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HORTICULTURAL CROPS TO CONSIDER PLANTING DURING SUMMER UNDER NON-CONTROLLED PRODUCTION ENVIRONMENTS IN NAMIBIA

Namibia's summer is usually the longest season and it lasts about six (6) months starting from October to March (Vreugde Guest Farm, 2020). Cognisant of this fact, it is worth noting that crops usually perform at their optimal level when planted in their appropriate season in addition to other good management practices. With summertime now fast approaching in Namibia, it is imperative that horticulture farmers, especially small-scale farmers and upcoming farmers who may not have sufficient experience, are prepared to plant appropriate crops for the season to ensure reasonable harvests.

This article, therefore, focuses on some of the controlled horticultural crops that farmers can consider planting during summer under uncontrolled environments in Namibia. The article exclusively focuses on possible production under an uncontrolled environment, however, with high-climate smart technologies such as in mechanised greenhouses, some of the summer crops can also be produced throughout the year. The article also highlights the demand and supply of such crops as per the NAB domestic market statistics.

1. Tomato

Tomato is one of the crops that require adequate sunlight to grow, whereby at least 6 hours of direct sunlight are required per day. It also requires well-drained soil hence it is imperative to avoid soil that is prone to waterlogging. Tomato is one of Namibia's commonly used vegetables and the majority of households consume tomatoes daily. On average, a tomato takes about 40 – 90 days to reach maturity depending on whether the variety is determinate, inter-determinate, or an Open Pollinated Variety (OPV). Tomato is very sensitive to frost, however, in areas where no frost is experienced, tomatoes can be planted throughout the year without using any high-tech controlled environment.

Production Zones	Planting	Harvesting
Central	July to March	October to June
Karst	October/ November	February/March or Year-round
Kavango	Year-round	Year-round
North Central	Year-round	Year-round
Orange River	November	February to March
South	November	February to March
Zambezi	Year-round	Year-round

Tomato sowing/harvesting season guide. Source: NAB, 2023

2. Sweet potato

From a family of tubers, sweet potato is another crop that can be grown and thrive well in summer. Well-drained soils are ideal for good tuber formation and growth, thus areas prone to flooding should also be avoided. Sweet potato takes an average of about 90 to 120 days to reach maturity.

Production Zones	Planting	Harvesting
Central	October to January	July to September
Karst	August to mid-February	December to June
Kavango	July to January	December to June
North Central	July to March	November to July
Orange River	August/September	January/February
South	August/September	January/February
Zambezi	September to February	January to July

Sweet potato sowing/harvesting season guide. Source: NAB, 2023

3. Potato

Potato is one of the top imported horticulture crops in Namibia. However, potato can also grow in Namibia and it is more suitable for cultivation in summer. Potatoes thrive better in well-drained and ventilated soils which are not waterlogged or have high clay content as this will cause difficulties with harvesting. Potato takes about 110 to 150 days to reach maturity.

Production Zones	Planting	Harvesting
Central	January/February	May/July
Karst	July/August & December to Mid-February	April to August & November/December
Kavango	July to February	October to May
North Central	July to April	December to August

Orange River	January	May
South	January	May
Zambezi	July/April	October August

Potato sowing/harvesting season guide. Source: NAB, 2023

4. Beetroot

Farmers can also consider planting beetroot in summer. However, the crop requires a cooler soil temperature for it to germinate. This is why the seedlings should at least be prepared under greenhouse conditions which have reduced heat and the seedlings can be transplanted in early summer just before the strong heat is experienced. What is good about beetroot is that while it is mainly grown for its tubers, its leaves are also nutritious and can be consumed as a green vegetable. Beetroot is one of the few vegetables that can be grown throughout the year and can mature in 55 to 70 days.

Production Zones	Planting	Harvesting
Central	October to May	May/ June
Karst	Year-round	Year-round
Kavango	January to September	January to November
North Central	January to September	March to November
Orange River	January to April	April to July
South	January to April	April to July
Zambezi	January to September	March t November

Beetroot sowing/harvesting season guide. Source: NAB, 2023

5. Green Pepper

Green pepper is another crops that can be grown in summer. Just as it is important for other crops, soil preparation, watering, and mulching are some of the most important management practices necessary for green pepper production. Peppers take at least 70 – 80 days to reach maturity.

Production Zones	Planting	Harvesting
Central	July to March	Year-round
Karst	Year-round	Year-round
Kavango	July to March	Year-round
North Central	July to March	Year-round
Orange River	Year-round	Year-round
South	Year-round	Year-round

Zambezi	Year-round	Year-round
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Green pepper sowing/harvesting season guide. Source: NAB, 2023

6. Gem squash

Also, scientifically known as *Cucurbita pepo* var. *pepo*, gem squash can be grown in summer in well-drained sandy loam soils with high contents of organic matter. Gem squash matures between 50 and 80 days depending on whether it is to be harvested as baby gems or mature gem squash fruits.

Production Zones	Planting	Harvesting
Central	July to March	October to May
Karst	August to Mid-February	November to June
Kavango	August to February	October to May
North Central	July to April	October to July
Orange River	February/March & August/September	May/June & November/December
South	February/March & August/September	May/June & November/December
Zambezi	July to April	October to July

Gem squash sowing/harvesting season guide. Source: NAB, 2023

7. Pumpkin

Belonging to the same family as gem squash, pumpkin is one of the other crops that can be grown in summer. Pumpkin grows best in deep and well-drained sandy loam soils and just like gem squash also with high levels of organic matter. Pumpkin takes about 130 to 160 days before it reaches maturity. It is therefore advisable that this crop be planted as early as possible to ensure sufficient time for it to grow. Perishability for pumpkin is very low and it can be stored for a long period under a cool and well-ventilated place before it can be consumed.

