Bell Pepper Fungicide Spray Guide for 2018

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Major Diseases of Bell Pepper

Phytophthora blight
(*Phytophthora capsici*)


Photo courtesy: NC State

Bacterial Spot
(*Xanthomonas campestris* pv. *vesicatoria*)


Photo courtesy: NC State

Southern Blight
(*Sclerotium rolfsii*)


Photo courtesy: NC State

Anthracnose
(*Colletotrichum* species)

Spraying Chemicals Effectively

- No single chemical is effective against all foliar diseases
- Alternate products in different fungicide (FRAC) groups
- Avoid overuse of a single product for fungicide resistance management
- Use a preventative spray program instead of relying on the few curative products available

Use a Volume-based Spray Schedule

Less product is needed early in the growing season when plants are small

1. Calibrate your sprayer
2. Determine the maximum spray volume per acre for your sprayer for fully grown plants
3. Determine the volume required to cover an acre of plants when they are young
4. Adjust the acre rate for the volume you are spraying (e.g., if your field requires 100 gal when plants are fully grown and the label says 1 lb. per acre, then you would spray 1 lb. in 100 gallons or 0.33 lb in 30 gallon) Rate = (vol when young/vol when fully grown) x amount per acre when fully grown
5. Apply the entire spray volume

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Table 1. Relative Effectiveness of Various Chemicals for Pepper Disease Control

++++ Excellent; +++ Good; ++ Fair; + Poor; - Not effective; NA not labeled; ND no data			Relative Control Rating					
Active Ingredient (Fungicide trade name)	**Fungicide group[1]**	**Preharvest Interval (Days)**	**Anthracnose of fruit**	**Bacterial spot**	**Phytophthora blight (root and crown)**	**Phytophthora blight (fruit and foliage)**	**Pythium damping off**	**Southern blight**
azoxystrobin (Quadris)	11	0	+++	-	-	-	-	-
azoxystrobin + flutriafol (Topguard)	3 + 11	0	++	-	-	-	-	-
difenoconazole + benzovindiflupyr (Aprovia Top)	7 + 3	0	++	-	-	-	-	+
difenoconazole + cyprodinil (Inspire Super)	3 + 9	0	++	-	-	-	-	-
famoxadone + cymoxanil (Tanos)	11 + 27	3	+	-	-	+	-	-
fluopyram + trifloxystrobin (Luna Sensation)	7 + 11	3	++	-	-	-	-	-
pyraclostrobin (Cabrio)	11	0	++++	-	-	-	-	-
pyraclostrobin + fluxapyroxad (Priaxor)	11 + 7	0	+++	-	-	-	-	-
PCNB (Blocker)	14	Only at Planting	-	-	-	-	-	+++
penthiopyrad (Fontelis)	7	0	-	ND	-	-	-	+
chlorothalonil (various)	M	3	+	-	-	+	-	-
cyazofamid (Ranman)	21	0	-	-	+++	++++	-	-
dimethomorph (Acrobat, Forum)	40	4	-	-	-	+	-	-
dimethomorph + ametoctradin (Zampro)	40 + 45	4	-	-	+++	++++	-	-
fluopicolide (Presidio)[3]	43	2	-	-	+++	++++	-	-
mandipropamid (Revus)	40	1	-	-	+++	++++	-	-
mefenoxam[2] (Ridomil Gold SL)	4	7	-	-	++++[R]	NA	++++	-
mefenoxam + copper (Ridomil Gold Copper)	4 + M	7	+	++[R]	NA	++++[R]	-	-
oxathiapripolin + chlorothalonil (Orondis Opti)	49 + M	0	-	-	+++	++++	-	-
oxathiapripolin + mefenoxam (Orondis Gold 200)	49 + 4	0	-	-	++++	+++	-	-
oxathiapiprolin + mandipropamid (Orondis Ultra)	49 + 40	0	-	-	ND	++++	-	-
propamocarb (Previcur Flex)	28	5	-	-	-	-	++++	-
Bacillus mycoides J (LifeGard WG)	P6	0	-	++	-	-	-	-
Bacillus thuringiensis subsp. *kurstaki* strain ABTS-351 + methyl salicylate (LEAP ES)	NA	NA	-	++	-	-	-	-
fixed copper[4] (various)	M	Check label	+	+++[R,5]	-	++	-	-
mancozeb (Manzate Pro-Stick, Dithane F45)	M	5	++	+[5]	+	+	-	-
streptomycin sulfate[6] (Agri-Mycin, Firewall)	25	Not for field use	-	+++[R]	-	-	-	-

[1] Fungicides are separated into groups according to their mode of action and risk of resistance development. Numbers distinguish the different fungicide groups; whereas letters refer to multi-site activity.

[2] *P. capsici* becomes resistant to mefenoxam quickly. Ridomil Gold may be applied to pepper at transplanting, but it is NOT registered for control of Phytophthora blight; the foliar blight phase of Phytophthora cannot be controlled with foliar applications of Ridomil Gold.

[3] Presidio should always be tank mixed with a protectant (i.e. copper) to reduce the risk of fungicide resistance.

[4] Fixed coppers include: Champ, Champion, Cuprofix Ultra, Kocide, MasterCop, Nordox, Nu-Cop.

[5] Copper tank-mixed with mancozeb enhances efficacy against bacterial spot.

[6] Streptomycin may be used on transplants but is NOT registered for field use.

[R] Resistance to this pesticide has been detected in the pathogen population.