

Table 3 Overview of positive (+), negative (-) or neutral (o) effects on phytopathogenic fungi resulting from the feeding activity of herbivores on the same plant. ‘Direct/plant-mediated effects’ = Effect of herbivore infestation on fungus results directly from herbivore activity and/or herbivore-induced local plant responses’. ‘Locally plant-mediated effects’ = Effect of herbivore infestation on fungus results from plant responses in feeding-damaged leaf. ‘Systemic effects’ = Effect of herbivore infestation on fungus results from plant responses in leaf (leaves) adjacent to feeding-damaged leaf. ‘Temporal scale of herbivory and fungal infection’ indicates length of time of herbivore feeding and time between end of feeding by herbivore and inoculation of fungus.

EFFECTS OF HERBIVORES ON FUNGI								
Spatial scale	Plant	Herbivore	Temporal scale of herbivory and fungal infection		Fungus	Effects on fungus	Lab / Field	Reference
			Feeding period	Time until inoculation				
Direct/plant-mediated effects								
	<i>Rumex crispus</i>	<i>Gastrophysa viridula</i> (Coleoptera)	24 hours	1, 3, and 7 days after herbivory	<i>Uromyces rumicis</i> (rust)	-	L	Hatcher et al. 1994b
	<i>Rumex obtusifolius</i>	<i>Gastrophysa viridula</i> (Coleoptera)	24 hours	1, 3, and 7 days after herbivory	<i>Uromyces rumicis</i> (rust)	-	L	Hatcher et al. 1994b
	<i>Populus</i> hybrids	<i>Tetranychus</i> spp. (Acari)	No data available.		<i>Septoria musiva</i> (leaf spot)	+	L	Klepzig et al. 1997
	<i>Populus</i> hybrids	<i>Chrysomela scripta</i> (Coleoptera)	No data available		<i>Septoria musiva</i> (leaf spot)	+	L	Klepzig et al. 1997
	<i>Cucurbita pepo x texana</i>	<i>Diabrotica undecimpunctata</i> (Coleoptera)	natural infestation and infection during vegetation period		<i>Erysiphe cichoracearum</i> (mildew)	-	F	Moran & Schultz 1998
	<i>Cucurbita pepo x texana</i>	<i>Diabrotica virgifera</i> (Coleoptera)	natural infestation and infection during vegetation period		<i>Erysiphe cichoracearum</i> (mildew)	-	F	Moran & Schultz 1998
	<i>Cucurbita pepo x texana</i>	<i>Acalymma vittatum</i> (Coleoptera)	natural infestation and infection during vegetation period		<i>Erysiphe cichoracearum</i> (mildew)	-	F	Moran & Schultz 1998

Table 3 continued

Plant	Herbivore	Temporal scale of herbivory and fungal infection		Fungus	Effects on fungus	Lab / Field	Reference
		Feeding period	Time until inoculation				
Direct/plant-mediated							
<i>Cucurbita pepo</i> x <i>texana</i>	<i>Anasa tristis</i> (Heteroptera)	natural infestation and infection during vegetation period		<i>Erysiphe cichoracearum</i> (mildew)	○	F	Moran & Schultz 1998
<i>Cucurbita pepo</i> x <i>texana</i>	<i>Aphis gossypii</i> (Homoptera)	natural infestation and infection during vegetation period		<i>Erysiphe cichoracearum</i> (mildew)	○	F	Moran & Schultz 1998
<i>Glycine max</i> 'Bragg'	<i>Spissistilus festinus</i> (Homoptera)	natural infestation and infection during vegetation period		<i>Diaporthe phaseolorum</i> (stem canker)	+	F	Padgett et al. 1994
<i>Glycine max</i> 'Bedfort'	<i>Spissistilus festinus</i> (Homoptera)	natural infestation and infection during vegetation period		<i>Diaporthe phaseolorum</i> (stem canker)	+	F	Padgett et al. 1994
<i>Citrullus lanatus</i>	<i>Thrips tabaci</i> (Thysanoptera)	2 days	2 days after herbivory	<i>Colletotrichum orbiculare</i> (athracnose)	-	L	Russo et al. 1997
<i>Citrullus lanatus</i>	<i>Thrips tabaci</i> (Thysanoptera)	2 days	2 days after herbivory	<i>Colletotrichum orbiculare</i> (athracnose)	○	L	Russo et al. 1997
<i>Citrullus lanatus</i>	<i>Aphis gossypii</i> (Homoptera)	2 days	2 days after herbivory	<i>Colletotrichum orbiculare</i> (athracnose)	-	L	Russo et al. 1997
<i>Citrullus lanatus</i>	<i>Aphis gossypii</i> (Homoptera)	2 days	2 days after herbivory	<i>Colletotrichum orbiculare</i> (athracnose)	+/-	L	Russo et al. 1997
<i>Salix x cuspidata</i>	<i>Plagioderia versicolora</i> (Coleoptera)	3 days	1 day after herbivory	<i>Melampsora allii-fragilis</i> (rust)	○	L	Simon & Hilker unpubl. results
<i>Salix x cuspidata</i>	<i>Plagioderia versicolora</i> (Coleoptera)	3 days	1 day after herbivory	<i>Melampsora allii-fragilis</i> (rust)	○	F	Simon & Hilker unpubl. results

