

KEEP ASPARAGUS COMING

By E. S. HABER

FOLKS who grow asparagus generally prize it as "tops" among their vegetable crops.

There are good reasons for this: Asparagus comes popping through the ground early and generally is ready to eat long ahead of any other vegetable; it "hits the spot" in taste for most folks; it is a good vegetable to can or to freeze for cold storage lockers; it is easy to grow and harvest; once a planting is established, it will last for many years if given the right treatment.

For nearly 15 years we have been carrying on work here at the Iowa Station to answer such questions as: What age and size of plants or crowns are best for planting? Do male or female plants yield best? How soon after planting can spears be

harvested? How late in the season can spears be harvested without reducing yields in future years? How should the plants be spaced to secure the best yield and large spears? How can weeds be controlled best? Do plants produce more spears and greater weight when cut at 6- to 9-inch lengths or 9 to 12 inches?

Here in brief is what we have found and the conclusions we've drawn:

1. Plants 1-year old are superior to 2- or 3-year-old plants for setting out. We found little difference in the results from crowns weighing $\frac{1}{2}$ ounce to about 2 ounces, but when the crowns weighed less than $\frac{1}{2}$ ounce, results were not so good.

2. Male plants yield more spears and larger total weight than females, but the spears from female plants are larger

individually and of better quality. Whether male or female plants are the better is not important, however, because one cannot afford to leave the plants 2 or 3 years in a nursery row to determine their sex before planting them.

3. Spring planting is best in Iowa. We had heavy loss with fall planting. (Massachusetts experiments have shown that deep planting as usually recommended is not necessary. From 4 to 6 inches from the top of the crown to the surface of the soil is sufficient.)

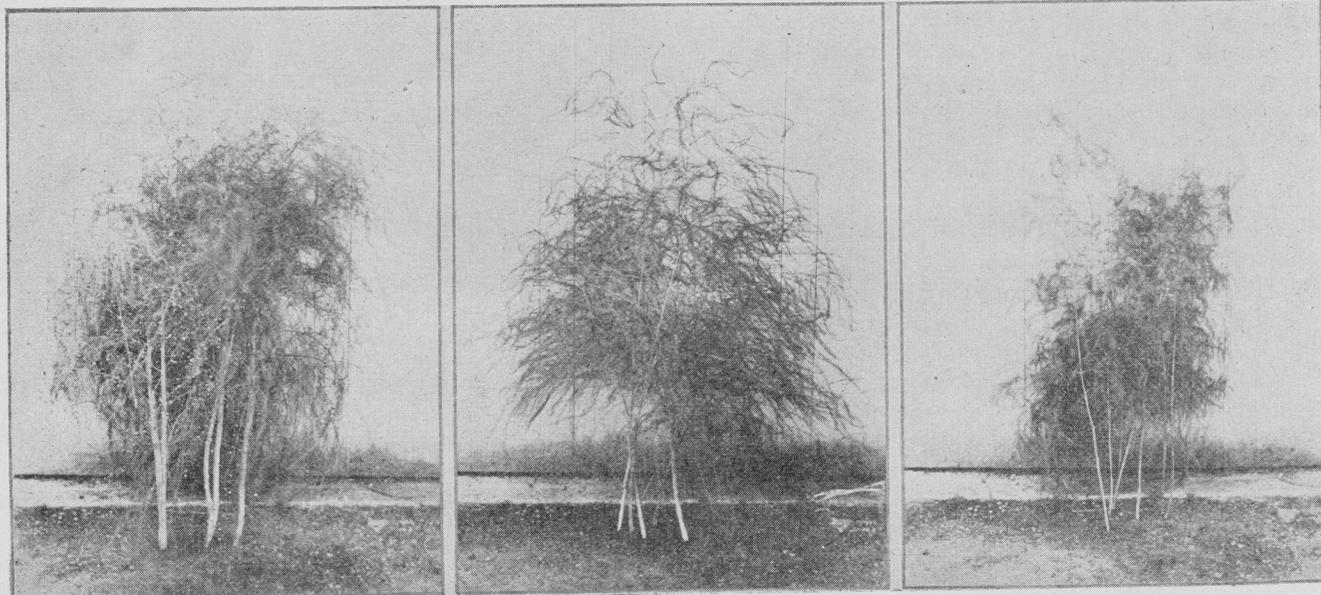
4. Do not harvest any asparagus the first season it is planted. The second season after planting, harvesting for a couple of weeks may do no harm to future yields. Harvesting never should continue more than 2 weeks the second season. The third season, do not harvest after June 1.

The photographs below, taken Sept. 1, 1939, show what happens when asparagus is harvested year after year early, medium or late. A large top growth is essential to build up and permit storing plant food to provide a satisfactory crop for the following year. The plant on the left produced much larger spears than the one at the extreme right in the spring of 1940. These tests showed that harvesting until June 15 gave the best all around results over a period of several years.

