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Trend and Implications of Nigerian Crop Produce Rejection by Destination Countries (2012-2022)

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ABSTRACT

The persistence of rejection of Nigerian crop produce has significant implications economically. This paper aimed to investigate the trend of Nigerian crop produce rejection by the destination countries (2012-2022). Secondary data on rejection notices (2012-2022) from the European Union's Rapid Alerts System on Foods and Feeds (RASFF), and the UK's Department of Environment, Foods and Rural Affairs (DEFRA) were analysed using descriptive statistics. From the findings, Nigerian crop produce were rejected mostly due to the presence of toxic contaminants (Salmonella spp (80, 24.8%), unauthorized Dichlorvos (77, 23.9%), Aflatoxin (37, 11.5%), and dead insects (12, 3.7%)), illegal importation (48, 14.9%), absence of phytosanitary certificate, absence of import permit (34, 10.6%), and expired certificate (7, 2.2%). The top rejected crop produce include Hibiscus flower, Groundnut, Beans, Melon seed, Sesame seed and Lime. The destination countries where the crop produce were mostly rejected include Poland, United Kingdom, Belgium, Germany, Greece, and Netherland. Sesame seed was the most rejected produce and the United Kingdom was the most critical destination country. The number of crop rejections were randomly high but there was a reduction in the number of rejections in 2020 and 2021. There were 322 crop rejection alerts of 6 major crop produce by 6 main destination countries. Continuous crop produce rejection within the period of 2012-2022 (June) led to economic losses and loss of market access for the produce in the destination countries. Quality control and certification system should be enhanced to ensure that exported produce meets international standards.

Keywords: Aflatoxin, Beans, Phytosanitary certificate, Salmonella spp, Sesame seed

1.0 INTRODUCTION

Nigeria is Africa's largest economy. It has been striving to diversify its economy and reduce its dependence on oil exports. The agricultural sector in Nigeria has the great potential to drive export diversification and create jobs for the unemployed youths. On this basis, the agricultural sector has been identified as a key driver of economic growth and development. The failure to realise this potential is due to trade related problems (Aina, 2024). The agricultural sector has been facing the challenge of rejection of crop produce export by destination countries. The persistence of rejection of Nigerian crop produce has significant implications economically. Rejection results in substantial economic losses for exporters and the government. It also leads to a loss of reputation for the country's crop produce. Furthermore, rejection results to a loss of market access and opportunities for Nigerian farmers and traders, leading to reduced incomes and livelihoods, exacerbating poverty and inequality.

Despite Nigeria's vast arable land and increased investment, the Director General of the World Trade Organization (WTO) on March 13, 2024 reiterated that, Nigeria has lost its leading position in the agriculture export markets due to inability to meet sanitary and phytosanitary standards of the foreign markets (Aina, 2024). Crop produce rejection occurs when agricultural produce does not meet established food safety and quality regulations. When products face rejection in the international markets, the rejection typically translates into monetary losses, affects the psychological outlook, and jeopardizes future prospects. According to the Nigerian Agricultural Quarantine Service (NAQS, 2019), there are various standards, certifications, and regulations governing the export of agricultural produce. The emphasis on food safety and quality regulations is to ensure that crop produce is safe for human consumption. Crop produce are considered unsafe when they contain chemical contaminants such as pesticides and heavy metals, biological contaminants like pathogens and allergens, as well as physical contaminants which are foreign objects (Somorin *et al.*, 2021).

The factors which contribute to rejection include contamination (chemical, biological, physical) (Lengai *et al.*, 2022), pest or disease infestation, inadequate handling and storage, non-compliance with labeling and packaging regulations, and failure to meet quality parameters (size, color, texture) (NAQS, 2019). When regulatory standards are found to be violated, there is an interception of such crop produce in the destination countries, which leads to eventual rejection when such violations are confirmed (Alshannaq and Yu, 2021). Such rejection leads to financial losses for exporters, damage to the reputation of the country and trade restrictions or bans by the destination countries. All these lead to eventual economic losses to Nigeria.

