

Descriptions, recommendations and illustrations in this catalogue correspond as closely as possible to tests and practical experience. This information is provided to assist professional growers and users; however, variable local conditions must be taken into account. Under no circumstances shall Vitalis Organic Seeds, North America, accept liability based on such information for deviating results in the cultivated product. The Purchaser is responsible for determining whether the items are suitable for the intended cultivation type and location.

Important Resistance Information:

Resistances in varieties of our crops are coded, unless indicated otherwise. See explanation of our coding list at www.vitalisorganic.com. If a variety is resistant to more than one pathogen, the individual resistance codes will be separated by the symbol “/”.

- If in a resistance code of a certain variety reference is made to certain strains for which the resistance is claimed, this means that no resistance is claimed to other strains of the same pathogen.
- If in a resistance code no reference is made to specific strains of the pathogen for which the resistance is claimed, this means that resistance is claimed only generally to the pathogen, and not to specific strains of the pathogen.

Two examples:

Tm: A Tm:1-3 resistant sweet pepper variety is resistant to Tobamo (Bell Pepper Mosaic Virus, Pepper Mild Mottle Virus, Tobacco Mild Green Mosaic Virus, Tobacco Mosaic Virus, Tomato Mosaic Virus) race 0,1,2 and 3.

TSWV: A TSWV resistant variety has resistance to certain non-specified strains of Tomato Spotted Wilt Virus.

Crop	Type	Code	English Name	Scientific Name
Arugula	Fungi	Hp	Downy mildew	<i>Hyaloperonospora parasitica</i>
Basil	Fungi	Fob	Fusarium wilt	<i>Fusarium oxysporum f. sp. Basilicum</i>
		Pb	Downy mildew	<i>Peronospora belbahri</i>
Cucumber	Virus	CGMMV	Cucumber green mottle	
		CMV	Cucumber mosaic virus	
		CVYV	Cucumber vein yellowing virus	
		CYSDV	Cucumber yellowing stunting disorder	
		PRSV	Papaya ringspot	
		WMV	Watermelon mosaic	
		ZYMV	Zucchini yellow mosaic virus	
	Fungi	Ccu	Scab and gummosis	<i>Cladosporium cucumerinum</i>
		Co	Anthraxnose	<i>Colletotrichum orbiculare</i>
		Foc	Fusarium wilt	<i>Fusarium oxysporum f.sp.cucumerinum</i>
For		Fusarium crown and root rot	<i>Fusarium oxysporum f.sp.radicis-cucumerinum</i>	
Cca	Corynespora blight and target spot	<i>Corynespora cassicola</i>		
Px (es Sf)	Powdery mildew	<i>Podosphaeria xanthii (Sphaerotheca fuliginea)</i>		
Lettuce	Virus	LMV	Lettuce mosaic virus	
		TSWV	Tomato spotted wilt virus	
		TBSV	Tomato bushy stunt virus (lettuce dieback complex)	
		LNSV	Lettuce necrotic stunt virus	
	Bacteria	Ss	Corky root	<i>Rhizomonas suberifaciens</i>
	Fungi	BI	Downy mildew	<i>Bremia lactucae</i>
		CA	Downy mildew	<i>Bremia lactucae</i>
		Fol:1	Fusarium Wilt	<i>Fusarium oxysporum f.sp. lactucae</i>
	Insect	Me	Potato aphid	<i>Macrosiphum euphorbiae</i>
		Nr	Lettuce leaf aphid	<i>Nasanovia ribisnigri</i>
Pb		Lettuce root aphid	<i>Pemphigus bursarius</i>	

