T.R.I. ADVISORY CIRCULAR No.PM 6

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MITE CONTROL

(This Advisory Circular supersedes Advisory Circular PM 6 with Serial No. 01/08 issued in June 2008 and related previous Advisory Circulars and links with Advisory Circular PU 4)

1. Introduction

Five species of mites cause damage to tea in Sri Lanka. Their common names are Red Spider Mite (*Oligonychus coffeae* Neither), Scarlet Mite (*Brevipalpus californicus* Banks), Yellow Mite (*Hemitarsonemus latus* Banks), Purple Mite (*Calacarus carinatus* Green) and Pink Rust Mite (*Acaphylla theae* Watt).

Tea mites are generally dry-weather pests, feeding on tea foliage but also attacking other vegetation, such as certain species of shade trees, cover crops, weeds, *etc.* Tea by roadsides and in pockets, exposed to various environmental and physiological stress factors, are prone to infestation by different species of mites.

Mites often make their appearance in isolated pockets at the beginning of dry weather, and unless controlled in time they can spread over an entire field causing significant toss of the crop. In particular, Scarlet Mite and Red Spider Mite could result in a setback to bush growth.

2. Mite-prone Fields and Spot Treatments

While some fields are prone to mite infestations, others are seldom affected. It is advisable to use spot applications of acaricides for prevention rather than as a curative measure after infestation.

3.Rain and Mites

Though mite infestation is generally less pronounced during wet weather, mild wet-weather conditions are not conducive to its eradication. In fact, light rain promotes Yellow Mite. Red Spider Mite infestations continue into monsoonal weather once the populations reach high levels.

4.Damage Symptoms

4.1. Red Spider Mite

It mainly attacks the upper surface of the maintenance foliage. This mite could be identified by the bronze colouration of its upper surface. Webs and minute white specks of cast skin are visible.

Thumb Nail Test. When a thumb is pressed against an affected leaf, a pin-dot mark of mite blood appears.

4.2. Purple Mite

Older leaves are preferred. These mites occur on both surfaces of the leaf. The leaves attacked have a dull matt appearance and a purplish-bronze discolouration.

4.3. Pink Rust Mite

Young leaves are preferred. Mostly found on the under surface of the leaf, but found on the upper surface as well. Petioles and tender stems are also attacked. The affected leaves become pale in colour and curl upwards. The veins and margins show a pinkish discolouration.

4.4. Scarlet Mite

Feeds mainly on the lower surface of the maintenance foliage, especially near the midrib and on the petiole. There is a dark-brown necrosis of the midrib and petiole. Heavy attack leads to severe defoliation.

4.5. Yellow Mite

Mainly attacks the younger leaves, the first 2 or 3 leaves and the bud. Found in nurseries, young tea fields and fields recovering from prune The flush is stunted, deformed and brittle, and pale and yellow in colour The feeding area remains as a light corky-brown necrotic strip over the mid-rib.

5. Integrated Approaches to Manage Mites

In order to ensure successful control of mites in tea lands, proper monitoring should be undertaken for obtaining an understanding of the spread, locations and specific times of the year where the mites occur.

5.1. Planting of non-host plants of mites on road sides such as Artemisia spp., Wild sunflower as the road side with dust enhances the buildup of mite population.

5.2. Improve and maintain shade during dry period to reduce stress for tea as the stressed plants are highly susceptible to mites.

5.3. Ensure balanced fertilization to minimize stress.

5.4. Chemical Control

Chemical spraying should be used only when the signs of mite damages appear and the infestation stages of the mites are known.

Please refer Advisory Circular PU 4 for recommended acaricides and dosages.

For effective control of mites, spraying should be done to the undersurface of the foliage as well.

Spraying in plucking fields should be carried out immediately after plucking.

When fields sprayed with Sulphur, the green leaves should be bulked with ten times the amount of flush from unsprayed areas.

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