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AGRONOMIC BOARD**

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MARKET INTELLIGENCE REPORT

GRAIN VALUE-ADDED PRODUCTS

PROCESSED GRAIN PRODUCTS IN NAMIBIA



ISSUE 2 OF 2023

1 INTRODUCTION

Namibia's agro-processing industry is quite small, with very few commercial grain processors of grain value-added products as well as horticulture processors. Therefore, the country relies heavily on imports of food products (GIZ, 2022). On the other hand, currently, Namibia is not producing enough of the three main grain crops (white maize, pearl millet and wheat) which are the main raw materials for grain-processed products, hence the country depends on imports to meet the ever-increasing local demand. The majority of all the grain-processed food products are imported from neighbouring South Africa.

The few well-established local grain processors add value to the grain to produce various value-added products such as maize meal/flour, mahangu/pearl millet flour, maize samp, wheat flour, pasta, breakfast cereals and many others. However, with all these value-added products, there is no data available to show how much of these products are locally produced/value-added in Namibia in comparison to other imported grain value-added products visibly available in the local Namibian market.

This issue of the Market Intelligence Report focuses on the grain value-added products (products made from White maize, Wheat and Pearl Millet) that are commonly available in the Namibian market. This will help to establish agro-business opportunities in the grain product value chain as well as provide an opportunity for policy and programme interventions that are aimed to promote value addition in the Namibian agronomy industry. With this information being documented, it will further assist the role players in the local grain value chain to make informed business decisions.

2 PRODUCTION

2.1 MAIZE PRODUCTS

Maize is the most largely produced and consumed cereal crop in the world, simply because it is the main staple food for many people. It is also one of the largest components of animal feed (Carol, 2021). Food products such as flour, popcorn, corn syrup, chips, instant porridge, corn cereal, and many others are also made from maize.





Figure 1: Some maize products

Sources: Laseter (2019), Bevia (2019), Getty Images (2021), LaMargida (2021), Cooking Classy (2019), Merco Trading Company (2021), Bokomo Namibia (2023)

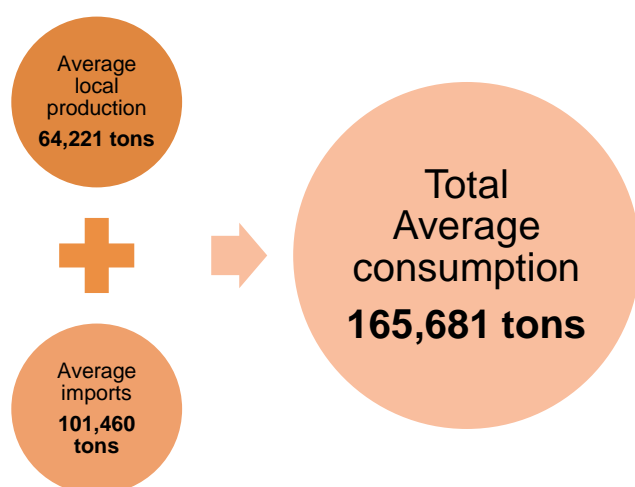


Figure 2: Average white maize grain production versus imports in Namibia (5-year average: 2017/18 to 2021/22). Source: NAB, 2023

On average, for the period 2017/18 to 2021/22, Namibia consumed a total of 165,681 tons of white maize grain every year, of which more than 100,000 tons were imported to meet local consumption demand.

