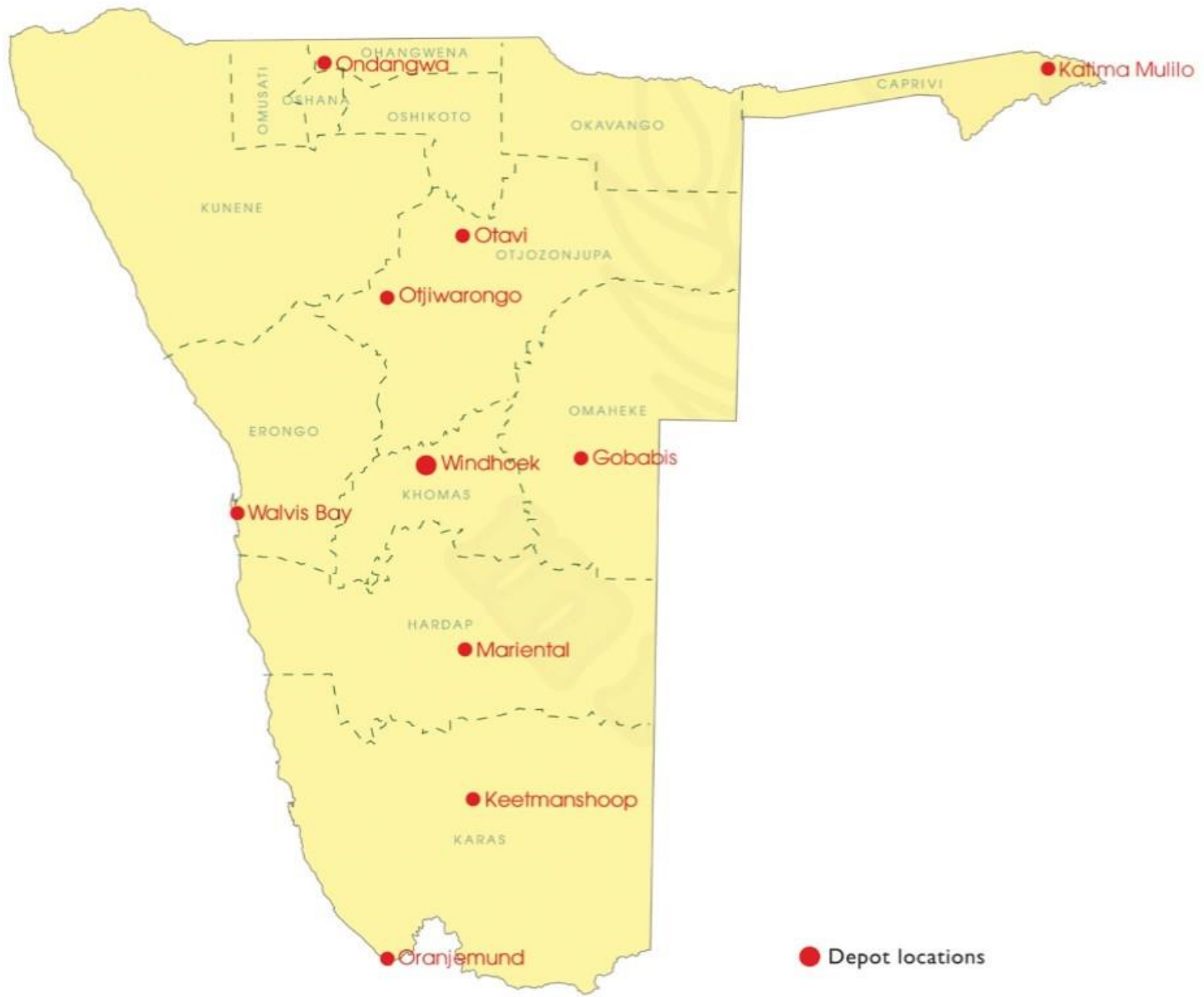


# **NAMIBIA**

## **MAIZE MILLING INDUSTRY STRUCTURE**

# Introduction

- Jürgen Hanke
- Quality Manager
- NAMIB MILLS – Commercial Grain Products Manufacturer
- (Wheat, Maize, Pasta, Mahangu)
- (Commercial Chicken Industry)



