

# MENNO Florades® - Effectiveness spectrum:

Fungi (including their duration forms)		Viruses/Viroids	Bacteria
Alternaria alternata*10	Phytium aphanidermatum*17	ArMV*2 / 22 (arabis mosaic nepovirus)	Acidovorax avenae ssp. cattleiae*1
Alternaria solani*10	Pythium sp.*6	BePMV*7 (bell pepper mottle virus)	Agrobacterium <sup>a)</sup> rhizogenes *20
Alternaria sp.*1	Phytium ultimum*10	CarMoV*4 (carnation mottle carmovirus)	Agrobacterium <sup>a)</sup> tumefaciens*1
Aspergillus sp.*6	Phytophthora cinnamomi*1	CGMMV*18 (cucumber green mottle mosaic virus)	Clavibacter michiganensis ssp. michiganensis*1/*17
Botrytis cinerea*1/*17	Phytophthora cryptogea*1	CMV*4 (cucumber mosaic virus)	Clavibacter michiganensis ssp. sepedonicus*1
Candida albicans*13	Phytophthora infestans*10/*11	CSVd*7 (chrysanthemum stunt viroid)	Curtobacterium flaccumfaciens*21 Dickeya solani*19
Cercospora beticola*10	Ramularia beticola*10	CyMV*5 / 22 (cymbidium mosaic virus)	Enterococcus faecium*13
Chalara elegans*8			Erwinia amylovora*3/*14
Cladosporium fulvum*21	Rhizoctonia solani*10	MNSV*7 (melon necrotic spot virus)	Erwinia <sup>b)</sup> carotovora ssp. atroseptica*1
Colletotrichum coccodes*10	Rhizopus sp.*6	ORSV*5 / 22 (odontoglossum ringspot virus)	Erwinia <sup>b)</sup> carotovora ssp. carotovora*1/*10
Colletotrichum sp.*1	Streptomyces scabies*1	PepMV*7/*17 / 22 (pepino mosaic v.)	Escherichia coli*13
Cylindrocladium scoparium*1	Taphrina deformans*15	PFBV*2 / 22 (pelargonium flower break virus)	Pectobacterium carotovorum ssp. atroseptica*1
Cylindrocladium spathiphylli*1	Thielaviopsis basicola*1	PLCV*2 / 22 (pelargonium leaf curl tombusvirus)	Pectobacterium carotovorum ssp. carotovorum*1/*10
Dactylium dendroides*1	Trichoderma harzianum*9	PLPV*2 / 22 (pelargonium line pattern virus)	Proteus mirabilis*13 Pseudomonas aeruginosa*13
Didymella bryoniae*17	Trichoderma viride*1	PMMoV*7 (pepper mild mottle virus)	Pseudomonas fluorescens marginaeis*16
Erysiphe cichoracearum*17	Verticillium fungicola*1/*9	PSTVd*7 (potato spindle tuber viroid)	Pseudomonas lachrymans
Fusarium spp.*17		PVX*4 (potato virus X)	Pseudomonas putida
Fusarium oxysporum f.sp. cyclaminis*1/*12		PVY*4 (potato virus Y) RMV*4 (ribgrass mosaic tobamovir.)	Pseudomonas solanacearum*1
Fusarium oxysporum (Stamm Elatiorbegonien)*1		TBRV*2 (tomato blackring nepovirus)	Pseudomonas syringae
Fusarium solani var. coeruleum*1		TMV*2 / 22 (tabacco mosaic virus) ToBRV *22 (tomato blackring nepovirus)	Ralstonia solanacearum*1 Rhizobium rhizogenes*20
Helminthosporium solani *1/*10/*11		ToBRFV*23 (tomato brown rugose fruit virus)	Staphylococcus aureus*13 Xanth. camp. pv. begoniae*1
Mucor sp.*6		ToMV*17 (tomato mosaic virus)	Xanthomonas campestris pv. campestris*1
Ophiostoma quercus*1		TSWV*2 / 22 (tomato spotted wilt tospov.)	Xanthomonas campestris pv. pelargonii*1
Peronospora tabacina*8		ZyMV*7 (zucchini yellow mosaic virus)	