Production Zones	Planting	Harvesting
Central	July to March	October to May
Karst	August to Mid-February	November to June
Kavango	August to February	October to May
North Central	July to April	October to July
Orange River	February/March & August/September	May/June & November/December
South	February/March & August/September	May/June & November/December
Zambezi	July to April	October to July

Pumpkin sowing/harvesting season guide. Source: NAB, 2023

8. Watermelon

Cultivated for its sweet flesh, watermelon can also be grown in summer. The soil requirement for watermelon is of sandy loam texture with high organic content as well. The soil should also be well drained and preferably of alkaline PH level. Watermelons mature in 85 to 90 days and one field can be harvested several times, 2-3 days apart.

Production Zones	Planting	Harvesting
Central	July to February	September to May
Karst	August to Mid-February	November to June
Kavango	August/ September	November/ December
North Central	June to September	September to December
Orange River	February	May
South	February	May
Zambezi	July to September	October to December

Watermelon sowing/harvesting season guide. Source: NAB, 2023

9. Sweet melon

Sweet melon is from the same family as watermelon and hence it has the same requirements. Well-drained sandy loam soils with high organic matter content are ideal for cultivating sweet melon. This crop takes about 70 – 85 days to mature and just like watermelons, one field can also be harvested more than once, 2-3 days apart.

Production Zones	Planting	Harvesting
Central	July to February	July to September
Karst	August to Mid-February	November to June
Kavango	August/ September	November/ December
North Central	June to September	September to December
Orange River	February/March & August/September	May/June & October/November
South	February/March & August/September	May/June & October/November
Zambezi	July to September	September to December

Sweet melon sowing/harvesting season guide. Source: NAB, 2023

10. Cucumbers (Field)

The most commonly cultivated cucumber in Namibia is the English cucumber, specifically the parthenocarpic greenhouse cucumber (which produces fruit without the fertilisation of ovules), and the fruit is usually seedless (Starke Ayres, 2019). Hence the English cucumber is one of

the few crops that can also be grown all year round because it is generally produced under a controlled environment which is the green/hot houses.

According to Starke Ayres (2019), there are also Field Cucumbers which are seeded varieties that produce both male and female flowers and require pollination for them to form healthy fruits which have seeds and white spines. These are more suited to open-field production and they usually thrive better during summertime because they are sensitive to frost. Its cultivation requires some kind of wall or support to climb on as it grows to enhance its production capability. The cucumber plant takes about 50 to 60 days to mature.

Production Zones	Planting**	Harvesting
Central	August to November	November to March
Karst	August to December	November to May
Kavango	August to December	November to May
North Central	August to December	November to May
Orange River	August to November	November to March
South	August to November	November to March
Zambezi	August to December	November to May

Field cucumber sowing/harvesting season guide. Source: NAB, 2023

**Based on last frost experience

The market statistics in terms of supply and demand always help farmers with decisions as to which crop type to grow and during which period. Based on this, the table below highlights a typical trade analysis of the summer crops in this article during the summer months (October to March) in 2022/2023.

Summer crops local purchase vs imports during the summer period of October 2022 to March 2023 (NAB, 2023)

Vegetable type	Local purchase (Tons)	Imports (Tons)	Total consumption (Tons)	Proportion (%) of imports	Average farm gate price per kg during summer (N\$)
Beetroot	308	211	520	41%	8.90
English cucumber	514	40	554	7%	9.23
Gem squash	79	71	150	47%	7.75
Green pepper	184	63	248	26%	16.33
Potatoes	4,078	16,911	20,988	81%	7.75
Pumpkins	350	71	421	17%	7.17
Sweet melons	219	45	264	17%	11.74

Sweet potatoes	61	273	335	82%	13.05
Tomatoes**	156	694	850	82%	12.63
Watermelons	865	23	888	3%	44.94

** Includes jam and round tomatoes

Depending on which horticulture crop type one decides to choose and plant this summer, it is advisable to research more on the type of inputs required (i.e. fertilisers, pesticides, etc.), have your water infrastructure sorted, and source all inputs before planting to ensure timely application for a good harvest.

Some summer crops are ready for harvest from as early as 40 days, therefore, considering that we have about 140 days of summer in Namibia, farmers are advised to plant their crops in intervals (say 3 to 4 days apart). This ensures a continuous harvest for the remainder of the season of such a crop. Most traders prefer dealing with a farmer who is reliable and consistent in supplying fresh vegetables every week (or every second week) as opposed to a once-off bulk supply.

Although crop diversity is encouraged unless you are an expert and have adequate resources to handle a lot of different crops at once, farmers (especially small-scale farmers) are advised to try and avoid growing too many different crops at once to ensure effective management and easier control.

Ideally, a farmer should prepare some seedlings a month before summer officially begins so that by the first early days of summer the seedlings are ready for transplanting, and that they will not be prone to dying because of the heat as the summer heat intensifies. Additionally, all crops require regular monitoring to ensure early detection of pests and diseases for a fast remedy. Adding any type of mulching helps to reduce evaporation rates and weeds. Furthermore, soil testing is necessary to understand the soil nutrients with the requirements of the chosen horticulture crop to be planted.

Lastly, the Namibian Agronomic Board publishes open and closed border restriction notices on special controlled horticultural products monthly. Visit our website (www.nab.com.na) to see the supply and demand trends on various special controlled horticultural products for the specified periods to help you plan better on your next target crop to produce higher yields. From the same website, you can as well find Production Manuals and Enterprise Budgets for most of the summer crops discussed above.

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