Spider mite management in outdoor tomatoes

Recognize the problem
Spider mites ("Utiti wekundu" in Swahili) are tiny, but can be seen with a hand lens or good eyes. They never have wings. They usually attack the undersides of leaves. They cause tiny white yellowish feeding spots on both leaf surfaces. At heavy mite feeding, leaves become silvery-greyish. But leaves are not covered with silvery powder, as for mildew disease. Mites also produce fine webbing. Heavily infested leaves are whitish, covered with webs and may dry up.

Background
Mites live on many different plants and may appear in tomatoes any time. They multiply quickly as the plants grow. Mites like hot and dry weather.

Management
To prevent the problem:
• Use varieties that can tolerate some mites (such as Roma VFN, RioGarde).
• Do not place field plots with young tomatoes next to plots with older tomatoes as mites can mass-multiply and then move towards the younger plants.
• Irrigate to strengthen plants and reduce impact of mite damage. Note, that very moist conditions can enhance tomato diseases.
• Remove and bury all debris from harvested tomatoes as mites can survive up to half a year in debris, and may move to adjacent younger tomatoes.

After first detection of mites on several plants, spray once or twice max. per season. Spray directly on the underside of leaves. For older plants, spray after staking and pruning to increase the chance of the spray reaching the mites. Use either:
• Neem-based products (such as nimbecidine) at 1 litre of product/acre or 10 plastic bottle-lids/20 litres of water in a knapsack sprayer. Alternatively, dissolve ¼ of a cup of grinded neem seed cake or seed powder per litre of water. Start spraying about 15 days after transplanting.
• 1/3 cup horticultural oil mixed with 4 litres water. Stir very well and spray at 4 week intervals.
• Finely chop 20 garlic cloves, soak for 1 day in 10 bottle-lids of mineral oil, then add 1 bottle-lid of soap, stir, add 2 litres of water and stir again). Spray over plants max twice in 1 week interval
• Strong water sprays cause mites to drop to the ground, but can enhance diseases.

In case of further infestation of up to 1/3 of plants, consider further action:
• Repeat the above sprays.
• Spray Abamectin-based products twice max. (WHO toxicity class U, unlikely hazard). Do not spray 3 days or less before harvest.
• Avoid spraying other pesticides, because there are many very toxic ones. Use only products declared acaricides (which means mite pesticides).

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > Tetranychus spp.