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Crop Guide – Butternut

PLEASE REMEMBER TO ALWAYS READ THE LABEL BEFORE USING ANY CHEMICAL

Butternuts are frost- sensitive and grow best under warm conditions. Plants have a deep root system with some roots growing down to a meter. Male and female flowers are separate, males being borne on long stalks, females being borne on shorter stalks much closer to the stem. Pollination, usually by bees is important for normal fruit development.

Ideal soil temperature for germination : 20 - 25 C (minimum 16 C) and ideal temperature for growth : 18 – 24 C

An ideal pH of around 6 and best results are obtained with well-drained soils. Low salt level and high organic matter content are preferred.

Soil should be thoroughly prepared and deeply loosened before planting. Any residue from previous crops should be well-rotted. The use of raised beds should be considered if high rainfall that could lead to waterlogging.

Butternuts are normally direct sown and planted 2,5 to 3cms deep. Plants should be 30 to 40cms apart in rows that are 120 cms apart. This is between 20000 to 30000 plants per ha.

Butternuts are a warm weather vegetable; thus planting occurs from early spring to mid-summer. In Zimbabwe planting starts in August where temperatures have started to increase after the winter. In areas where there is a risk of frost planting will only take place in September.

Growth period is generally 12 to 15 weeks from planting of seed to the first butternuts ready to harvest.

Fertilizer Program

Growth Stage	KynoPop	10.24.20	A.N	M.A.P TECH	Pot Nitrate	FOLIAR LEAF SPRAYS		N	P2O5	K2O	S	B
						Veggie Starter	Veggie Grow					
At Planting	7kgs	400kgs	120kgs					80	96	80	24	0.56
Week 2						3kgs						



Week 3						3kgs						
Week 4				50kgs	100kgs		3kgs	19	15	46		
Week 5							3kgs					
Week 6			80kgs	50kgs			3kgs	33	15			
Week 7												
Week 8				50kgs	100kgs		3kgs	19	15	46		
Week 9							3kgs					
Week 10							3kgs					
	7KGS	400KGS	200KGS	150KGS	200KGS			151	141	172	24	0.56

Butternut has a deep root system and 25mm irrigation per week is required during the growing season. Sufficient water in the root zone is essential for good flowering and fruit set.

Chemical Spray Program

CROP/GROWTH	TARGET PEST/	PRODUCT FOR	ACTIVE	DOSAGE		REMARKS
STAGE	DISEASE	CONTROL	INGREDIENT	PER 20L	PER HA	
TRANSPLANTING	Cutworms	Karate Zeon	Lambdacyhalothrin	20mls	200mls/ ha	Application timing is immediately after transplanting
		Plesiva Star 60WG	Cyantraniliprole + Pymetrozine	27g	270g/ha	Apply as a soil application
	Soil Pests	Confidor 70Wg	Imidacloprid	30g	280g/ha	Apply as a soil application
VEGETATIVE STAGE	Early Blight	Mancozeb	Mancozeb	50g	2.5kgs/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
		Copper Hydroxide	Copper Hydroxide	50g	2.5kgs/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
		Ridomyl Gold	Metalaxyl + Mancozeb	50g	2.5kgs/ha	When weather conditions favour the disease. Not than 6 sprays
		Azoxy Duo	Azoxystrobin + Difenaconazole	50mls	500mls/ha	Should be applied per crop cycle
	Aphids, thrips & caterpillars	Karate Zeon	Lambdacyhalothrin	50mls	500mls/ ha	Pests transmit mosaic virus and Karate Zeon has a quick knockdown effect on these pests

		Decis Forte	Deltamethrin	10-15mls	300mls/ha	Decis Forte is a synthetic pyrethroid with contact and stomach action which controls a wide range of insects
		Thunder 145OD	beta-cyfluthrin + Imidacloprid	30mls	330mls/ha	Thunder has excellent systemic properties and a significant residual activity. Imidacloprid has a broad spectrum of activity, particularly against sucking insects such as aphids, leafhoppers, thrips, leaf miners and white flies
		Sivanto Prime	Flupyradifurone	40mls	400mls/ha	Sivanto Prime is a new insecticide from Bayer for the control of a range of sucking insect pests and has an outstanding safety profile.
		Vayego 200SC	Tetraniliprole	5mls	50mls	Vayego is a powerful, innovative insecticide that provides quick antifeedant and residual activity on all life stages from egg to adult
		Plesiva Star 60WG	Cyantraniliprole + Pymetrozine	27g	270g/ha	Apply as a soil application
		Magmectin Ultra Duo	Emmamectin Benzoate + Acetamiprid	20mls	250mls/ha	A broad spectrum acaricide and insecticide for the control of mainly Spidermites, Lepidoptera pests, Thrips, Aphids and Leafminers in Butternuts
	Whitefly, thrips & aphids	Abamiprid	Abamectin + Acetamiprid	15mls	200mls/ ha	Abamiprid is a combination of acetamiprid and abamectin. It has larvicidal and ovicidal activity.
		Magmectin Ultra Duo	Emmamectin Benzoate + Acetamiprid	20mls	250mls/ha	A broad spectrum acaricide and insecticide for the control of mainly Spidermites, Lepidoptera pests, Thrips, Aphids and Leafminers in Butternuts
		Plesiva Star 60WG	Cyantraniliprole + Pymetrozine	27g	270g/ha	Apply as a soil application
		Ampligo 150ZC	Chlorantraniliprole	40mls	400mls/ha	<ul style="list-style-type: none"> • Application timing and frequency should be based on economic thresholds. • Apply as required by scouting. • To control boring species, time applications before they bore into the fruits or stems.
		Sivanto Prime	Flupyradifurone	40mls	400mls/ha	Sivanto Prime is a new insecticide from Bayer for the control of a range of sucking insect pests and has an outstanding safety profile.