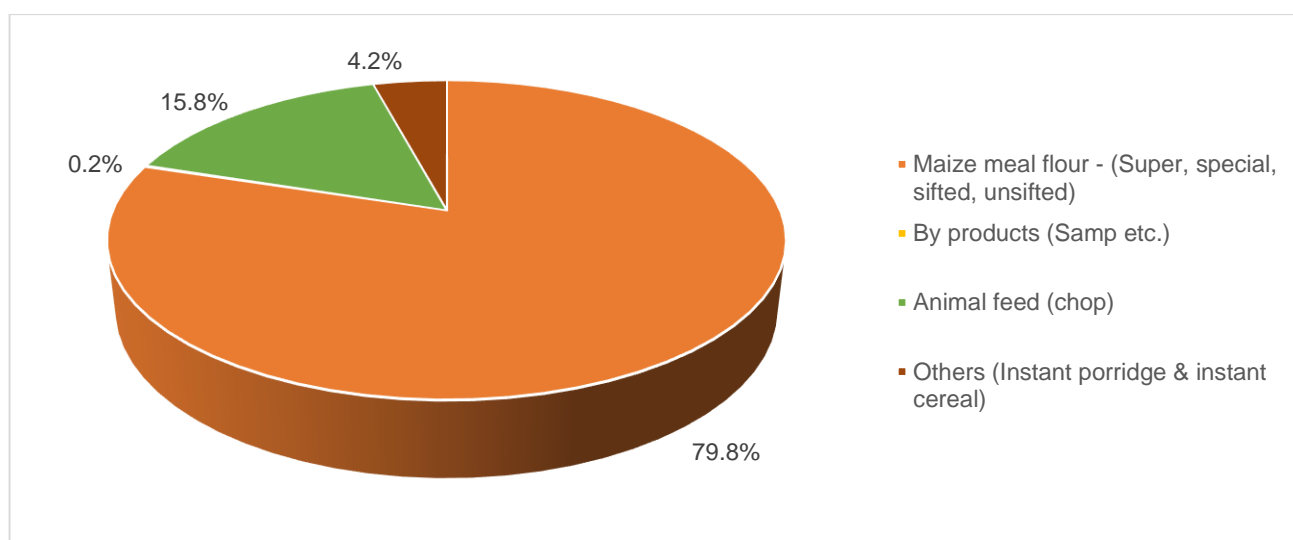


Figure 3: White maize grain value-added products processed in Namibia during 2019/20. Source: NAB: Survey data (2021)

** data from two (2) largest millers only

Of the total 157,290.96 tonnes (both locally produced and imported) of maize as reportedly milled by the two largest millers in Namibia during the 2019/20 marketing year, about 79.8% (125,529 tons) of it was processed and sold as maize meal flour (sifted, super, special, unsifted), whereas 15.8% (24,885 tons) was processed into animal feed (chop). At least 4.2% (6,594 tons) of the processed maize was used for other maize grain products such as instant porridge and instant cereal, whilst about 0.2% (280 tons) of the maize resulted in a by-product of samp.

2.2 WHEAT PRODUCTS

After maize, wheat is the second highest consumed staple food crop in Namibia, given its ability to grow in different types of soil with different climate conditions. Even then, its production is the lowest (NAB, 2021). Furthermore, domestic wheat production was about 12 251 tonnes for the 2020/2021 marketing season, more than double the predicted 4 666 tonnes for the 2019/2020 marketing season. However, about 89% (106 573 tonnes) of the wheat was imported to satisfy the estimated total domestic demand of 118 824 tonnes. Domestic production only covered about 11% of the total local demand. Wheat is usually processed into flour and the greatest portion of wheat flour is used to make bread. Other products made from wheat include pasta, cereal, various flours (cake flour), cookies, crackers, pastries, etc. The main wheat product is pasta and bread (Magazine BBM, 2015).



Figure 4: Some wheat products. Sources: Razon (2021), Johnston (2016), Bajramovic (2017), Pinterest (2021), Lynn (2020), McAfee (2020)

Namibia has two large milling companies that operate in grain processing, including wheat. Some of the wheat grain products produced in Namibia include cake flour, bread flour, biscuit flour, pasta, bakery complete mixes, and a range of other by-products (i.e. semolina, whole-wheat, crushed wheat, and digestive bran). Below are a few grain products that are produced in Namibia by the two (2) largest millers from the combined 133,824 tons of wheat processed during 2019/2020.

