



Fig. 3. A tally of vegetation kill was made one year following treatment. Seventy to eighty percent of the stems were completely killed by the ester formulation. Note invasion by grasses and herbaceous vegetation. This is Pennsylvania stream treated with the 2,4,5-T ester formulation.

mine the effect of the herbicides on the riparian vegetation (Figure 3). Streamside vegetation was very brushy. The number of stems under 4 inches in diameter breast high ranged from 5,600 to 11,520 per acre. Results indicate that the ester formulation had completely killed 70 to 81% of the stems and the emulsifiable acid killed 58 to 78%. In addition, from 17 to 32% of the remaining stems were partially killed. A subse-

quent treatment in 3 to 5 years should eliminate the remaining stems. New streambank vegetation consists primarily of grasses and herbaceous species and should eventually predominate.

On the basis of this study it appears that phenoxy herbicides can be used to control riparian vegetation on municipal watersheds, if properly applied with the normal precautions, without constituting a water pollution hazard.

Table 2. Results of streamflow samples collected by panel in Pennsylvania and New Jersey to determine contamination.

Herbicide and Time of Sample	Herbicide Concentration in Penna. Streams	Streamflow Sample N. J. Streams
	ppb	ppb
2,4,5-T ester		
After spraying	40	40
4 hours later	20	20
Next 9 samples	neg.	neg.
After first large storm	10	neg.
2,4,5-T acid		
After spraying	40	20
4 hours later	10	neg.
Next 9 samples	neg.	neg.
After first large storm	20	neg.
Both herbicides		
All downstream samples	neg.	neg.

### Mites Can Be Controlled

Mites which attack ornamental shrubs, fruit trees and bermudagrass lawns can be controlled with Tedion or Kelthane, two specific miticides, according to Stanley Coppock, entomologist

with the New Mexico State University Cooperative Extension Service, University Park, N. M. Malathion is also effective although it is not a specific miticide.

Mites vary in size from almost

### Dutch Elm Disease Control Should Continue in Winter

Dutch elm disease doesn't attract much attention during the winter, but this is the time to put into effect measures to help keep it from spreading next spring, the National Arborist Assn. recommends. Sanitation and spraying are still the most effective means known to control this fatal disease of elm trees.

The overwintering habits of the tiny bark beetle makes sanitation an entirely practical control measure. Destroy weakened elm wood in which the beetles may live. By eliminating their habitat the beetle population is reduced, thus lessening the chances of the disease being spread.

Destruction of beetle-infested, diseased elm trees is of greatest importance; no elm material that can serve as living quarters for the beetles should be neglected. The National Arborist Association warns that diseased elm trees should be felled and the wood destroyed, preferably by burning, well before the spring emergence of the beetles.

Equally important in the disease control program is the application of an insecticidal spray to protect healthy elm trees against the feeding beetles. Spraying should be done annually, either in the fall after leaves have dropped and before freezing weather arrives, or in early spring before the new leaves appear.

microscopic to as big as the head of a pin. The European red mite, two-spotted mite, and McDaniel mite are troublesome on deciduous and fruit trees and shrubs. Red mites, prevalent in early spring and summer, experience a population decrease in early August. Two-spotted mites and McDaniel mites are in greatest number at the end of July and are a problem until fall.

The bermuda mite is specific on bermudagrass. Symptoms are shortening of the plant stems and browning of the vegetation. Diazinon or Kelthane work best on the bermuda mite.