		Vayego 200SC	Tetraniliprole	5mls	50mls	Vayego is a powerful, innovative insecticide that provides quick antifeedant and residual activity on all life stages from egg to adult
	Powdery Mildew	Azoxy Duo	Azoxystrobin + Difenaconazole	50mls	500mls/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
		Folicur 250EW	Tebuconazole	30mls	375mls/ha	Apply at the first signs of infection and repeat every 7-10 days. Apply as a full cover spray in minimum 500 lwater per ha and relatively more on larger plants.
		Cuperdem	Copper	300mls	3lts/ha	Apply as a full cover spray on first signs of infection. Can also be applied at planting for early protection.
	Phytophthora Crown & Fruit Rot	Ridomyl Gold	Metalaxyl + Mancozeb	50g	2.5kgs/ha	The diseases is soil borne, sprays with Ridomyl Gold ; a highly systemic fungicide with protective and curative attributes which effectively controls the disease
FLOWERING STAGE	Late Blight	Azoxy Duo	Azoxystrobin + Difenaconazole	50mls	500mls/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
		Cuperdem	Copper	300mls	3lts/ha	Apply as a full cover spray on first signs of infection. Can also be applied at planting for early protection.
		Ridomyl Gold	Metalaxyl + Mancozeb	50g	2.5kgs/ha	The diseases is soil borne, sprays with Ridomyl Gold ; a highly systemic fungicide with protective and curative attributes which effectively controls the disease
		Cabrio Duo	Pyraclostrobin + Dimethomorph	50g	2.5kgs/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
	Thrips & Red Spider	Abamiprid	Abamectin + Acetamiprid	15mls	200mls/ ha	Abamiprid is a combination of acetamiprid and abamectin. It has larvicidal and ovicidal activity.
FRUIT EXPANSION STAGE	Late Blight	Azoxy Duo	Azoxystrobin + Difenaconazole	50mls	500mls/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
		Cuperdem	Copper	300mls	3lts/ha	Apply as a full cover spray on first signs of infection. Can also be applied at planting for early protection.
		Melody Duo	Iprovalicarb + Propineb		2.5kgs	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart

		Infinto WG	Propamocarb Hydrochloride + Fluopicolide		1,2kgs	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
		Ridomyl Gold	Metalaxyl + Mancozeb	50g	2.5kgs/ha	The diseases is soil borne, sprays with Ridomyl Gold ; a highly systemic fungicide with protective and curative attributes which effectively controls the disease
		Cabrio Duo	Pyraclostrobin + Dimethomorph	50g	2.5kgs/ha	Start applications preventatively before disease symptoms appear. Apply in blocks of 2 consecutive sprays 7-10 days apart
	Bacterial Infections	Copper Hydroxide	Copper Hydroxide	50g	2.5kgs/ha	Apply in blocks of 2 consecutive sprays 7-10 days apart
		Kasugamycin 4SL	kasugamycin	120mls	1.2lts/ha	Apply maximum of 3 sprays.
RIPENING	Red Spider	Abamiprid	Abamectin + Acetamiprid	15mls	200mls/ ha	Abamiprid is a combination of acetamiprid and abamectin. It has larvicidal and ovicidal activity.
	Whitefly, thrips, aphids & American Bollworm	Abamiprid	Abamectin + Acetamiprid	15mls	200mls/ ha	
		Magmectin Ultra Duo	Emmamectin Benzoate + Acetamiprid	20mls	250mls/ha	A broad spectrum acaricide and insecticide for the control of mainly Spidermites, Lepidoptera pests, Thrips, Aphids and Leafminers in Butternuts
		Plesiva Star 60WG	Cyantraniliprole + Pymetrozine	27g	270g/ha	Apply as a soil application
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		Vayego 200SC	Tetraniliprole	5mls	50mls	Vayego is a powerful, innovative insecticide that provides quick antifeedant and residual activity on all life stages from egg to adult

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