\*1 FAG Forschungsanstalt Geisenheim, Special Field: Phytomedicine, Von-Lade-Str. 1, D-65366 Geisenheim, Dr. Wohanka, Germany

\*2 University Hamburg, Institute for applied Botany, D-2000 Hamburg 36, Germany

\*3 Eidgenössische Forschungsanstalt für Obst-, Wein- und Gartenbau, CH-8820 Wädenswil, Switzerland

\*4 Institut f. Pflanzenkrankheiten und Pflanzenschutz, Universität Hannover, D-30419 Hannover, Herr Prof. Dr. Maïß, Germany

\*5 Albert-Ludwigs-Universität Freiburg, Institut für Forstbotanik und Baumphysiologie, D-79085 Freiburg i. Br., Priv. Doz. Dr. C. Büttner, Germany

\*6 Praxisgutachten über den Einsatz ... Florades (... Einsatz im gärtnerischen Bereich), Dr. M. Wölk, D-56204 Hillscheid, Germany

\*7 HUMBOLDT-UNIVERSITÄT ZU BERLIN, Institut für Gartenbauwissenschaften, Phytomedizin, Frau Prof. Dr. C. Büttner, Germany

\*8 Landesanstalt für Pflanzenbau Forchheim, Dr. N. Billenkamp, Germany

\*9 Horticultural Research International, Dr. H. Grogan, Wellesbourne, Warwick, England

\*10 Institut für Pflanzenpathologie und Pflanzenschutz der Universität Göttingen, Dr. M. Benker, D-37077 Göttingen, Germany

\*11 Institut PPO Wageningen, Applied Plant Research BV, NL-8200 AK Lelystad, Dr. H.T.A.M. Schepers, Dr. A. Veerman, The Netherlands

\*12 Institut PPO Wageningen, Applied Plant Research BV, NL-1431 JV Aalsmeer, Dr. A. Hazendonk, Dr. J.P. Wubben, The Netherlands

\*13 Technische Mikrobiologie Dr. J. Höffler GmbH, D-22045 Hamburg, Germany

\*14 Institut für Pflanzenschutzmittelprüfung, Österreichische Agentur für Gesundheit und Ernährungs., Wien, Dr. M. Keck, Dr. P. Fida, Austria

\*15 Dienstleistungszentrum Ländlicher Raum, Rheinhessen-Nahe-Hunsrück, A. Thomas, Dr. G. Albert, Germany

\*16 Bretagne Biotechnologie Végétal (BBV), E. Pajot, F-29250 St. Pol de Léon, France

\*17 Crop Diversification Centre South, Alberta Agriculture, Food and Rural Development, Dr. M.W. Harding, Dr. R.J. Howard, Canada

\*18 Wageningen UR Glastuinbouw, (tested MENNO CLEAN equivalent to M.F.) I. Stijger, R. Hamelink, Wageningen, The Netherlands

\*19 Wageningen, Plant Research International, R. Czajkowski & W. J. de Boer & J. M. van der Wolf, published online 25.01.2013, Eur J Plant Pathol, Springer

\*20 Hochschule Geisenheim University, Institut für Phytomedizin, Von-Lade-Str 1, D-65366 Geisenheim, Dr. Ada Linkies, H. Fehres, Germany

\*21 Hochschule Geisenheim University, Institut für Phytomedizin, Von-Lade-Str 1, D-65366 Geisenheim, Prof. Dr. Beate Berkelmann-Löhnertz, Germany

\*22 ELIMINATION OF PLANT VIRUSES BY HORTICULTURAL DISINFECTANT, C. Büttner, M. Bandte, Med. Fac. Landbouww. Univ. Gent, 65/2b, 2000, page 703 – 708

\*23 Groen Agro Control, Laboratoriumonderzoek & Advies, Adriaan Vermunt, Petra Hollander, NL-2645 EG Delfgauw., The Netherlands, 25.10.2019

Legal national registration requirements and legislation have to be considered before use.

<sup>a)</sup> Agrobacterium = Rhizobium

<sup>b)</sup> Erwinia = Pectobacterium