To curb the tide of agro produce rejection, Nigerian government has taken steps to address the challenges facing its agricultural exports in terms of rejection by destination countries. These intervention measures include the creation of the Nigeria Agricultural Quarantine Service in 2018 by the Federal government of Nigeria through an act of parliament (Onuba, 2022), launch of the Zero Reject Initiative by the inauguration of the Inter-ministerial Committee on the zero reject by the Federal Ministry of Industry Trade and Investment in 2021, and the Agro-export *ad hoc* Committee by the office of the Vice President under the Presidential Enabling Business Environment Council on November 10, 2021 (Federal Republic of Nigeria, 2021). NAQS was established to ensure that Nigerian agricultural exports meet international standards. Also, the zero reject initiative and the Agro-export *ad hoc* Committee aim to reduce the rejection of Nigerian agricultural exports by destination countries.

The Nigerian Agricultural Quarantine Service (NAQS) stated that between 2015 and 2020, Nigeria lost over ₦100 billion (approximately \$260 million USD) due to the rejection of its agricultural produce by European countries alone (NAQS, 2020). According to NAQS, various factors led to the rejection of Nigerian crop produce. These include non-compliance with international phytosanitary standards, poor handling and storage practices, and inadequate infrastructure. Nigerian agricultural produce such as beans, sesame seeds, and cassava, were rejected by countries such as the European Union, the United States, and China (Somorin *et al.*, 2021). The rejection of Nigerian crop produce exports is a significant issue as it undermines the country's efforts to diversify its economy and reduce its dependence on oil exports. Therefore, it is essential to investigate the trend of Nigerian crop produce rejection by destination countries. By addressing the root causes of crop produce rejection, Nigeria can reduce the economic implications and improve its competitiveness in the global market.

1.1 Research Questions

This paper answered the following research questions:

- i. What are the reasons for Nigerian crop produce rejection?
- ii. Which Nigerian crop produce are the most rejected?
- iii. Which destination countries give the notifications of rejection?
- iv. What is the trend of Nigerian crop produce rejection (2012-2022)?

1.2 Objectives

The aim of this paper is to investigate the trend of Nigerian crop produce rejection in the destination countries (2012-2022). The specific objectives of this study are to:

- i. analyse the reasons for Nigerian crop produce rejection
- ii. examine the most rejected Nigerian crop produce
- iii. identify the destination countries where the crop produce are rejected
- iv. investigate the trend of Nigerian crop produce rejection

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Theories of crop produce rejection can be categorized into many factors; pre-harvest factors, harvest and post-harvest factors, market and economic factors, as well as regulatory and standards factors. This paper is based on the regulatory and standards factors. These include Quality Standards Theory, Certification Theory, and Regulatory Theory. Quality Standards Theory deals with non-compliance with food safety and quality regulations, leading to interception and eventual rejection of crop produce. Also, Certification Theory highlights the lack of certification (phytosanitary certificate for crop produce) or compliance with international standards. Lack of phytosanitary certificate for exported crop produce or forgery of such certificate lead to rejection of crop produce. Regulatory Theory considers inadequate or inconsistent regulatory frameworks which allows for the passage of consignments that are not duly certified or a certified consignment with hidden uncertified produce. This also leads to crop produce rejection. This paper determines the trend of Nigerian crop produce rejection on the basis of regulatory and standards factors.

2.2 Empirical Review

Somorin *et al.* (2021) analysed the Rapid Alert System for Food and Feed (1999–2019) to identify the prevalent food borne pathogens in food shipments originating from African nations to the European Union (EU) during the period between 1999 to 2019. In the findings, *Salmonella* was the most common food borne pathogen in African food exports to the European Union. *Salmonella* accounted for 87.8% of 596 PM notifications. Eastern Africa had 52% of *Salmonella* cases, while Sudan had the most (182). Most *Salmonella*-contaminated products fell under "nuts, nut products, and seeds", primarily sesame seeds (335 out of 343). Importantly, 97% of *Salmonella*-contaminated sesame seeds posed serious consumer risks. African countries exporting to the EU need to enhance food safety systems to avoid economic losses from non-compliance with EU standards.

