

# Brassica Range 2011

Harvest our experience



syngenta®



## Brassica Range

Cultivating your business in today's competitive industry is tough. S&G, Syngenta's horticultural seed brand for Europe, the Middle East and Africa, gives you a competitive edge. Backed by Syngenta's world leadership and over 150 years of experience, we know a thing or two about adding value to our customers' businesses.



## Harvest our experience

Harvesting our experience comes down to three crucial elements. Firstly, we know seeds and everything that goes into high-yielding, reliable varieties. Secondly, we're constantly innovating based on market trends, climatic conditions and consumer preferences. Thirdly, we understand you – your needs, concerns and challenges.

Our constant innovation delivers crops which appeal to the entire value chain: growers, integrated producers, traders, fresh cutters, retailers and consumers. Your Brassica will meet the highest requirements of nutrition, taste, freshness, visual appeal, convenience and packaging.

### Partners from the ground up

We believe in partnership from seed to harvest, involving growers and integrated producers in early product development. Therefore, product traits, such as long storage, reflect your needs as well as those of the entire value chain.

### A responsible partner

As the world's population booms, Syngenta is helping the agricultural industry grow more from less to meet the growing demand for more food. Assisting farmers to increase yield, improve crop quality and use natural resources responsibly, benefits us all.

### Grow with trust

Companies that trust each other, grow together. For instance, we benchmark our germination test methods with commercial young plant raisers. We deliver a high percentage of useable plants – with figures to prove it. It's our commitment to provide top quality, intensively-tested seeds and pellets.

### Global company, local service

Wherever you are, we are close by. Our local sales teams live and work near you. They speak your language, know your markets and your growing conditions. If you have a question or need advice, specialist help is a phone call or a personal visit away.





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# Club Root Solutions

Club Root is a serious disease affecting Brassica. An estimated 10% of the total cultured area worldwide contract the disease. Syngenta has invested years of breeding to offer a high level of resistance in their Brassica varieties.

## Club Root symptoms

Club Root is a soil borne fungal disease which attacks the roots of Brassica crops. It is considered as one of the most economically important diseases of cultivated crucifers. Roots affected by Club Root are swollen and distorted. The damage caused to the roots causes crops to be stunted and, in most cases, there is a reduction in yield. The pathogen survives in the soil for up to 15 years in the form of resting spores released from decayed galls.

## Syngenta's solutions

The potential of cultural practices to reduce crop losses due to Club Root are limited and chemical treatments to control the fungus are either banned, due to environmental regulations, or are not cost effective. The best way to combat Club Root is through the breeding of resistant varieties. Syngenta Seeds has succeeded, after many years of breeding, to introduce a high level of resistance in varieties of cabbage, Brussels sprouts and cauliflower.

## We currently have the following varieties with Club Root resistance:

Cauliflower	White Storage Cabbage	Brussels sprouts
Clapton	Kilaton	Crispus
Clarify	Kilazol	



# Seed treatments & coatings

## Brussels sprouts, Cabbage, Cauliflower & Broccoli

### Definition of resistances

**Immunity:** Not subject to attack or infection by a specified pest or pathogen.

**Resistance** is the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure.

**Two levels of resistance are defined:**

**High/standard resistance (HR\*):** plant varieties that highly restrict the growth and development of the specified pest or pathogen under normal pest or pathogen pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest or pathogen pressure.

**Moderate/intermediate resistance (IR\*):** plant varieties that restrict the growth and development of the specified pest or pathogen, but may exhibit a greater range of symptoms or damage compared to high/standard resistant varieties.

Moderately/intermediately resistant plant varieties will still show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest or pathogen pressure.

**Susceptibility** is the inability of a plant variety to restrict the growth and development of a specified pest or pathogen. The Vegetable Section of ISF recommends, as it pertains to biotic stress, that its members use the terms immunity, high/standard or moderate/intermediate resistance and susceptibility and to avoid the term tolerance in communications with their customers.

Tolerance is the ability of a plant variety to endure abiotic stress without serious consequences for growth, appearance and yield. Vegetable companies will continue to use tolerance for abiotic stress.