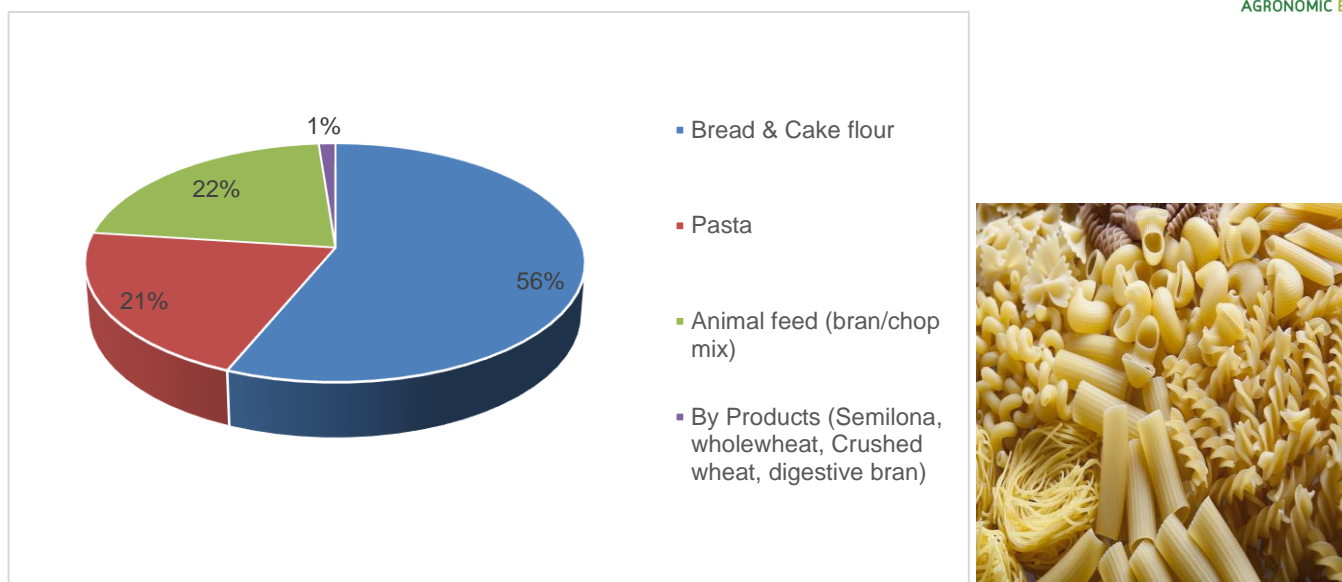


Figure 5: Wheat grain value-added products processed in Namibia (tonnage %) - 2019/20. Source: NAB: Survey data (2021)

** data from two (2) largest millers in Namibia only

The figure above indicates that over half of Namibia's processed wheat grain is sold in the form of flour, of which 56% of the total wheat grain processed during the 2019/20 marketing year was processed into bread and cake flour, followed by animal feed (bran or chop mix) with 22% and thereafter, pasta and by-products with 21% and 1% respectively.

2.3 PEARL MILLET PRODUCTS

In Namibia, millet is largely used for human consumption. Like wheat, pearl millet is largely processed into flour which is used to make porridge and a few other products such as cookies, noodles, and fermented drinks (commercial or traditional).



Figure 6: Some pearl millet products

Sources: My Little Moppet Store (2020), Interpack (2021), Launch Magazine (2021), Cook With Penny (2020), Tasteatlas (2021), African Business (2020)

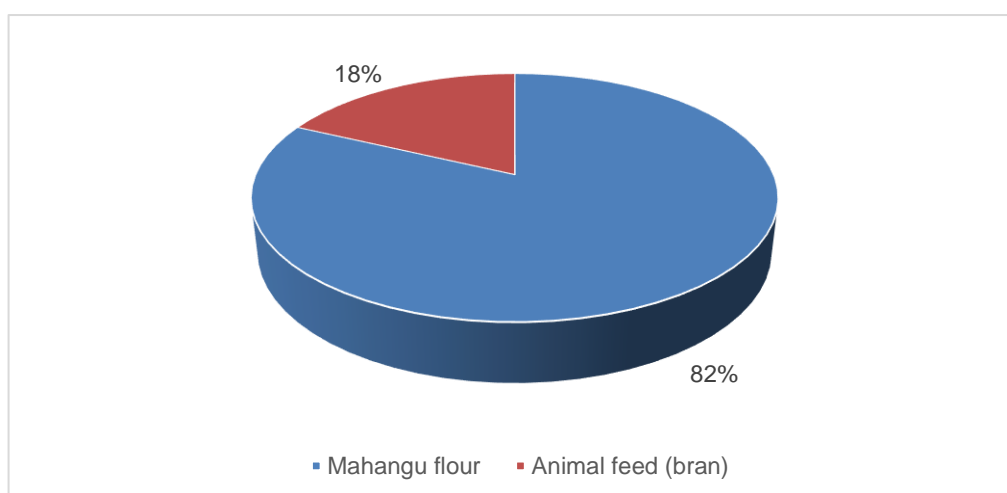


Figure 7: Pearl Millet grain products processed in Namibia (tonnage %)** - 2019/20. Source: NAB: survey data (2021)