Etuk and Idem (2021) examined the determinants of trade flow of some selected non-traditional agricultural export commodities in Nigeria. Trade data of 36 countries for the period of 2007-2017 were used and analysed using the gravity estimation model. In the findings, Nigeria's exports of non-traditional commodities, which were classified under the Harmonised Standard Code, HS12 in the United Nations International Trade Statistics, conformed to the fundamental expectations of the gravity model. The implication is that bilateral trade flows increased in proportion to the Gross Domestic Product (GDP) of trading partners and decreased in proportion to the geographical distance between them.

A study by Lengai *et al.* (2022) analysed the strategies aimed at enhancing fresh vegetable access to export markets by reduction of phytosanitary and pesticide residue limitations. The significant contribution of the horticultural sector to Kenya's gross domestic product was highlighted, which was achieved primarily through the export of fresh-cut flowers, fruits, and vegetables to diverse niche markets. The authors underscored the stringent technical and phytosanitary quality standards established by export markets. Phytosanitary concerns were with respect to pests and microbial contaminants, while the most predominant technical challenge revolved around the presence of chemical residues. These constraints often led to the interception and subsequent rejection of produce at export destinations. Freedom from quarantine and regulated non-quarantine pests, absence of pest-related damage, compliance with prescribed maximum residue levels (MRLs) for pesticides, and the possession of the requisite phytosanitary certification are important in meeting export requirements.

Alshannaq and Yu (2021) focused on analyzing notifications originating from the "Rapid Alert System for Food and Feed (RASFF)" concerning the contamination of United States food and feed products with mycotoxins, primarily aflatoxins (AFs), over the period from 2010 to 2019. It was found that

approximately 95% of RASFF notifications pertaining to mycotoxins in the United States were linked to food items, while only a minor (5%) were related to feed products. Within the realm of US food notifications concerning mycotoxins, a staggering 98.9% were attributed to AF contamination in almond, peanut, and pistachio nuts. The Netherlands took the lead, issuing approximately 27% of AF notifications concerning US nuts. Notably, more than 78% of AF notifications for US nuts led to border rejections. Furthermore, it was highlighted that all US feed notifications in the RASFF system were associated with AF contamination.

In a study to assess the impact of agricultural commodity export on Nigeria's gross domestic product between 2009 to 2018 (Victor and Onyeukwu, 2022), the export of raw cocoa beans and sesame seeds both had a considerable impact on the gross domestic product of Nigeria during the study period. Additionally, it showed that there is no connection between Nigeria's gross fixed capital formation and exports of agricultural commodities

3.0 METHODOLOGY

Secondary data were used for this study. Interceptions and rejection notices from the European Union's Rapid Alerts System on Foods and Feeds (RASFF), and the UK's Department of Environment, Foods and Rural Affairs (DEFRA) were obtained from the national data of the Nigeria Agricultural Quarantine Service (NAQS). The data spanned through 2012 to 2022. NAQS is a regulatory agency which is responsible for ensuring the sanitary and phytosanitary measures in Nigeria's agricultural sector. In the same way, Somorin *et al.* (2021), in their study to identify the prevalent food borne pathogens in food shipments originating from African nations to the European Union (EU) during the period between 1999 to 2019, used the Rapid Alert System for Food and Feed (1999–2019). Also, Alshannaq and Yu (2021) analysis the E.U. Rapid Alert System (RASFF) notifications for aflatoxins in exported U.S. food and feed products for 2010–2019.

To achieve the objectives of this study, data were analysed using descriptive statistics. The reasons for Nigerian crop produce rejection over the time period were analysed, the most rejected Nigerian crop produce were examined, the destination countries where the crop produce were rejected were identified, and the trend of Nigerian crop produce rejection from 2012 to 2022 was investigated. The rejection notifications were analysed to achieve these objectives. Results are presented in frequency distribution tables.

