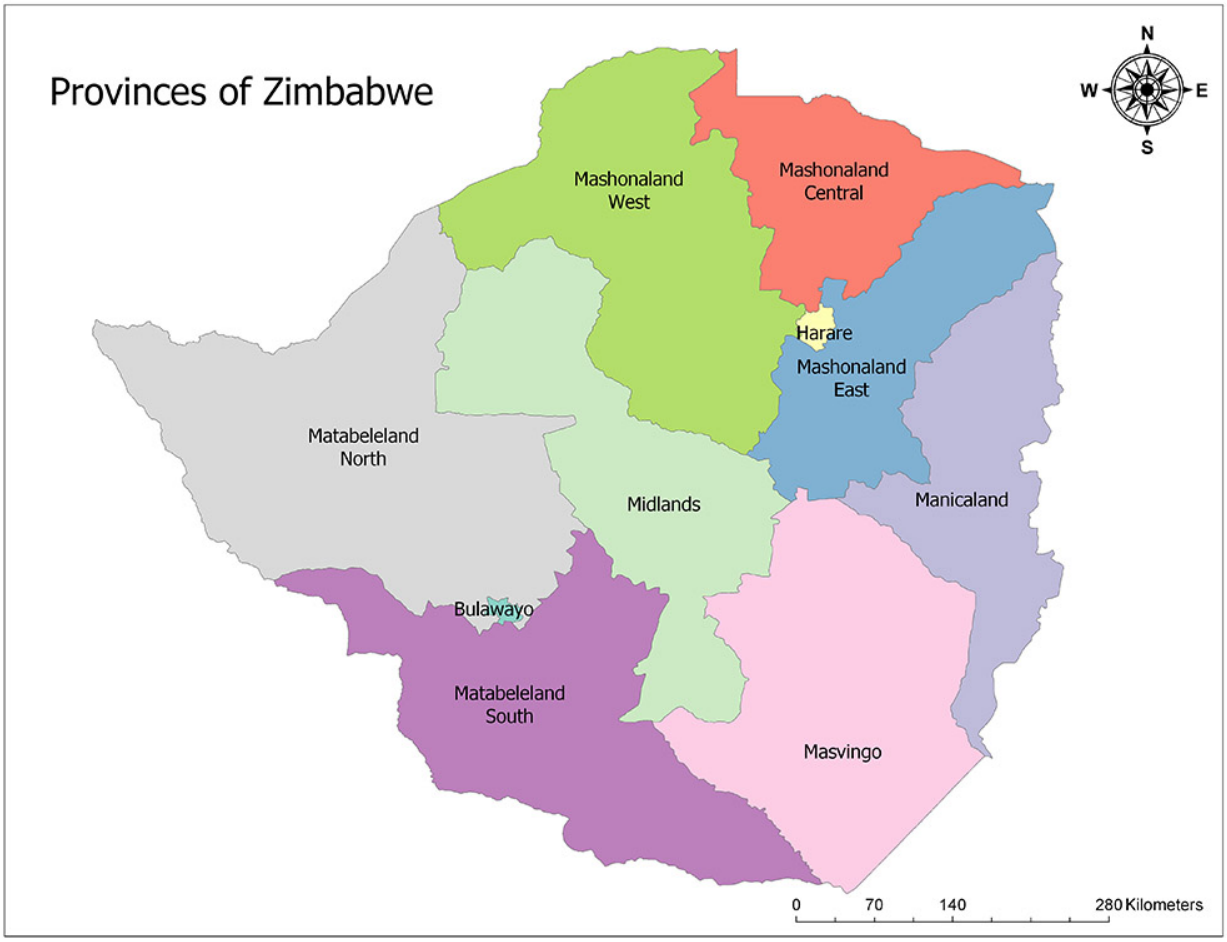
1.9 Delimitation

This study was conducted in wards 8 and 9 in which is in Chipinge district. Chipinge district is one of the seven districts in Manicaland province of Zimbabwe. It is located 188 km South of Mutare and stretches up to the Mahenye and borders with Gonarezhou National Parks which is in Masvingo. Chipinge district borders with Mozambique on the eastern side. It also borders with Chimanimani on the Northern part, Buhera on the north east and Masvingo on the western side.

Materials and method

1.10 Study area

The research was carried out in Manicaland Province of Zimbabwe in Chipinge district, in wards 8 and 9.