Crop	Type	Code	English Name	Scientific Name
Melon	Virus	MNSV	Melon necrotic spot virus	
	Fungi	Fom	Fusarium wilt	<i>Fusarium oxysporum f.sp.melonis</i>
		Px (es Sf)	Powdery mildew	<i>Podosphaeria xanthii (Sphaerotheca fuliginea)</i>
		Gc	Powdery mildew	<i>Golovinomyces cichoracearum (ex Erysiphe cichoracearum)</i>
Insect	Ag	Cotton aphid	<i>Aphis gossypii</i>	
Parsley	Fungi	Pp	Downy mildew	<i>Plasmopara petroselini</i>
Pepper	Virus	ChiVMV	Chili veinal mosaic	
		CMV	Cucumber mosaic virus	
		PepMoV	Pepper mottle virus	
		Tm:0-3	Pepper mosaic virus, Pepper mild mottle virus, Tobacco mild green mosaic virus, Tobacco mosaic virus, Tomato mosaic virus	
		PVY	Potato virus Y	
		TEV	Tobacco etch virus	
	TSWV	Tomato spotted wilt virus		
	Bacteria	Xcv	Bacterial spot	<i>Xanthomonas campestris pv. vesicatoria</i>
Rs		Bacterial wilt	<i>Ralstonia solanacearum</i>	
Fungi	Foc	Fusarium wilt	<i>Fusarium oxysporum f.sp.capsici</i>	
	Pc	Buckeye fruit and root rot	<i>Phytophthora capsici</i>	
	Lt		<i>Leveillula taurica (anamorph: Oidiopsis sicula)</i>	
Nematode	Mi	Root-knot	<i>Meloidogyne arenaria</i>	
	Ma	Root-knot	<i>Meloidogyne incognita</i>	
	Mj	Root-knot	<i>Meloidogyne javanica</i>	
Rootstock, Cucurbit	Fungi	Foc	Fusarium wilt	<i>Fusarium oxysporum f.sp. cucumerinum</i>
		Fom	Fusarium wilt	<i>Fusarium oxysporum f.sp. melonis</i>
		Fon	Fusarium wilt	
		Forc	Fusarium crown and root rot	<i>Fusarium oxysporum f.sp. radiscucumerinum</i>
Spinach	Fungi	Pfs	Downy mildew	<i>Peronospora farinosa f.sp.spinaciae</i>
Squash	Virus	CMV	Cucumber mosaic virus	
		ZYMV	Zucchini yellow mosaic virus	
		WMV	Watermelon mosaic virus	
		PRSV	Papaya ringspot virus	
Fungi	Px (es Sf)	Powdery mildew	<i>Podosphaeria xanthii (Sphaerotheca fuliginea)</i>	
Tomato	Virus	CMV	Cucumber mosaic virus	
		PepMV	Pepper mosaic virus	
		ToANV	Tomato apex necrotic virus	
		ToMV	Tomato mosaic virus, Tobacco mosaic virus	
		TSWV	Tomato spotted wilt virus	
		TYLCV	Tomato yellow leaf curl virus	
		ToMV	Tomato mosaic virus	
	Fungi	Aai	Alternaria stem canker	<i>Alternaria alternata f.sp.lycopersici</i>
		Ff	Leaf mold	<i>Fulvia vulva (ex Cladosporium fulvum)</i>
		Fol	Fusarium wilt	<i>Fusarium oxysporum f.sp. lycopersici</i>
		For	Fusarium crown and root rot	<i>Fusarium oxysporum f.sp. radiscycopersici</i>
		Lt	Powdery mildew	<i>Leveillula taurica (anamorph: Oidiopsis sicula)</i>
		On	Powdery mildew	<i>Oidium neolycopersici (ex Oidium lycopersicum)</i>
		Pl	Corky root rot	<i>Pyrenochaeta lycopersici</i>
Ss	Gray leaf spot	<i>Stemphylium solani</i>		
Va	Verticillium wilt	<i>Verticillium albo-atrum</i>		
Vd	Verticillium wilt	<i>Verticillium dahliae</i>		
Nematode	Ma	Root-knot	<i>Meloidogyne arenaria</i>	
	Mi	Root-knot	<i>Meloidogyne incognita</i>	
	Mj	Root-knot	<i>Meloidogyne javanica</i>	
Abiotic Stress	Si	Silvering		