HARVESTED TO MAY 1

HARVESTED TO JUNE 15

HARVESTED TO JULY 1



Plants Will Produce for Many Years if Given Proper Treatment, Tests at Iowa Station Show

5. Cutting until June 15 over a period of 13 years gave the largest yield in our tests. Cutting until May 1, May 15 or June 1 was not as profitable as cutting until June 15. Cutting until July 1 for 10 years materially reduced the size of the crop after the sixth year, and the size and weight of the spears dropped. Cutting until July 15 each year greatly shortened the profitable life of the planting—the quality of the spears as measured by average weight and diameter was so poor that the planting was rendered unprofitable after harvesting 5 years to this date. Many of the plants died, too, as a result of harvesting so late in the season.

6. On a highly fertile soil, the fertility of which is maintained by manure and commercial fertilizer, space plants 2 feet apart in the row and have the rows 3 to 4 feet apart. On less fertile soil, this spacing may be too close. It's easier to cultivate between rows spaced 4 feet apart.

7. You will get a larger yield if you cut the spears when 9 to 12 inches high than if you cut them at 6 to 9 inches. During the 3 years the "length of spear test" was conducted, more spears were secured when cut at the 6- to 9-inch length, even though the yield was less in 2 of the 3 years and about the same in the other year.

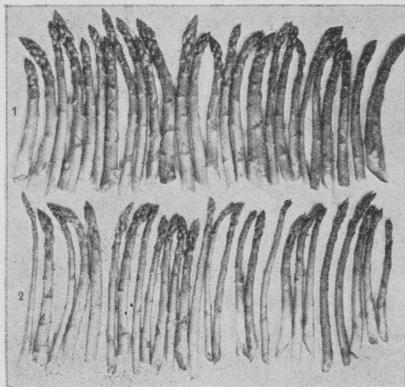
8. Salt was not found to be an efficient weed killer. It killed the broad-leaved plants such as pigweed and lamb's quarter, but it only stunted the grasses, and they quickly recovered after rains. We found no evidence of salt benefiting asparagus.

9. The cheapest and easiest way to eliminate weeds was found to be by disking the field, then following with a spike-tooth harrow. These opera-

tions should be just before growth starts in the spring, again about May 15 and the final operation June 15 when cutting is stopped. A wide spring-tooth weeder will work equally as well as the disk and harrow.

We know other factors, in addition to the foregoing, have much to do with successful asparagus production even though they were not specifically studied in our experiments here at the Iowa Station.

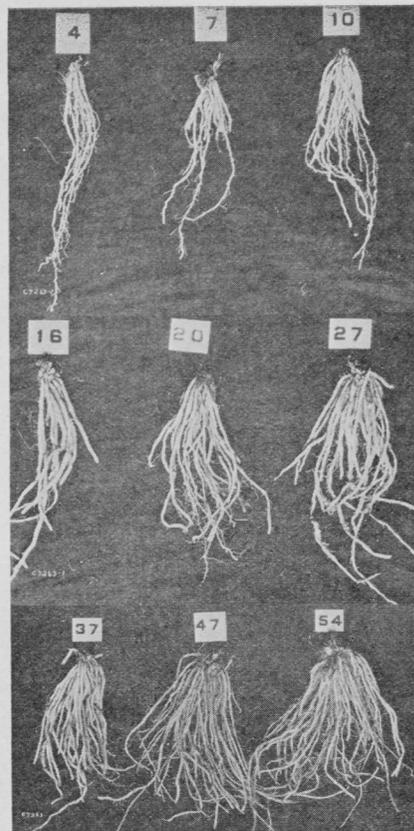
It is important to remember that when the asparagus harvest is finished for the year, a large growth of brush or tops is



necessary to insure a good yield the following year. Most of the growth in the early spring is from the food reserves which have been stored the previous year in the fleshy roots. Heavy tops mean that food is being stored in the roots. So practices which help build heavy tops increase the asparagus crop you will harvest next year.

One of the things you can do to build tops is maintain a high level of fertility by heavy manuring or using commercial fertilizer. Phosphate fertilizer in combination with manure is helpful in Iowa; on some soils potash will help.

Highly acid soils are not good for asparagus. A nearly neutral soil is best. When you are



Above: Asparagus crowns 1-year-old dug from same nursery row. Figures above each are weight in grams. Top row crowns are too small to be used satisfactorily.

Left: Top row of spears are from plants harvested for 10 years until June 15 and those at bottom were from plants harvested until July 1 for a period of 10 years.

cultivating to get rid of weeds, don't go too deep because of the danger of injuring roots and crowns. Disking or putting the harrow or weeder in 2 or 3 inches deep is sufficient and won't do any harm.

Don't remove the tops in the fall until they have been completely killed by frosts or freezing. Plant varieties such as Mary or Martha Washington because they are partially resistant to rust, a fungus disease of the foliage.

Controlling insects is important. Asparagus beetle is sometimes serious in Iowa. Grasshoppers are partial to asparagus and when numerous seriously damage the tops of asparagus plants in late summer.