2.1 The research design

This study adopted a mixed research design. According to Yin (1994) a mixed research design entails the combination of both qualitative and quantitative methods of data collection and analysis. This approach is very ideal when dealing with research issues that are both perceptual and factual such as the issue of the impact of Covid 19 on honey production. Through the adoption of a mixed design, the study generated theoretical (qualitative) and factual (quantitative) knowledge that was useful in coming up with measures for mitigating the factors identified as contributing to loss of business and the factors contributing to successful areas of beekeeping.

2.2 The population and sampling method

A sample size of 240 beekeepers was selected from 415 beekeepers from the four wards of Chipinge district, four extension officers and two environmental officers working in these wards were interviewed. The number of beekeepers selected from each ward was 60 beekeepers. Random sampling was used.

2.3.0 Data collection methods and instruments

2.3.1 Questionnaires

The qualitative and quantitative data were collected through a survey using questionnaires. Questionnaires were administered among the beekeepers. Questionnaire administration was done in the local language, Shona, for all respondents to understand the questions. The questionnaire was pre-tested to avoid biasness before the final data collection in ward 11. Two Agritex officers were requested to administer the questionnaires.

2.3.2 Focus group discussions

A focus group discussion was held in each of the two wards. Each of the focus group was comprised of 20 members of the community, in order to stick to the rules of Covid 19. The 20 members of the focus group was involving kraal head, committee members of beekeepers, church leaders, traditional leaders, lead farmers and the councilor.

3.0 Results

The study revealed that 92% of the beekeepers, COVID-19 pandemic has seriously impacted negatively on the performance and existence of honey producers in Chipinge district of Zimbabwe. Taking into consideration of variables such as; lockdown, movement restrictions, closure of markets and social distancing to reduce the spread of COVID-19 pandemic among the people. Most of the variables had a negative and significant effect of COVID-19 pandemic on the performance of honey business. Only 8% of the beekeepers said that, they were affected to a little extent while 92% said they were greatly affected. No one claimed that was not affected and nobody with no response. Beekeepers found it difficult to tend to their hives as they used to do. Trainings were no more carried out. Honey harvesting was no longer done and bees were consumed the honey in order for them to make fresh honey.

Macadamia nuts and avocado pear crops which rely on bees for cross pollination were threatened and 35% of the beekeepers who offer pollination services lost the business due to movement restriction since beekeepers transport boxes of bee colonies to plantations and orchards. The beekeepers get higher yield of honey from macadamia flowers and avocado pear flowers and they are also paid for the service of cross pollinating these crop for the farmers who are not into beekeeping. All the 35% beekeepers who are into crop pollination services were claiming to have lost honey yield and income from cross pollination services.

Due to honey well-known healing properties, during COVID-19 emergency, there was an increase in honey consumption as a potential enhancer of immunity defenses and this caused an increase in honey price, to those farmers who had large stocks of honey due to poor market. Beekeepers who are 43% claim that they made more profit and the product was in short supply and at a high demand.

Contributions from focus groups on strategies which can be implemented were that the government and non-governmental organizations should help smallholder farmers by providing recommended protective equipment and sanitizers by medical experts, so that they can continue to produce and distribute produce to selling points. The government should relax the restriction on smallholder farmers' movement so that they are able to harvest and sell their produce. During lockdown, the government should assist with transport for smallholder farmers since public transport is prohibited during lockdown. Most farmers lost their crops which need irrigation such as bananas due to curfew imposed by the government in order to try and reduce the spread of the disease. Such crops which need frequent irrigation dried and it will take time to recover.

Banana plantation before COVID-19 lockdown

Banana plantation during COVID-19 lockdown

Bees collect nectar from banana flowers and when bananas fail to get water they get dried and the source of bee forage is affected. This means that honey production is seriously reduced.

4.0 Recommendations

Beekeeping operations such as planting of flowering plants and making fireguards, play a crucial role in fighting climate change. Therefore beekeeping restrictions should be removed during lockdown. Beekeeping business should be considered as an essential service, like health institutions.

Conclusion

Smallholder farmers such as beekeepers and horticultural crop producers were heavily affected and it is difficult for these farmers to recover when COVID-19 is over. Beekeepers should be treated as essential service providers and should be given less restrictions in their movement.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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