This process is the removal of a small section of the bark surrounding the cane for the purpose of obstructing the downward flow of sap, which is thereby caused to accumulate in excessive quantities in the portions of the cane above the ring, and to supply these portions richly with food materials. Experiments were tried last summer to test the results of ringing on several varieties. The rings of bark were removed in the period between June 27 and July 5, when the grapes were from one-third to one-half grown. The width of the ring removed in most cases was one-half inch, but on some canes only one-fourth inch. The following notes taken at the time of ripening indicate the results on each varietv :---

Concord showed the first on the ringed cares to be slightly larger and a day or two in advance of the fruit of the rest of the vine.

Cambridge showed the fruit on the ringed canes to be larger, of better quality, and two or three days, earlier than that on other canes.

Brighton showed no difference in size, but three days difference in earliness.

Columbian Imperial showed very great difference in size, the berries averaged one-fifth larger on the ringed than on the unringed canes, while the ringed canes ripened fruit two weeks earlier than other canes of the same vines.

Agawain showed only a slight difference in size and earliness.

Herbert showed no difference except that the fruit on the ringed canes was poorer in quality than the rest.

Moore's Early showed no perceptible difference in size, quality or earliness.

Nuagara showed the fruit on the ringed canes to be two days earlier and slightly superior in quality to that on the canes.

The Delaware showed better and earlier fruit on the ringed than on the unringed canes, but showed the best fruit where only a small section of the bark had been removed.

The best results were obtained on canes where the bark overgrew the sections from which it had been removed. Where the bark overgrows section about the time the first begin to ripen the surplus food material in the cane is drawn away into the lower parts of the vine and the fruit ripens with only a normal quantity of food material present. If the section is not overgrown, the excess of food remains, the fruit is forced to ripen with this excess on hand, and hence ripens improperly.

The width of the section of bark to be removed should vary according to the vigor of the cane and the variety. On strong canes of vigorous varieties three-fourths of an inch is not too much while on feeble varieties one-fourth of an inch may be sufficient.

## W. L. HALL

Kansas State, Agricultural College.

