

Fig. 2. 'Newhaven' peach.

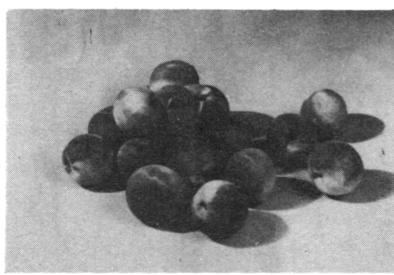


Fig. 3. 'Jayhaven' peach.

cold temperatures. The chilling requirement has not been evaluated. The blossoms are non-showy.

The fruit (Fig. 3) of 'Jayhaven' matures, with 'Glohaven' 10 days after 'Redhaven'. It is round in shape and medium in size and has

an 80% red blush over a golden-yellow ground color. It is freestone, has excellent firmness and acceptable commercial quality.

Dormant season flower buds of 'Jayhaven' are exceptionally hardy. It has not shown a tendency to produce "buttons" (undeveloped nonabscising fruit), which is a common problem in some cultivars currently grown for this maturity season. All 3 cultivars are well-adapted to commercial peach production in the Great Lakes Region of North America. Further tests are needed to evaluate their adaptation to other regions.

Availability

Trees and budwood are available from commercial sources; limited quantities of virus-indexed budwood will be provided by the Michigan State University Department of Horticulture.

HortScience 16(5):686-687. 1981.

'Ebano' Thornless Blackberry¹

Maria do Carmo M. Bassols²

UEPAE de Cascata, Pelotas, RS, Brazil

James N. Moore³

Department of Horticulture and Forestry, University of Arkansas, Fayetteville, AR 72701

Additional index words. *Rubus*, *Eubatus*, fruit breeding, small fruits, fruit processing

'Ebano' is a high-yielding, thornless blackberry cultivar (*Rubus*, subgenus *Eubatus*) with good adaptation to the mild humid climate of southern Brazil. It will be of value to the newly developing blackberry processing industry of southern Brazil due to its late maturity, high processing quality, and thornlessness for hand harvesting. 'Ebano' is the Portuguese word for ebony.

Origin

'Ebano', tested as selection Black 44, originated in the F₂ population of the cross Comanche x (Thornfree x Brazos) made at the Arkansas Agricultural Experiment Station. Seeds were germinated and the selection made at UEPAE de Cascata, Pelotas, RS, Brazil. The selection has been tested on the experiment station in Cascata and on commercial farms in southern Brazil.

Description

Canes of 'Ebano' are semi-erect and genetically thornless. Plants of this cultivar are tetraploid and carry the monogenic recessive thornless condition of 'Merton Thornless'.

Canes are vigorous and show good bud break following mild winters in southern Brazil (< 400 hr below 7°C). The plants sucker sparingly, but may be propagated from both root and stem cuttings. 'Ebano' flowers are self-fertile.

Fruits are glossy black in color (Fig. 1) and medium-large, averaging 5.0 to 6.5 g. The flesh is reasonably firm. Seeds are medium in size, somewhat smaller than 'Thornfree'. The fruit is black in color and of good fresh and processed quality. The fresh fruit is slightly acid. Fruit clusters are large and numerous on the floricanes, with clusters occurring generally at the top 6-9 nodes.

'Ebano' was compared in production tests with the thorny cultivars 'Brazos', 'Comanche', and 'Cherokee' (Table 1). Considering that the 'Ebano' plots from which these data were taken were 3 years younger than the plots of the commercial cultivars, it appears that 'Ebano' is as productive as the available

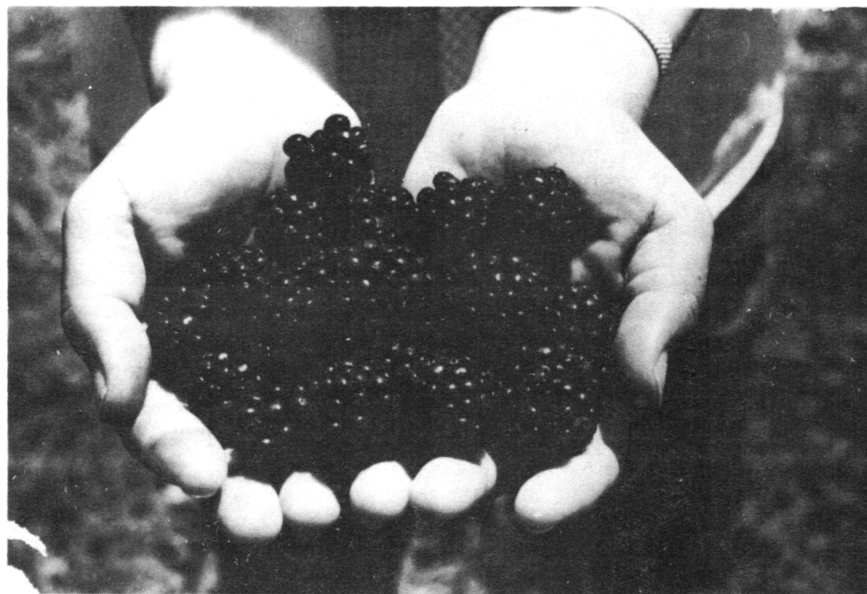


Fig. 1. Fruit of the 'Ebano' blackberry.

¹Received for publication May 4, 1981. Published with the approval of the Director, Arkansas Agricultural Experiment Station.

The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked *advertisement* solely to indicate this fact.

²Researcher, EMBRAPA/UEPAE de Cascata, Caixa Postal 403,96.100, Pelotas RS, Brasil.

³Professor.

Table 1. Comparison of yield and fruit size of 'Ebano' and three commercial cultivars at Cascata, RS, Brazil, 1979.