4.0 RESULTS AND DISCUSSION

There are many Nigerian crop produce that are exported. They include melon seeds, bitter leaf, minced ginger, melon seeds flour, chili powder, different types of beans (brown, honey, butter, sobo, and so, on), beans flour, hibiscus flowers, nuts and oil seeds, sweet potatoes, sesame seed, and *et cetera*.

4.1 The Reasons for Nigerian Crop Produce Rejection

The reasons why Nigerian crop produce were rejected over the years 2012-2022 were analysed and are presented in Tables 1 & 2. The numbers of rejections per year are also shown. From the results, crop produce were rejected due to the presence of toxic contaminants including aflatoxin, salmonella species, unauthorized dichlorvos and dead insects. Other reasons are illegal importation of crop produce, absence of phytosanitary certificate, expired certificate, and absence of import permit.

Aflatoxin is a toxic compound which is produced by molds. Molds can grow on nuts, seeds, grains, spices and fruits. It can cause liver damage, cancer and suppression of immune system. On the other hand, salmonella is a type of bacteria which can cause illnesses such as food poisoning, gastroenteritis, diarrhea, fever and abdominal cramps. Dichlorvos is an organophosphate insecticide to control insects of crop produce. Its unauthorised use makes it becomes a source of contamination of crop produce. Dichlorvos is not acceptable due to toxicity concerns. Also, dead insects can contaminate crop produce such as fresh fruits, leafy greens, vegetables, grains, and nuts and seeds.

Dead insects can contaminate crop produce through physical, microbial, and chemical contamination, and can trigger allergic reactions. Moreover, exporters can embark on illegal importation in order to avoid

tariffs, taxes and regulations. This can lead to the absence of phytosanitary certificate due to the avoidance of food safety standards. Some exporters may also use expired certificates. Some crop produce require import permit to export them to the destination countries. The consequence of all these violations, when found, is rejection. On the basis of the years, findings show that from 2012–2022, there were 322 rejections. Crop produce were rejected most in 2019 (46); followed by 2017 (45) and 2018 (41). It was also very high in 2012 (35) and 2014 (32). The number of rejections decreased in 2020 (28), 2021(14) and up to June 2022 (10).

On the basis of the reasons for rejection, contamination of produce with *Salmonella* spp and unauthorized dichlorvos accounted for about one-quarter each (24.8% and 23.9%) of the total rejections. With Aflatoxin (11.5%) and dead insect (3.7%), the proportion of rejections due to contaminants was 63.9%. This implies that crop produce rejection was mainly due to the presence of contaminants, especially *Salmonella* spp and unauthorized dichlorvos. This was corroborated by Somorin *et al.* (2021), who identified the prevalent food borne pathogens in food shipments originating from African nations to the European Union (EU) during the period between 1999 to 2019. The authors found that *Salmonella* spp was the most common food borne pathogen in African food exports to the European Union, accounting for 87.8% of 596 interception and rejection notifications. Lengai *et al.* (2022) also found that, in Kenya, phytosanitary concerns were with respect to pests and microbial contaminants, while the most predominant technical challenge revolved around the presence of chemical residues. The least number of rejections (7) was on the basis of expired certificate, which was 2.2% of the total rejections.

Table 1: Reasons for Nigerian Crop Produce Rejection (2012-2017)

S/N	Reason for rejection	2012	2013	2014	2015	2016	2017
1	Aflatoxin	8	3	2	2	4	2
2	<i>Salmonella</i> spp	4	-	1	3	1	11
3	Illegal Importation	1	-	4	6	6	19
4	Unauthorized Dichlorvos	14	16	22	10	-	-
5	Absence of phytosanitary certificate	5	1	-	-	-	6
6	Expired certificate	-	-	3	-	-	-
7	Absence of Import Permit	1	6	-	6	6	-
8	Dead Insect	2	-	-	1	-	7
Total number of rejections/year		35	26	32	28	17	45

Source: Author’s Compilation from NAQS National Reports

Table 2: Reasons for Nigerian Crop Produce Rejection (2018-2022)