# Planting density

Plant stations per acre calculator in '000 stations																		
Row width (inch)	DISTANCE BETWEEN PLANT STATIONS (INCHES)																	
	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8	9	10	11	12	13	14	15
4	784	627	523	448	392	348	314	285	261	224	196	174	157	143	131	121	112	105
5	627	502	418	358	314	279	251	228	209	179	157	139	125	114	105	97	90	84
6	523	418	348	299	261	232	209	190	174	149	131	116	105	95	87	80	75	70
7	448	358	299	256	224	199	179	163	149	128	112	100	90	81	75	69	64	60
8	392	314	261	224	196	174	157	143	131	112	98	87	78	71	65	60	56	52
9	348	279	232	199	174	155	139	127	116	100	87	77	70	63	58	54	50	46
10	314	251	209	179	157	139	125	114	105	90	78	70	63	57	52	48	45	42
11	285	228	190	163	143	127	114	104	95	81	71	63	57	52	48	44	41	38
12	261	209	174	149	131	116	105	95	87	75	65	58	52	48	44	40	37	35
13	241	193	161	138	121	107	97	88	80	69	60	54	48	44	40	37	34	32
14	224	179	149	128	112	100	90	81	75	64	56	50	45	41	37	34	32	30
15	209	167	139	119	105	93	84	76	70	60	52	46	42	38	35	32	30	28
16	196	157	131	112	98	87	78	71	65	56	49	44	39	36	33	30	28	26
17	184	148	123	105	92	82	74	67	61	53	46	41	37	34	31	28	26	25
18	174	139	116	100	87	77	70	63	58	50	44	39	35	32	29	27	25	23
19	165	132	110	94	83	73	66	60	55	47	41	37	33	30	28	25	24	22
20	157	125	105	90	78	70	63	57	52	45	39	35	31	29	26	24	22	21
21	149	119	100	85	75	66	60	54	50	43	37	33	30	27	25	23	21	20
22	143	114	95	81	71	63	57	52	48	41	36	32	29	26	24	22	20	19
23	136	109	91	78	68	61	55	50	45	39	34	30	27	25	23	21	19	18
24	131	105	87	75	65	58	52	48	44	37	33	29	26	24	22	20	19	17
25	125	100	84	72	63	56	50	46	42	36	31	28	25	23	21	19	18	17
26	121	97	80	69	60	54	48	44	40	34	30	27	24	22	20	19	17	16
27	116	93	77	66	58	52	46	42	39	33	29	26	23	21	19	18	17	16
28	112	90	75	64	56	50	45	41	37	32	28	25	22	20	19	17	16	15
29	108	87	72	62	54	48	43	39	36	31	27	24	22	20	18	17	15	14
30	105	80	70	60	52	46	42	38	35	30	26	23	21	19	17	16	15	14

## Sowing guide example

A row of 20 inches and distance between stations within the row of 15 inches will give a density of seed or plants of 21,000 per acre (not allowing for tram lines).

Length of drilling per acre			
12 in rows = 43,560 ft	18 in rows = 29,040 ft	23 in rows = 22,728 ft	27 in rows = 19,354 ft
13 in rows = 40,212 ft	19 in rows = 27,513 ft	24 in rows = 21,780 ft	28 in rows = 18,765 ft
14 in rows = 37,530 ft	20 in rows = 26,136 ft	25 in rows = 20,910 ft	30 in rows = 17,424 ft
15 in rows = 34,848 ft	21 in rows = 24,891 ft	26 in rows = 20,106 ft	36 in rows = 14,520 ft
16 in rows = 32,670 ft	22 in rows = 23,760 ft		

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For the latest information on our Brassica range,  
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Syngenta Seeds Vegetables has exercised reasonable care and skill in compiling this brochure. All resistances quoted refer only to races or pathotypes indicated at the varieties. Other pathogen races or pest biotypes capable of overcoming the resistance may exist or emerge. Syngenta Seeds Vegetables uses highly elaborate analytical methods to verify specific variety resistances. Specificity of pests or pathogens may vary over time and space and depends on environmental factors. In order to maximize the efficiency of a resistance, it is highly recommended to mix different ways of control such as growing conditions, plant protection products and genetic resistance as part of an integrated crop management. All data in this brochure is intended for general guidance only and the user should apply it in accordance with their own knowledge and experience of local conditions. In case of doubt we recommend that a small scale trial production be carried out to determine how local conditions may affect the variety. Syngenta Seeds cannot accept any liability in connection with this brochure. Resistance against Club Root is effective against the predominant strains but not against infrequent strains that may occur in some fields in Europe and that may break the resistance. At present very sparse information is available on the type of strains and their occurrence. Separation and identification of the different strains is also technically difficult. For Club Root control we recommend culture measures as liming, drainage and calcium fertilization. It is advised to first execute small trials before starting commercial production.