** data from two (2) largest millers only

As indicated in the pie chart above, of the total 2,369 tonnes (of which 2,338 tonnes was imported) of pearl millet grain processed during the 2019/20 year, 82% of it was processed and sold in the form of flour, whereas 18% was used for animal feed (bran). However, according to Miller Magazine (2020), millet is generally consumed where it is produced. Unfortunately, this reality also means that there is limited data on products that are made or processed from pearl millet in Namibia. This further indicates that pearl millet is one of the most nutritious grain crops that are underutilised in Namibia as there are very few commercialised products that are made from pearl millet in Namibia.

Table 1: Overview of locally (produced in Namibia) processed grain products

Wheat Products	Millet Products	White Maize Products
<ul style="list-style-type: none"> • Cake flour • White bread flour • Brown bread flour • Range of bakery complete mixes • Animal feed/Bran (Offal products) • Pasta 	<ul style="list-style-type: none"> • Flour • Animal feed/Bran 	<ul style="list-style-type: none"> • Super maize meal • Sifted maize meal • Chop (offal products) • Instant porridge • Cereal

Source: NAB survey data (2021)

As stated in the sections above, very limited data is available for pearl millet and pearl millet products in the international trade space and Africa. It is mostly consumed through traditional meals.

Consistent with the above, a study by Haingura (2011) found that the country imports more grain than what it exports as finished/processed products such as flour. Namibia so far does not export any millet value-added products but exports other maize grain products such as instant porridge, cereal, and super maize meal as well as other wheat grain products like pasta. Namibia's main food products export country

is South Africa (taking up 70.49% in 2019). However, the exports of products such as super maize meal, pasta, and instant porridge are also done to Australia, Zambia and Botswana respectively (WITS, 2021).

Table 2: Summary of the import and export of grain (maize, wheat and pearl millet) agro-processed products by Namibia (averages for the 2018 to 2022 calendar years)

HS Code	Product label/ Description as per ITC Trade map	Raw grain type used	Specific product examples in the local market	IMPORTS: 5-year average (2018 – 2022)			EXPORTS: 5-year average (2018 – 2022)	
				Imported value, N\$	Imported quantity, tonnages	Major import/supplying country in 2022	Exported value N\$	Exported quantity, tonnages
'190230	Pasta, cooked or otherwise prepared (excl. stuffed)	Wheat	Macaroni, spaghetti	39,546,000.40	1,914	SA (81.6%), Mauritius (7.3%), China (4.6%), Indonesia (3.3%), Italy, Portugal, Germany, Botswana & Denmark (3.2%)	179,698,000.60	14,123
'190219	Uncooked pasta, not stuffed or otherwise prepared, not containing eggs	Wheat	Macaroni, spaghetti, noodles, lasagne sheets	17,941,000.60	1,018	SA (60.7%), Turkey (12.6%), Italy (7.9%), Latvia (5.2%), Lithuania, Egypt, China, Thailand, Germany, Norway, Romania, India and UK (13.6%)	73,173,000.40	5,658
'190211	Uncooked pasta, not stuffed or otherwise prepared, containing eggs	Wheat	Macaroni, spaghetti, noodles, lasagne sheets	799,000	23	SA (63%), Germany (37%)	311,000.40	28
'190220	Pasta, stuffed with meat or other substances, whether cooked or not cooked or otherwise prepared	Wheat	Ravioli, tortellini, samosa	6,342,000.40	137	SA (93.4%), Indonesia (5.3%), Japan, China, Germany & Norway (1.3%)	410,000.00	53
'190430	Bulgur wheat in the form of worked grains obtained by cooking hard wheat grains	Wheat	Bulgur wheat	782,000.40	30	SA (100%)	-	-
'190520	Gingerbread and the like, whether or not it contains cocoa	Wheat	Gingerbread cookies, gingerbread cakes	2,053,000.20	54	SA (50.5%), Germany (49.5%)	-	-
'190240	Couscous, whether or not prepared	Wheat	Couscous	2,131,000.60	94	SA (93%), Italy (5%), China (2%)	506,000.00	62
'190532	Waffles and wafers	Wheat	Waffles, wafers	4,793,000.60	121	SA (68.1%), Netherlands (11.3%), India (10.3%), Germany (6.3%), United Arab Emirates (UAE), Poland, Italy & Spain (4%)	121,000.60	2
'190510	Crispbread	Wheat	Crispbread, Crackers	8,209,000.40	224	SA (94.4%), Germany (5.6%)	6,000.20	1

