

## Windmill (Pvt) Ltd

### Production requirements for 1 Hectare of Carrots

Planting Date: Can be grown all year round with Irrigation. Best time Feb - Sept. Optimum growing temperature 15-20 deg. C. Directly sown crop.  
 Soil Requirement: pH 5.5 - 6.5. Liming required below pH 5.5. Deep, well drained sandy loams.  
 Seed Requirement: 4-5 kg/ha. Plant in rows 200-300 mm apart, 15-20 mm deep into fine tilth soil. Seed can be mixed with pure sand.  
 Final Population required: 100-160 plants/sq.m. Thin out after germination to required population.  
 Harvesting: 3-4 months after germination when root +/- 20 mm diameter.  
 Irrigation Requirement: Irrigate to field capacity down to 600 mm depth before planting seed. Irrigate frequently during early seedling stage i.e. +/- 35-55 mm every 7-14 days.  
 Do not allow to drop below 50% water holding capacity except before lifting.  
 Yield Target: 25 ton/ha. Higher yields possible with increased fertilizer application.  
**Soil Analysis Vital!!**

Fertilizer requirements		Product	Rate/ha	Nitrogen	Phosphate	Potash	Sulphur	Boron	Comment	Rate/ha	Cost/ton
<b>Carrot requirements/ha</b>				<b>100</b>	<b>40</b>	<b>170</b>			Nutrients required		
Base dressing	Compound J	14:6:20:4.0S + 0.04B	600	84	36	120	24	0.24	With soils over 60 ppm P205. Incorporate in soils well before planting.	0.6	\$720
Top dressing	Potassium nitrate	13:0:46	100	13	0	46	0	0	Apply along rows at 3 weeks after emergence	0.1	\$1760
		<b>Applied Total</b>	<b>700</b>	<b>97</b>	<b>36</b>	<b>166</b>	<b>24</b>	<b>0.24</b>		<b>0.7</b>	

#### Pesticides, Fungicides and Herbicides

Problem	Product	Mixing rate	Application / Comments	Product/ha	Cost/pack
Annual Grasses and Broadleaf weeds	Linurex 50WP/ Afalon	90-120 g/15 lt water	Weeds pre-emergent - Spray immediately after sowing. Weeds post-emergent - Spray after 4 leaf stage of carrot seedling <b>N.B. Not for very sandy soils and no sedges control</b>	1.5-2.0 kg	
Broadleaf weeds	Prometrex 50SC/ Prometryn	150 - 200 g/15 lt water	<b>Not registered yet in Zimbabwe but in R.S.A.</b> Post emergent at true 1-2 leaf stage of carrot seedling. [Not for soils <20% clay]		\$8/lt
Grasses only (including Shamva)	Agil 100EC/Propaquizafop	30 - 120 ml/15 lt water	Post emergent of annual and perennial grasses. Higher dose rate for perennial grasses and weed height	0.5 - 2.0 lt	\$24/lt
	Fusilade/Fluazifop-p-12.5EC	75-600 ml/15 lt water		1.0-8.0 lt	\$24/lt
Nematodes	EDB WM	Advisable on light soils	Dilute/mix 1 litre/3 litres water and inject 5 ml emulsion to depth of 250 - 300mm at 380 x 380mm spacing into moist soil 3 weeks prior to planting date.	86 lt	
Cutworm	Decis 2.5 EC or Decis Tablets	18 ml/15 lt water 1 tablet/15 lt water	Mix rate 120 ml/100 lt water and band spray ONCE over emerged seedlings rows using 500 lt/water/ha	0.6 lt 16 tabs	\$12/lt \$0.50/tablet
	Carbaryl 85WP	22 - 30 g/15 lt water		2 kg	\$12/kg
Red Spider Mites	Dimethoate 40EC	11 ml/15 lt water	Mix rate 75 ml/100 lt water. Full cover spray and repeat as necessary every 14 days (14 day HI)	0.5 - 1.0 lt	\$9/lt
Leaf Hoppers	Malathion 1% Dust	-	Ready to use. Dust plants @ 100 - 175g/10m. Repeat as necessary		\$30/25 kg
Aphids	Pedza Nhamo Dust	-	Ready to use. Dust plants thoroughly. Repeat at 7-10 day intervals.		\$2/0.25kg
	Malathion 25 WP	30 g/15 l water	Mix rate 200 g/100 lt water. Full cover spray. Repeat as necessary (7 day HI)	1 kg	\$7/kg
Slugs and snails	Mesuroil Snail Bait	R.F.U.	Scatter/distribute 5 g/10sq. m of soil area.	5 kg	\$3/0.25kg
Rhizoctonia and soil borne fungi	Thiram 80WP	Seed dressing	8 g/5kg seed. Mix thoroughly	8 g	\$7/kg
	Quintozene M45	30 g/15 lt water	Work to a depth of 50-100 mm and water well.	100 kg	
Leaf Blight	Dithane M45	30 g/15 lt water	Mix rate 200 g/100 lt water. Full cover spray 1 10 - 14 day intervals. (3 Day H.I.)	2 kg	\$7/kg
Growth stimulant	Kelpak/Kelpac	Mix 120 ml/15 lt water	Root growth hormone for bigger yields and straighter carrots! Spray along rows at emergence and 4 weeks later as well.	2 lt	
Trace elements	Librel BMX	150 - 300 g/15 lt water	Trace elements foliarly applied at 1-2% concentration i.e. 1-2 kg/100 lts water mix	1-2 kg	\$8/kg
Poor quality spray water	Bladbuff 5	-	For buffering your spraying water for effective chemical application.		\$6/lt

NOTES: 17 X 15 lt knapsacks/ha applies +/- 250 lt/ha.  
 Use **Bladbuff 5** wetter/buffer or **WINBooster** adjuvant where spray water is alkaline and/or is hard (high Calcium and Magnesium salts) for effective spray application.

**READ AND FULLY UNDERSTAND THE LABELS BEFORE USING THE PRODUCTS.  
 THIS IS NOT AN ORDER**

JUNE, 2015