

**REMARKS ON CRANBERRY CULTURE**

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Perhaps you would be interested to know that while there has been no construction of cranberry marsh on a large scale this year quite a number of growers have put in small areas of new marsh, and several parties have started new locations in a small way. Altogether 50 acres of new marsh have been planted. There has also been some re-modelling of old fields.

Varieties of vines used were as follows: 7A. Native, 7A. Howes, 15A. Searles, and 26A. McFarlin. Growers have sanded about 275A. this season.

A careful check has been made of the acreage of cranberries which should be used for statistical purposes for Wisconsin at the present time. The acreage was listed as 2120 in 1928. Making corrections for changes since 1928 both for new plantings and abandoned areas (those outside water protection) we find that there are not now more than 2000 acres of vines in the state, including the 1933 plantings. Some of this area is in poor condition but is being rapidly reclaimed by the aid of the electric clipper, hand weeding, sanding, and the use of various weed-killers.

The budding last fall was light and winter took a heavy toll so we may not expect a large crop. Considerable damage was done last year by the root girdler and there may be further work this summer. This pest is easily controlled by fall flooding and should be a menace only where there is no water available in September. Girdler work is common and widespread in the central and southern districts even where no vines have been killed as yet. Wherever it can be done in these locations, growers should flood after harvest. A 48 hour full flood should be long enough before September 15. The same result should be obtained by holding the water over the surface two or three weeks to extend into October.

As usual some damage has been done by the black-head fireworm and slight incidental injury by flooding for control. As was the case last spring, June flooding became dangerous because of the very warm days and nights from the middle of May on through the flooding season. The fire-worm will live almost as long under water as will the hocks and the grower who has to flood must know to a nicety how long his vines can remain under water without injury. Many growers have taken twelve hours complete flood at about June 5 to June 10 as a base to work from. The time of safety is determined by several influences such as the advancement of growth, the water temperatures, the kind of water and the kind of weather. Growers who cannot get the water on and off quickly should not attempt June floodings, but should make a longer flood earlier. When fireworms are very numerous I do not think they can be controlled by May flooding except in seasons of very early hatching. Under these conditions it would be well to water-cure. A good method to use would be to let off the winter flood as usual, reflood about May 25, and let off the water June 25 to June 30, reflood again in 15 to 18 days for 30 hours to catch worms that may not have hatched under the flood. With good weather conditions there should not be any killing of new growth by the latter flood.

Those using the June flood and having high spots that do not readily cover for the desired time should either scalp them down to the general level and replant or mow or burn over the area. By the latter methods there should be little or no crop loss as larger yields may be expected for several years, following the first year's loss. The

same usually holds good after the water-cure. If each grower will take careful notes of water temperatures and the state of the weather, after a few trials he should learn to time his flooding so as to sustain no hook injury. Apparently the best time to flood is to have the twelve hours all in daylight. Vines do not supply oxygen to themselves in darkness under water and not as much in dark colored water as in water that is clear.

Further testing of fuel oil as a weed killer has demonstrated that some of the most feared weeds can be controlled by its use. It is not yet quite clear whether the No. 1 or the No. 3 oil is best. My tests favor the No. 3, but some growers think the No. 1 is better. We have much more to learn about the oils and their application, but one thing seems certain: The soil must be dry when oil is applied. Rain soon after or flooding 24 hours after application, apparently does not influence results.

Growers using the stamping method of setting vines on peat are now getting splendid results, by using plenty of good vines carefully distributed and carefully stamped in. The method of cutting vines into very short lengths and puddling in with a fork usually gives a good catch, but water must be held very high for a long period and the plants seem to make a short spindling growth the first year. The past three years have shown some very excellent fields planted by the dibble method and by the single blade stamper through sand. If the dibble is used, great care should be taken that the plants do not heave by frost. Heaving breaks the roots and retards the next year's growth. There seems to be little choice between the dibble and the single blade stamp when planting through sand. In planting through sand with the dibble, the best looking fields have been planted in squares 6 x 6 inches. I would suggest that someone try planting 5 x 8 inches. This will take a few less vines and will give some space for the inducement of runners and also some space to walk in for the first year's weeding. A small area planted 5 x 8 in our nursery gave excellent results in vine growth.

I am pleased that so many growers who have remade marsh or made new in the past few years, have made level beds getting out all bad grass roots before planting, and have selected vigorous vines getting them in early. Money spent for these things is money spent to good advantage. It is better to construct well, even if less acreage must be built.

Because of the severe injury to vines in many marshes, by the almost unprecedented cold of late Nov. and of Dec. last season, there will undoubtedly be a reaction toward earlier flooding this fall. I hope growers will not go back to the old method of early and deep winter flooding.

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## CRANBERRY PROBLEMS OF 1933

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Due to the last two or three very dry years, insects in Wisconsin cranberry marshes have increased very rapidly. Take the leaf hoppers (*Euscelis striatulus*, *Euscelis vaccinii*) for example, the only known carriers of the cranberry false blossom virus. My records (I now have a complete record of the leaf hopper population on every cranberry bog in the state) show that since 1931 the leaf hopper population on some marshes has increased many times. This means that most likely the false blossom is going to spread very rapidly on those