



Specific Adjuvants that Facilitate Systemic Movement of FireLine™ 17 WP & FireWall™ 50 WP

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Huanglongbing (HLB or “greening”) is a serious disease in Florida citrus caused by the bacterium ‘*Candidatus Liberibacter asiaticus*’ (CLas), which are transmitted by Asian citrus psyllids as they feed. Once inside the leaf, CLas multiply and move throughout the tree via its internal vascular network. HLB is thus a *systemic* disease and, because of this, foliar applications of FireWall™ 50 WP and/or FireLine™ 17 WP for CLas/HLB¹ should be applied with adjuvants that facilitate systemic transport of the bactericide throughout the tree. The bactericidal activity of FireWall™ and/or FireLine™ can then work to kill CLas and tree health can begin to recover.

Recognizing the need for systemic activity of FireWall™ and FireLine™ when used against CLas, AgroSource initiated a research project in cooperation with the USDA ARS in Fort Pierce, FL in 2013 under the framework of a Cooperative Research and Development Agreement (CRADA) to test a wide range of adjuvant classes from numerous manufacturers. These were scientifically evaluated using proprietary methodology to determine which best enabled systemic transport of the active ingredients in FireWall™ and/or FireLine™ in citrus. Preliminary results (see AgroSource Technical Bulletin 10 published April 2015) revealed TACTIC™ greatly facilitated the systemic movement of FireWall™ 50 WP.

Continued work through the CRADA has identified several more adjuvants for use with FireWall™ 50 WP and/or FireLine™ 17 WP that facilitate their systemic movement in the tree. Field trials are currently being conducted to confirm the field performance of these additional adjuvants. AgroSource recommends growers use one of these adjuvants when applying FireWall™ 50 WP and/or FireLine™ 17 WP to citrus for management of CLas and tree health per the table below.

Adjuvant	Recommended to be applied with	
	FireWall™ 50 WP	FireLine™ 17 WP
GROUND®	X	X
JOINT VENTURE®	X	X
KeyPlex® 445 DP® ²	X	X
LI-700®		X
TACTIC™	X	X

For more information about FireLine™ 17 WP and FireWall 50 WP™ bactericides, please contact AgroSource Florida sales representative Bo Meador at (863) 673-0727, email us at sales@agrosource.net; or visit us on the web at www.agrosource.net.

¹ Application of FireWall™ 50 WP and FireLine™ 17 WP to Florida citrus is permitted in accordance with the Crisis Declaration issued by the Florida Agriculture Commissioner on March 7, 2016.

² KeyPlex® 445 DP® is a foliar nutrient product having non-plant food additives which evidently act to facilitate uptake.