HS Code	Product label/ Description as per ITC Trade map	Raw grain type used	Specific product examples in the local market	IMPORTS: 5-year average (2018 – 2022)			EXPORTS: 5-year average (2018 – 2022)	
				Imported value, N\$	Imported quantity, tonnages	Major import/supplying country in 2022	Exported value N\$	Exported quantity, tonnages
'190540	Rusks, toasted bread and similar toasted products	Wheat and Maize	Rusks, Tortilla/Wraps	15,911,000.40	722	SA (98.6%), Netherlands (0.9%), Germany and others (0.4%)	5,000.80	1
'190420	Prepared foods obtained from unroasted cereal flakes or mixtures of unroasted cereal flakes and roasted cereal flakes or swelled cereals	Wheat and Maize	Cereal bars, wheat or maize biscuits (i.e weet-bix),	49,083,000.40	1,735	SA (95.7%), Germany (2.4%), Zimbabwe & others (1.8%)	421,000.00	33
'190120	Mixes and doughs of flour, groats, meal, starch or malt extract, not containing cocoa or containing < 40% by weight of cocoa calculated on a defatted basis, n.e.s. and of mixes and doughs of milk, cream, buttermilk, sour milk, sour cream, whey, yoghurt, kephir or similar goods of heading 0401 to 0404, not containing cocoa or containing < 5% by weight of cocoa calculated on a defatted basis, n.e.s., for the preparation of bakers' wares of heading 1905	Wheat	Bread dough, pizza dough, cake mixtures	32,100,000.00	1,271	SA (99.1%), Germany (0.8%), Italy, Norway & Portugal (0.1%)	92,000.60	2
'190490	Cereals (excl. maize [corn]) in grain or flake form or other worked grains, pre-cooked or otherwise prepared, n.e.s. (excl. flour, groats and meal, food preparations obtained by swelling or roasting or from unroasted cereal flakes or mixtures of unroasted cereal flakes and roasted cereal flakes or swelled cereals and bulgur wheat)	Wheat	Whole-wheat grains, wheat berries	52,490,000.60	1,731	SA (98%), Zimbabwe, Belgium & Portugal (2%)	5,488,000.60	495

HS Code	Product label/ Description as per ITC Trade map	Raw grain type used	Specific product examples in the local market	IMPORTS: 5-year average (2018 – 2022)			EXPORTS: 5-year average (2018 – 2022)	
				Imported value, N\$	Imported quantity, tonnages	Major import/supplying country in 2022	Exported value N\$	Exported quantity, tonnages
'190110	Food preparations for infant use, put up for retail sale, of flour, groats, meal, starch or malt extract, not containing cocoa or containing < 40% by weight of cocoa calculated on a defatted basis, n.e.s. and of milk, sour cream, whey, yoghurt, kephir or similar goods of heading 0401 to 0404, not containing cocoa or containing < 5% by weight of cocoa calculated on a defatted basis, n.e.s.	Wheat and Maize	Baby cereals/porridge, cookies	69,786,000.40	987	SA (91.7%), Netherlands (3.4%), Germany (2.3%), Mexico (1.8%), Ireland, Switzerland, France & Eswatini (0.8%)	2,290,000.80	52
'190410	Prepared foods obtained by swelling or roasting cereals or cereal products, e.g. corn flakes	Wheat and Maize	Cornflakes, wheat flakes, puffed maize (i.e. maize snacks such as niknaks etc.), maize or wheat instant porridge,	129,884,000.60	5,024	SA (99.3%), Portugal (0.2%), China, Poland, Saudi Arabia, Germany, Spain, Brazil, Norway & USA (0.5%)	3,353,000.20	390
'190531	Sweet biscuits	Wheat	Biscuits, cookies	149,269,000.40	6,473	SA (80.7%), India (7.8%), Zimbabwe (2.8%), Saudi Arabia (1.9%), UAE (1.8%), Germany, Botswana, Portugal, Netherlands, Spain, Denmark, Australia & China (5%)	23,659,000.60	1,945
'190590	Bread, pastry, cakes, biscuits and other bakers' wares, whether or not containing cocoa; communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar products (excl. crispbread, gingerbread and the like, sweet	Wheat	Bread, cakes, pastries (i.e. croissants, doughnuts, pies, scones etc),	120,061,000.80	3,119	SA (96.3%), Angola (0.9%), Poland (0.6%), Germany, Portugal, Hungary, People's Democratic Republic of Lao, Norway, Belgium, China, Korea Republic, USA & UK (2.2%)	163,000.00	7

