Broad Mite Biology, Growth Stages, Damage to Blackberry and Control

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(25 August 2016)
(Photos by D. Johnson unless specified)
Broad Mite Life Cycle (7 to 11 days)

Source: http://organicsoiltechnology.com/broad-mite-description-control.html
Broad Mite Stages

- Amber adult female (note hour glass on back)
- Male carrying deutonymph (resting stage) before mating
- Spindle-shaped deutonymph
- Protonymph
- Predatory mite egg
- Male
- Broad mite eggs

(SEM Photo: Eric Erbe, Ron Ochoa and Chris Pooley, ARS)
Seasonal Changes in Numbers of Broad Mite per Prime-Ark® 45 Primocane Leaflet (White Co., AR in 2015)

Active broad mites and eggs (brown lines - right Y-axis)
Predatory mites (blue lines, left Y-axis)
(Graph: D. Johnson)
Healthy versus Broad Mite-Damaged Blackberry on 18 June 2015 (Fruit Station in Clarksville, AR)

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Healthy versus Broad Mite-Damaged Blackberry

Healthy flowering terminal

Downward cupped leaves

Upward cupped leaves

On same date, some terminals have downward cupped leaves (center – flower buds) and others have upward cupped leaves (right – no flower buds).
Sequence from early terminal leaf bronzing/cupping to dead leaves
Broad Mite Terminal Damage (19 Aug. 2015; White Co., AR)

- Bronzing tip and downward cupped leaves
- Downward cupped and dying leaves
- Bronzing and upward cupped leaves
Healthy versus Broad Mite-Damaged Laterals
(19 August 2015; White Co., AR)

Healthy lateral

Bronzing lateral

Broad mite killed lateral
Broad Mite Damage of ‘Prime Ark® 45’ Blackberry
Before & After Agri-Mek SC Application
on 15 July 2016
(White Co. Arkansas)

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July 7:
Significant broad mite damaged terminals before miticide treatment
On July 22:
Healthy primocanes, lateral shoot growth and fruit after Agri-Mek SC spray on July 15. The grower pruned off damaged terminals after the spray to promote lateral shoot growth (area circled).