S/N	Reason for rejection	2018	2019	2020	2021	2022/June	Total (2012-2022) No	%
1	Aflatoxin	3	2	7	2	2	37	11.5
2	<i>Salmonella</i> spp	26	25	5	3	1	80	24.8
3	Illegal Importation	1	-	7	-	4	48	14.9
4	Unauthorized Dichlorvos	-	10	3	-	2	77	23.9
5	Absence of phytosanitary certificate	9	6	-	7	-	34	10.6
6	Expired certificate	2	-	-	2	-	7	2.2
7	Absence of Import Permit	-	2	6	-	-	27	8.4
8	Dead Insect	-	1	-	-	1	12	3.7
Total number of rejections/year		41	46	28	14	10	322	100

Source: Author’s Compilation from NAQS National Reports

4.2 The Most Rejected Nigerian Crop Produce

Examining the most rejected Nigerian crop produce by destination countries from 2012-2022, the results are presented in Tables 3 and 4. From Table 3, the most rejected crop produce in 2012 was 20,000kg of Hibiscus Flower by Poland, due to unauthorized dichlorvos. In 2013, it was 120,000kg of Groundnut, rejected by the United Kingdom, due to aflatoxin. Also, on the basis of aflatoxin and unauthorized dichlorvos, the United Kingdom and Belgium rejected 107,664kg of Beans in 2014 and increased to 210,936kg of beans rejected by the same destination countries for the same reasons in 2015. Alshannaq and Yu (2021) also found that more than 78% of AF notifications for US nuts led to border rejections, especially by Netherlands. However, Melon seed was on top of the list in 2016 with a rejection of 2,678kg by United Kingdom.

Findings from Table 4 show that 40,708kg of Sesame seed was rejected in 2017 by the United Kingdom due to the presence of Salmonella, and increased to 209,032kg of Sesame seed rejected due to the same reason by Germany, Greece and Netherland in 2018. Also, 631,707kg of Sesame seed was rejected by Germany, Poland, Greece for the same reason of presence of Salmonella in 2019, 212,783kg rejected by Germany, Greece and Netherland in 2020 and 25kg in 2022. According to the findings of Somorin *et al.* (2021), 97% of Salmonella-contaminated sesame seeds posed serious consumer risks. However, in 2021, Lime was on top of the list with 2,112kg rejected by the Netherland because of the presence of Chlorpyrifos. Sesame seed was on top of the list of rejections from 2017 to 2020 and 2022 while Lime was the most rejected in 2021.

According to the analysis on Table 3, other crop produce that were rejected over 2012-2022 include Minced ginger (559kg, 2012) by Germany, Nuts and Oil seeds (2,770kg, 2014) by the United Kingdom, Sweet Potato (420kg, 2014) by Spain, Palm Oil (600kg, 2015) by the United Kingdom, and Ginger (1,025kg, 2016) by the United Kingdom. From Table 4, other crop produce rejected were Frozen corn grains (18,216kg), Spice mixture (52.5kg), and grounded Ogbono (45kg) in 2018 by Netherland, Belgium and the United Kingdom, respectively. Also, Cocoa powder (4,320kg, 2019) was rejected by Hungary, and Pepper (953.75kg, 2020) by Belgium.

Table 3: The Most Rejected Nigerian Crop Produce (2012 – 2016)

S/N	Crop Produce	Reason for rejection	Quantity (KG)	Notifying Country
2012				
1	Hibiscus Flower	Unauthorized Dichlorvos	20,000	Poland
2	Beans	Salmonella spp, Unauthorized Dichlorvos	14,760	United Kingdom
3	Melon seed	Aflatoxin, Sal. Spp	2,802	United Kingdom
4	Minced Ginger	Aflatoxin	559	Germany
2013				
1	Groundnut	Aflatoxin	120,000	United Kingdom
2	Beans	Unauthorized dichlorvos	64,819	United Kingdom
3	Melon seed	Aflatoxin	4,020	Italy
2014				
1	Beans	Aflatoxin, Dichlorvos	107,664	United Kingdom, Belgium
2	Melon seed	Dichlorvos	13,010	United Kingdom
3	Nuts and Oil seeds	Dichlorvos	2,770	United Kingdom
4	Sweet Potato	Poor state of preservation	420	Spain
2015				
1	Beans	Aflatoxin, dichlorvos	210,936	United Kingdom, Belgium
2	Sesame	Aflatoxin, Insect larvae infestation	21,435	United Kingdom, Finland