HS Code	Product label/ Description as per ITC Trade map	Raw grain type used	Specific product examples in the local market	IMPORTS: 5-year average (2018 – 2022)			EXPORTS: 5-year average (2018 – 2022)	
				Imported value, N\$	Imported quantity, tonnages	Major import/supplying country in 2022	Exported value N\$	Exported quantity, tonnages
	Biscuits, waffles, wafers not mentioned, rusks, toasted bread and similar toasted products							
'230230	Bran, sharps and other residues of wheat, whether or not in the form of pellets, derived from sifting, milling or other working	Wheat	Wheat bran	2,984,000.20	1,304	Zambia (49.3%), Angola (42.3%), SA (8.5%)	5,817,000.00	2,324
'230240	Bran, sharps and other residues of cereals, whether or not in the form of pellets, derived from sifting, milling or other working (excl. maize and wheat)	Un-determined		248,000	127	Zambia (100%)	167,000.00	136
'230210	Bran, sharps and other residues of maize "corn", whether or not in the form of pellets, derived from sifting, milling or other working	Maize	Maize bran	79,317,000.00	31,620	Zambia (97.1%), Angola (2.4%), SA (0.5%)	10,434,000.80	5,809
'110220	Maize "corn" flour	Maize	Maize flour	1,347.40	91	SA (85%), Hungary (15%)	12,142,000.20	1,818
'110430	Germ of cereals, whole, rolled, flaked or ground	Un-determined		80,000.00	17	SA (100%)	-	-
'110423	Hulled, pearled, sliced, kibbled or otherwise worked maize grains (excl. rolled, flaked, pellets and flour)	Maize	Samp	355,000.20	56	South Africa (100%)	155,000.80	27
'110429	Grains of cereals, hulled, pearled, sliced, kibbled or otherwise worked (excl. rolled, flaked, flour, pellets, and oats and maize, and husked and semi- or wholly milled rice and broken rice)	Un-determined		883,000.00	58	SA (97%), Germany (3%)	14,000.60	2
'110320	Cereal pellets	Un-determined		539,000.60	41	SA (100%)	-	-
'110311	Groats and meal of wheat	Wheat	Wheat groats	1,936,000.60	181	Italy (96%), SA (4%)	-	-

HS Code	Product label/ Description as per ITC Trade map	Raw grain type used	Specific product examples in the local market	IMPORTS: 5-year average (2018 – 2022)			EXPORTS: 5-year average (2018 – 2022)	
				Imported value, N\$	Imported quantity, tonnages	Major import/supplying country in 2022	Exported value N\$	Exported quantity, tonnages
'110419	Rolled or flaked grains of cereals (excl. oats)	Un-determined		4,397,000.40	232	SA (100%)	8,000.60	3
'110811	Wheat starch	Wheat	Wheat starch	29,000.80	4	SA (100%)	-	-
'110812	Maize starch	Maize	Custard powder, baking powder, corn/maize starch i.e. maize cornstarch	9,560,000.00	1,355	SA (100%)	52,000.00	34
'110313	Groats and meal of maize "corn"	Maize	Maize groats	13,535,000.20	2,815	SA (96%), Botswana (4%)	640,000.60	136
'110100	Wheat or meslin flour	Wheat	Wheat flour (i.e. all-purpose, self-raising, whole-wheat, cake flour, bread flour, semolina etc)	8,746,000.20	1,356	SA (98.5%), Germany (1.3%), Belgium (0.1%), Norway (0.1%)	382,000.20	45
TOTALS				823,790,357.80	63,934		319,507,009.60	33,186

Source: Author's compilation with data sourced from ITC Trade Map (2023)

According to the International Trade Centre, Export Potential Map (2023), Namibia has great potential to export product HS-190230 (Pasta) to Botswana, the Netherlands and South Africa. However, Botswana shows the largest absolute difference between potential and actual exports in terms of value, meaning that there is a bigger potential worth US\$450,300 (N\$6,705,161.41) for Namibia to export its pasta to Botswana. Another advantage that Namibia has in terms of trading with Botswana is the fact that both countries are members of the Southern Africa Customs Union (SACU), and hence she can enjoy preferential treatment under this trading protocol.