Table 3 continued

Plant	Herbivore	Temporal scale of herbivory and fungal infection		Fungus	Effects on fungus	Lab / Field	Reference
		Feeding period	Time until inoculation				
Locally plant-mediated effects							
<i>Rumex crispus</i>	<i>Gastrophysa viridula</i> (Coleoptera)	24 hours	1, 3, and 7 days after herbivory	<i>Uromyces rumicis</i> (rust)	1 d : ● 3, 7 d : -	L	Hatcher et al. 1994b
<i>Rumex obtusifolius</i>	<i>Gastrophysa viridula</i> (Coleoptera)	24 hours	1, 3, and 7 days after herbivory	<i>Uromyces rumicis</i> (rust)	1 d : ● 3, 7 d : -	L	Hatcher et al. 1994b
<i>Brassica rapa</i> ssp. <i>pekinensis</i>	<i>Phaedon cochleariae</i> (Coleoptera)	24 or 72 hours	0, 3, or 8 days after herbivory	<i>Alternaria brassicae</i> (black spot)	●	L	Rostás & Hilker in press
<i>Lycopersicon esculentum</i>	<i>Helicoverpa zea</i> (Lepidoptera)	8-12 hours	2 days later	<i>Pseudomonas syringae</i> pv. <i>tomato</i> (bacterium)	-	L	Stout et al. 1999
Systemic effects							
<i>Rumex obtusifolius</i>	<i>Gastrophysa viridula</i> (Coleoptera)	Natural infestation and infection during vegetation period		<i>Uromyces rumicis</i> (rust)	-	F	Hatcher & Paul 2000
<i>Rumex obtusifolius</i>	<i>Gastrophysa viridula</i> (Coleoptera)	Natural infestation and infection during vegetation period		<i>Ramularia rubella</i> (leaf spot)	-	F	Hatcher & Paul 2000
<i>Rumex obtusifolius</i>	<i>Gastrophysa viridula</i> (Coleoptera)	Natural infestation and infection during vegetation period		<i>Venturia rumicis</i> (leaf spot)	-	F	Hatcher & Paul 2000
<i>Rumex crispus</i>	<i>Gastrophysa viridula</i> (Coleoptera)	24 hours	1, 3, and 7 days after herbivory	<i>Uromyces rumicis</i> (rust)	1, 3 d : ● 7 d : -	L	Hatcher et al. 1994b
<i>Rumex obtusifolius</i>	<i>Gastrophysa viridula</i> (Coleoptera)	24 hours	1, 3, and 7 days after herbivory	<i>Uromyces rumicis</i> (rust)	-	L	Hatcher et al. 1994b

Table 3 continued

Plant	Herbivore	Temporal scale of herbivory and fungal infection		Fungus	Effects on fungus	Lab / Field	Reference
		Feeding period	Time until inoculation				
Systemic effects							
<i>Glycine max</i> 'Bragg'	<i>Pseudoplusia includens</i> (Lepidoptera)	14 days	natural infection in the field	<i>Diaporthe phaseolorum</i> (stem canker)	-	F	Padgett et al. 1994
<i>Glycine max</i> 'Bragg'	<i>Pseudoplusia includens</i> (Lepidoptera)	11 days	natural infection in the field	<i>Calonectria crotalariae</i> (red crown rot)	-	F	Padgett et al. 1994
<i>Brassica rapa</i> ssp. <i>pekinensis</i>	<i>Phaedon cochleariae</i> (Coleoptera)	24 or 72 hours	0, 3, or 8 days I after herbivory	<i>Alternaria brassicae</i> (black spot)	o	L	Rostás & Hilker in press
<i>Salix x cuspidata</i>	<i>Plagioder a versicolora</i> (Coleoptera)	3 days	1 day after herbivory	<i>Melampsora allii-fragilis</i> (rust)	+	L	Simon & Hilker unpubl. results