Cultivar	Year planted	Yield (kg/ha)	Avg fruit wt (g)
Cherokee	1975	6228	5.2
Comanche	1975	8213	5.8
Brazos	1975	3668	7.5
Ebano	1978	5952	5.0

thorny cultivars. Fruit size is about the same as 'Cherokee'. The fruiting habit differs from the commercial thorny cultivars, however.

'Ebano' does not develop into a compact hedge row as is characteristic of 'Cherokee', 'Comanche', and 'Brazos', but remains as "hills" since new canes are primarily produced from the crown rather than from roots.

'Ebano' ripens very late, averaging 40 days after 'Brazos'. Its late maturity is desirable for the processing industry of southern Brazil since it can be processed after the peak of peach harvest. Fruits are suitable for jams, jellies, and canned and frozen packs. It is also suitable for adding flavor and color to yogurt and ice cream.

Adaptability

'Ebano' has been tested only in the mild, humid climate of southern Brazil. It should be adaptable to areas of similar climate. No information is available on its cold hardiness.

Availability

Limited quantities of plants of 'Ebano' are available from Maria do Carmo Bassols, UEPAE de Cascata, Caixa Postal 403, 96.100, Pelotas, RS, Brazil.

HortScience 16(5):687-688. 1981.

'Thompson' Lettuce¹

Edward J. Ryder

U. S. Agricultural Research Station, U. S. Department of Agriculture, Science and Education Administration-Agricultural Research, Box 5098, Salinas, CA 93915

Additional index words. big vein, *Lactuca sativa*, vegetable breeding, *Olpidium brassicae*, *Bremia lactucae*

Big vein has been a problem for growers of lettuce (*Lactuca sativa* L.), particularly in the western United States, for many years. The principal symptom, vein clearing, lends an unsightliness to the lettuce that may reduce its market value (7). During periods of low temperatures, big vein may delay or prevent head formation and thus reduce the harvest recovery (4).

Big vein is caused by a virus-like entity called big vein agent. It is transmitted to lettuce by a root-feeding fungus, *Olpidium brassicae* (Wor.) Dang. It is particularly severe during periods of low air temperature and in soils of high water-retention capacity (5, 6).

Several crisphead cultivars show varying, but modest, degrees of resistance to big vein. 'Thompson' combines resistances from several sources in a higher level than ever achieved in a crisphead cultivar.

The name 'Thompson' is in honor of the late R. C. Thompson, U.S. Department of Agriculture lettuce breeder for many years in Beltsville, Md., and Salinas, Calif., who performed pioneer work in interspecific hybridization, tipburn, and germination studies, developed the first lettuce cultivar using *L. virgosa* as a parent, and made the first cross in this station's big vein resistance work.

Origin

'Thompson' was released in 1981. It is derived from the cross 9747-1 x 'Calmar',

which was made in 1964 (Fig. 1). Line 9747-1 was derived from the cross 'Merit' x 2741, made by R. C. Thompson in 1957. Both 'Merit' and 2741, a crisphead breeding line, showed low to moderate resistance; 9747-1 was more resistant than either parent. However, it had poor horticultural characteristics and was crossed with 'Calmar', a popular, high-quality crisphead cultivar that also showed some degree of resistance. Progeny of the latter cross was selected for big vein resistance and horticultural type, leading to the F₆ selection 72-136. Subsequent massed

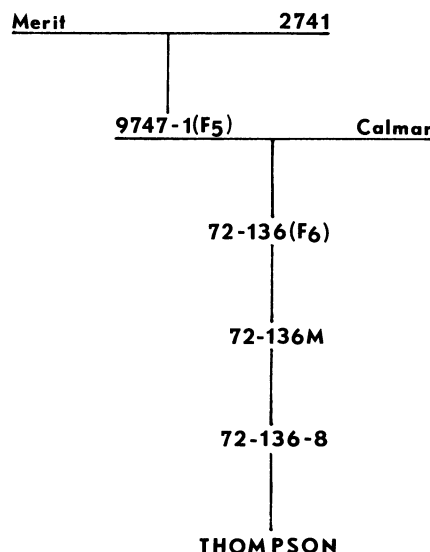


Fig. 1. Pedigree of lettuce cultivar 'Thompson'.

progenies were extensively tested as 72-136M in the greenhouse for resistance and in the field for resistance and yield.

We found that 72-136M progenies continually produced a non-heading, spatulate-shaped leaf mutant similar or identical to the 456 mutant described by Pearson (3). This mutant appears in most lettuce cultivars occasionally and more frequently in others (2). We judged its appearance to be frequent in 72-136M and selected one line, 72-136-8, among several individual plant progenies, as being apparently free of the mutant. This line was released as 'Thompson.'

Description

'Thompson' has medium-dark green outer leaves, with the brightness characteristic of 'Calmar', one of its parents, and the Great Lakes type in general. The color extends reasonably well towards the core. The interior color is very light cream, nearly white. The heads are firm to hard at maturity and will normally pack 2 dozen per standard carton.

The head is well-covered and occasionally spiraled (a whorl of outer leaves obscures the top of the head). The butt is usually flat, but occasionally rounded. Leaves are broad at the base and the ribs are usually flat but occasionally raised. The core diameter is medium to large. Stem height is low to medium but tends to greater length in hot weather. Leaf margins are dentate and texture is crisp, similar to the Calmar-Great Lakes type. Seed color is white (Fig. 2).

Disease reactions

'Thompson' was the most big vein-resistant item in our breeding program, in greenhouse tests and in extensive field trials



Fig. 2. 'Thompson' lettuce.

¹Received for publication February 14, 1981.

The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked advertisement solely to indicate this fact.