Additionally, the markets with the greatest potential for Namibia's exports of HS-190120 (mixes & doughs of flour) are Zambia, Botswana and Mozambique. However, the United States is the market with the highest demand potential for this product (ITC, 2023).

3 OPPORTUNITIES TO EXPLORE GRAIN PROCESSING IN NAMIBIA

As highlighted in Table 2, Namibia imports the majority of its processed grain products mainly from South Africa. Additionally, there is very little processing happening on pearl millet in the country and most of the pearl millet produced and imported in the country is mostly processed into and consumed as flour.

Based on the analysis in Table 2, there are some opportunities to process various grains into the following products that are imported in high amounts:

- ✓ HS Code 190211 with products of "uncooked pasta, not stuffed or prepared containing eggs" such as macaroni, spaghetti, noodles etc., has a trade deficit balance of N\$487,999.60.
- ✓ The table also indicates a high importation of products under HS code 190220, of which these are stuffed pasta types such as ravioli, tortellini, pies, samosa, etc., whereby over N\$6 million worth of these products are imported per year. At least 93% of these are being imported from South Africa.
- ✓ Other products being imported in quite high amounts are crispbread, crackers (HS 190510) as well as rusks, tortillas/wraps, rotti etc. (HS 190540), amounting to an import value of N\$8,2 million and N\$15,9 million per annum respectively.
- ✓ An extreme import value of products under HS 190410 by Namibia includes products such as cornflakes, wheat flakes, puffed maize etc, and this indicates a very high demand for such products in Namibia. This is evidenced by an average import of 5,024 tons valued at N\$129,8 million per year. This leaves an opportunity for the local production of such products valued at N\$3,2 million.
- ✓ Biscuits and cookies (HS 190531) are also being imported in high quantities with an average import value of about 6,473 tons valued at N\$149,3 million per year accordingly. An investment opportunity available in Namibia for these products is valued at N\$125,6 million.
- ✓ Apart from maize flour (HS110220) and pasta (HS190230 & HS190219), which the country seems to be producing in sufficient quantities and therefore able to produce large amounts of such

products, many opportunities exist in Namibia to process and produce other products such as couscous, gingerbread, rusks, mixes of doughs, pizza doughs, and cake mixtures.

- ✓ Overall, the country imported grain value-added (processed) products to the tune of an average of 63,973 tons valued at N\$823,7 million per year (during 2018-2022) in comparison to 33,186 tons valued at N\$319, 5 million tons during the same period respectively. Of the exports, mostly what is processed locally and exported is pasta and maize meal accounting for 21,599 tons (N\$265 million). The remaining products are mostly not processed in Namibia and, therefore, they are often referred to as re-exports.
- ✓ Unfortunately, not much is currently happening in Namibia in terms of the value addition of pearl millet hence this report highlights opportunities that exist in the processing of pearl millet.