3	Melon seed	Absence of Health Cert,	1,032	United Kingdom
4	Palm Oil	Salmonella	600	United Kingdom
2016				
1	Melon seed	Absence of Health Cert.	2,678	United Kingdom
2	Beans	Illegal Importation	1,300	United Kingdom
3	Ginger	Salmonella	1,025	United Kingdom
4	Groundnut	Aflatoxin	120	United Kingdom

Source: Author's Compilation from NAQS National Reports

Table 4: The Most Rejected Nigerian Crop Produce (2017 – 2022)

S/N	Crop Produce	Reason for rejection	Quantity (KG)	Notifying Country
2017				
1	Sesame seed	Salmonella	40,708	United Kingdom
2	Groundnut	Aflatoxin	9,583	United Kingdom
3	Beans	Illegal import	2,246.1	United Kingdom
4	Melon seed	Absence of Health Certificate	1,120	United Kingdom
2018				
1	Sesame seed	Salmonella	209,032	Germany, Greece, Netherland
2	Frozen corn grains	Food born outbreak	18,216	Netherland
3	Spice mixture	Aflatoxin	52.5	Belgium
4	Grounded ogbono	Aflatoxin	45	United Kingdom
2019				
1	Sesame seed	Salmonella	631,707	Germany, Poland, Greece
2	Cocoa powder	Benzo a pyrene	4,320	Hungary
3	Melon seed	Illegal import	183	United Kingdom
4	Beans	Illegal import	165	United Kingdom
2020				
1	Sesame seed	Salmonella	212,783	Germany, Greece, Netherland
2	Groundnut	Aflatoxin	12,768.16	United Kingdom
3	Beans	Illegal import	2,084	Germany
4	Pepper	Unauthorized color	953.75	Belgium
2021				
1	Limes	Chlorpyrifos	2,112	Netherland
2	Melon seed	Aflatoxin	600	Germany
3	Sesame	Salmonella	600	Greece
2022/June				
1	Sesame seed	Salmonella	25	Not indicated

Source: Author's Compilation from NAQS National Reports

4.3 The Destination Countries Where the Crop Produce Are Rejected

In identifying the destination countries, the top rejected crop produce and the destination countries where they were rejected from 2012-2022 are presented in Table 5. The top rejected crop produce include Hibiscus flower, Groundnut, Beans, Melon seed, Sesame seed and Lime. However, Sesame seed was found to be the most rejected produce.

From the results, the countries include Poland, the United Kingdom, Belgium, Germany, Greece, and Netherland. It is worthy of note that the United Kingdom was found to be the most critical destination country where crop produce were mostly rejected over 5 years (2013-2017). The United Kingdom rejected Groundnut, Beans, Melon seed, and Sesame seed. This was followed by Germany, Greece and Netherlands where crop produce were rejected over 3 years (2018-2020). Germany and Greece rejected Sesame seed from 2018 to 2020; Netherlands rejected Sesame seed in 2018 and 2020, as well as Limes in 2021. Also, Poland rejected Hibiscus flower in 2012 as well as Sesame seed in 2019, Belgium rejected Beans in 2014 and 2015.

