the leaders. The water sheds of our rivers are still in the hands of the Provincial Governments and they can at their pleasure reserve as much of them as they will for the storage of moisture, timber, and health and strength. Those reserves if managed according to the best foreign methods should furnish no inconsiderable revenue, and we certainly have enough and to spare of broad rich acres waiting anxiously for the plough to permit these barren lands to retain their forest glories.—*Toronto News.*

EXPERIMENTS WITH TOMATOES.

N. Y. Agricultural Experiment Station.

Our tests with tomatoes include 64 named samples. One hundred seeds of each kind were planted in boxes in the greenhouse April 9-11, and the time required for vegetation was six to nine days. The number of seeds which vegetated varied from 14 to 100 per cent. as between the different varieties, the average being 74 per cent. Four plants of each kind were transferred to the garden on May 24. The first bloom was noted 61 days from planting upon the Little Gem variety, and the last variety to bloom was the Improved Large Yellow, in 104 days from planting. The first tomato to ripen was of the Green-Gage variety, and was noted July 31, or 112 days from planting. The first large-fruited variety that ripened ten fruits was the Alpha, 135 days from planting, or upon August 22. The New Currant, a very small variety had ripened 10 fruits on August 18, and the Turk's Cap, another small variety, August 22. The President Garfield, a so-called new variety, failed to ripen any fruit. We find that the order of ripening of the varieties does not agree with that noted last season. Thus, last year the Acme was two days later than the Mayflower; the past season it was 7 days earlier. Last year the Acme was 6 days earlier than the Paragon; the past season it was 30 days earlier. Last year the Acme and Trophy ripened the same day; the past season the Acme was 7 days earlier than one sample of the Trophy, and 11 days earlier than another.

It is interesting to note that tomatoes which came up in the garden as weeds from the last fall's seeding, seemed to ripen their fruit at about the same time with the earlier class as grown by us from the planting of April 9th-11th.

We note that as a rule smooth tomatoes have few cells, and conversely, that many-celled tomatoes are rough. The number of cells found varies in the fruits on the same plant, as does also the smoothness of the fruit. These facts suggest that in order to secure smooth fruit we should select for seed those which are few-celled. As evidence in favor of this suggestion, we note that fruits of the Acme tomato are invariably smooth, and the number of cells in this variety rarely exceeds four. The Cherry, the Currant and Apple tomatoes are also invariably smooth, and rarely have more than two cells.

The roots of a tomato plant examined occupied the upper eight inches of the soil, and were traced to a distance of 24 inches on one side, and 80 inches on the other. From this it appears that the plant drew its nourishment from a circle about 4½ feet in diameter, or from an area of about 16 square feet. A single root was traced downward to a depth of 2½ feet. The tap root was clothed with a multitude of fibrous roots to the depth of 8 inches, where it separated into massy branches. This rooting habit is what we would *a priori* expect from a plant originating in the tropics. It seems at present to be a safe generalization that all plants grown in our gardens, of tropical origin, are superfical rooters, and that consequently they not only require a hot season for their best development, but that the