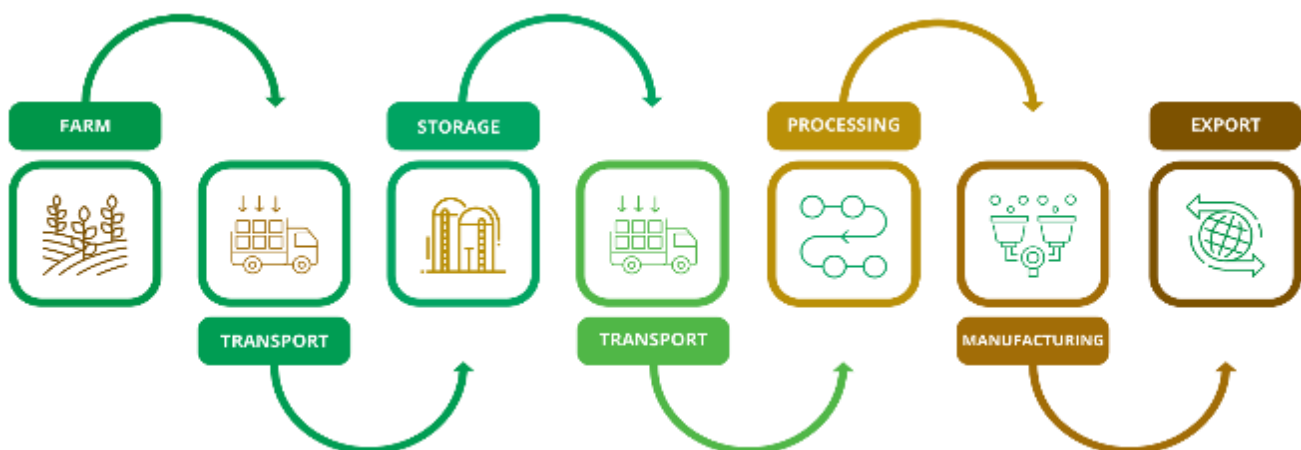
According to the grain value chain industry stakeholders, the grain processing industry is faced with several challenges that mostly have to do with availability, quality and pricing. These are challenges that can be easily addressed with good management practices at the production level. For instance, grain availability can be addressed with increased production coupled with good practices that will eventually address quality and prices in the long run. Other challenges raised are transport and operational costs. Again, these are challenges that have very little to do with demand, meaning that there is indeed a guaranteed market for grain value-added products.

4 KEY POTENTIALS/ CONCLUDING REMARKS TO UNLOCK GROWTH IN GRAIN VALUE-ADDED PRODUCTS

- ✓ The very limited quantities of grain value-added products produced in Namibia were processed from grains that were imported from other countries.
- ✓ However, the increasing demand and high imports of these products show that there is a big gap in the market that Namibia can take advantage of.
- ✓ Due to the evidently high demand for these grains (wheat, millet, and maize), and given their import rate, the first effort would be to address the production aspects of these grains.
- ✓ To unlock the growth in grain value addition, farmers as well as potential farmers are encouraged to take up farming as a serious commercial enterprise to increase local production and eventually increase value addition participation or investment.
- ✓ Increased production will lead to increased agro-processing of grain and eventually to increased export markets (of which the potential is already high in some countries (ITC, 2021), which will result in a strong currency for an improved economy.
- ✓ Namibia has also seen a significant increase in the poultry industry lately. This is a clear indication that there is an increased demand for poultry feed in the country. This is one of the reasons why the Government should invest more into establishing agricultural schemes and incentives to provide financial support to both farmers as well as small to medium enterprises (SMEs) so that

together they can commercialise production, increase yields and increase participation in the grain value chain, which in turn will encourage poultry feed production.

- ✓ Support programmes from the central government need to be intensified, especially those aimed at reducing production costs.
- ✓ Various programmes such as seed research are currently underway and these are some of the initiatives that farmers should take up upon completion as clearly there is reasonable potential for a reduction in input costs while addressing these challenges one by one.
- ✓ Wheat, pearl millet, and maize are gazetted as controlled crops under the Agronomic Industry Act 20 of 1992 in Namibia, and this means that the market for these products is protected by the government.
- ✓ Therefore, farmers and potential local farmers should take advantage of the favourable market situation coupled with conducive climatic conditions and expand the local production of these grain crops.
- ✓ With this evident support from the government, potential investors should significantly stand to make good returns by entering the grain value chain market.

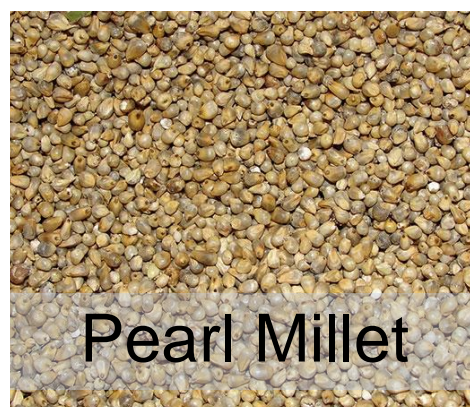


Source: Grain supply chain (RandAgri, 2021)

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