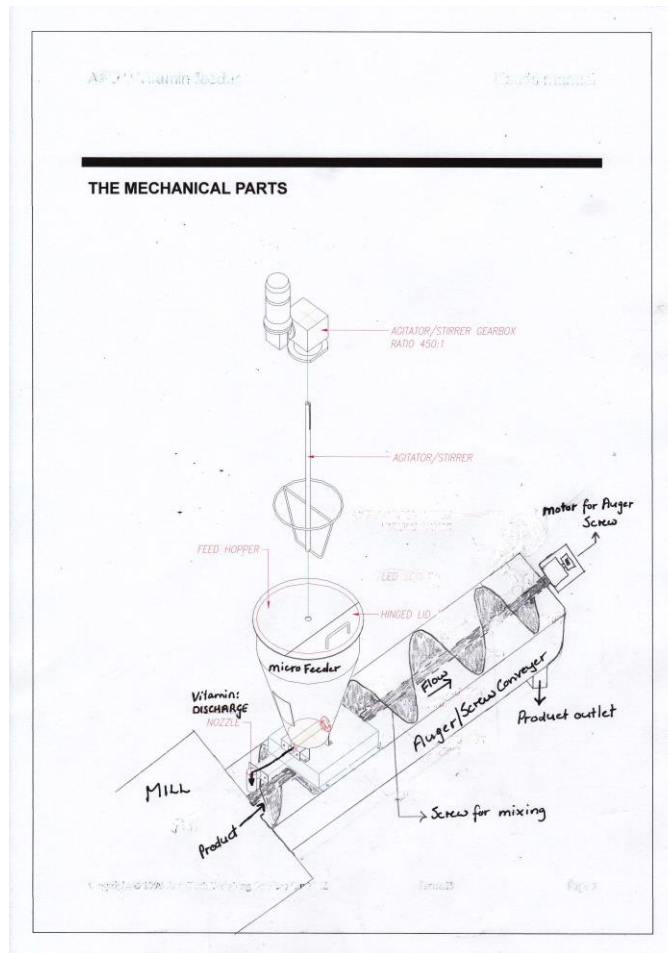
# MILLING INDUSTRY STRUCTURE

- > 6 Ton per hour Capacity MILLS - 2
- < 6 Ton per hour Capacity MILLS - 4
- < 2 Ton per hour Capacity MILLS - 17
- SERVICE MILLS - VARIOUS

# STATUS OF FORTIFICATION

- **Fortification Status: 85 – 90%**
- **Maize and Wheat fortification**
- **SA Fortification Regulations**

# FEEDER



# FORTIFICATION COSTS

FLOURS	TONS	COST	COST PER TON
MAIZE MEAL	95000	2414900	\$1.90
BREAD FLOUR	42000	950460	\$1.70

# FEEDER RATE CONTROL SETTINGS

TONNAGE PER HOUR MILLED	FEEDER SETTING: (settings differ with each micro feeder)		VITAMIN FLOW REQUIRED PER MINUTE (gram/minute) <u>IS...</u>
0.5	5		1.0 - 2.0
1.0	5		3.0 - 4.0
1.5	7		4.5 - 5.5
2.0	7		6.0 - 7.0
2.5	10		8.0 - 9.0
3.0	13		9.5 - 10.5
3.5	13		11.0 - 12.0
4.0	15		12.5 - 13.5
4.5	17		14.5 - 15.5
5.0	19		15.5 - 16.5
5.5	22		17.5 - 18.5
6.0	25		18.5 - 19.5
6.5	28		21.5 - 22.5
7.0	30		22.5 - 23.5
7.5	33		23.5 - 24.5
8.0	35		25.0 - 26.0
8.5	37		27.0 - 28.0
9.0	40		28.0 - 29.0
9.5	43		29.5 - 30.5
10.0	46		31.5 - 32.5
10.5	49		34.5 - 35.5
11.0	52		36.5 - 37.5
11.5	55		38.0 - 39.0
12.0	57		38.5 - 39.5



# NUTRITIONAL TABLE

TYPICAL NUTRITIONAL INFORMATION			
Single serving size = 30g packed product			
*Typical Values as packed	Per 100g	Per single serving	% NRV**(≥ 4 years)
Energy	1456 KJ	437 KJ	-
Protein	5.6 g	1.7 g	3%
Glycaemic Carbohydrate	76.7 g	23 g	-
of which total Sugar	1.2 g	0.4 g	-
Total Fat	1.8 g	0.5 g	-
of which saturated fat	0.2 g	0.1 g	-
of which trans fat	<0.01 g	<0.01 g	-
of which monounsaturated fat	0.5 g	0.2 g	-
of which polyunsaturated fat	1.1 g	0.3 g	-
Total sodium	6 mg	2 mg	-
•Dietary fibre	3.3 g	1.0 g	-
Salt	0.3 g	0.1 g	-
VITAMINS			
Vitamin A	189 mcg	57 mcg	6%
Vitamin B1 (Thiamine)	0.3 mg	0.1 mg	8%
Vitamin B2 (Riboflavin)	0.2 mg	0.1 mg	7%
Vitamin B3 (Niacin)	3 mg	1 mg	6%
Vitamin B6(pyridoxine)	0.4 mg	0.1 mg	6%
Folic Acid	190 mcg	57 mcg	14%
MINERALS			
Iron	3.7 mg	1.1 mg	6%
Zinc	1.9 mg	0.6 mg	5%

## Mineral and Vitamins as per SA fortification legislation

\* Values from SANAS accredited laboratory

\*\* Nutrient reference values (NRV\*) for individuals 4 years and older

• Method of analysis: AOAC 985.29

# CHALLENGES

- Costs of Fortification Cocktail and Equipment
- Training, Innovation and practical Challenges on Fortification
- Measuring of Addition rate

# MAIN CHALLENGES

- MAHANGU – (MILLET) VS MAIZE MEAL
- **CONSUMER EDUCATION**

# MAHANGU

- Normal annual Production 60 000 Tonnes
- (140 000 Family Farmers)
- Commercial Production of Mah. Meal <10%
- NSFR = Namibian Strategical Food Reserves  
(Government Silos)

# COMMERCIAL MAHANGU IMPORTS

- COMMERCIAL MAHANGU FLOUR  
PRODUCTION ONLY 10% OF TOTAL DEMAND