Table 5: Top Rejected Nigerian Crop Produce and the Destination Countries (2012-2022)

S/N	Year	Crop produce	Quantity. (kg)	Destination country
1	2012	Hibiscus Flower	20,000	Poland
2	2013	Groundnut	120,000	United Kingdom
3	2014	Beans	107,000	United Kingdom, Belgium
4	2015	Beans	210,936	United Kingdom, Belgium
5	2016	Melon seed	2,678	United Kingdom
6	2017	Sesame seed	40,708	United Kingdom
7	2018	Sesame seed	209,032	Germany, Greece, Netherland
8	2019	Sesame seed	631,707	Germany, Poland, Greece
9	2020	Sesame seed	212,783	Germany, Greece, Netherland
10	2021	Limes	2,112	Netherland
11	2022/June	Sesame seed	25	Not indicated

Source: Author's Compilation from NAQS National Reports

4.4 The Trend of Nigerian Crop Produce Rejection (2012-2022)

The trend of Nigerian crop produce is presented in Table 6. There was no particular order of crop produce rejection as they were rejected by different destination countries for different reasons as presented in Tables 1-5. However, going by the number of rejections by the destination countries, there were 322 crop rejections from 2012 to June 2022. The number of crop rejections were randomly high until 2018 and the highest number of rejections was obtained in 2019. Thereafter, there was a reduction in the number of rejections in 2020 and 2021.

This could be explained by the establishment of the Nigeria Agricultural Quarantine Service (NAQS) in 2018 by the Nigeria Agricultural Quarantine Service (Establishment) Act of Parliament, after which the Service became fully operational and their activities reduced the level of crop produce rejection in Nigeria. NAQS is a regulatory agency under the Federal Ministry of Agriculture and Food Security. Their mandate in this regard is to ensure compliance of crop produce to be exported with the standards of the destination countries so that rejection can be avoided. These are done through phytosanitary measures and certifying a crop produce consignment fit for export through the issuance of phytosanitary certificate to exporters.

Table 6: The Trend of Nigerian Crop Produce Rejection (2012-2022)

S/N	Year of Rejection	Number of rejections	Percentage
1	2012	35	10.9
2	2013	26	8.1
3	2014	32	9.9
4	2015	28	8.7
5	2016	17	5.3
6	2017	45	14.0
7	2018	41	12.7
8	2019	46	14.3
9	2020	28	8.7
10	2021	14	4.3
11	2022/June	10	3.1
Total number of rejections (2021-2022)		322	100.0

Source: Author's Compilation from NAQS National Reports

5.0 CONCLUSION

Nigerian crop produce were rejected mainly due to the presence of toxic contaminants (*Salmonella* spp, unauthorized Dichlorvos, Aflatoxin, and dead insects), illegal importation of crop produce, absence of phytosanitary certificate, absence of import permit, and expired certificate. The top rejected crop produce include Hibiscus flower, Groundnut, Beans, Melon seed, Sesame seed and Lime. The destination countries where the crop produce were mostly rejected include Poland, the United Kingdom, Belgium, Germany, Greece, and Netherland. Sesame seed was found to be the most rejected produce and the United Kingdom was found to be the most critical destination country where crop produce were mostly rejected. The United Kingdom rejected Groundnut, Beans, Melon seed, and Sesame seed. The number of crop rejections were randomly high but there was a reduction in the number of rejections in 2020 and 2021 when the Nigeria Agricultural Quarantine Service became fully operational and their activities reduced the level of crop produce rejection in Nigeria. There were also the inter-ministerial Committee on the zero reject and the Agro-export ad hoc Committee.

Mainly due to the presence of toxic contaminants, there were 322 rejection alerts, mainly of 6 major crop produce (Hibiscus flower, Groundnut, Beans, Melon seed, Sesame seed and Lime), and mainly rejected by 6 countries (Poland, the United Kingdom, Belgium, Germany, Greece, and Netherland). Continuous crop produce rejection within the period of 2012-2022 (June) led to economic losses. There was also loss of market access for the produce in the destination countries.

6.0 RECOMMENDATIONS

Based on the findings documented in this paper, the following recommendations are made:

- i. Improving phytosanitary measures to ensure compliance with international standards.
- ii. Enhancing quality control and certification system to ensure that produce for export meets international standards.
- iii. Providing support to exporters to enhance their capacity to meet international standards.

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