

Farm & Garden

Cherry Men Boost Mechanical Picking Berry Breeding

CORVALLIS — Dr. John Carew, Head of the Department of Horticulture at Michigan State University, told stone fruit growers during the 78th annual meeting of the Oregon Horticultural Society that Michigan sour cherry growers are finding that the economics and convenience of mechanical harvesting methods outweigh their disadvantages.

According to Dr. Carew, 61 Michigan growers had the equipment needed to harvest cherries mechanically this season. Due to a poor crop year, 20 had no crop to harvest. But the remaining 41 growers, mostly with one shaker and one frame each, harvested 2 1/2 million pounds of sour cherries, or about four per cent of the total crop, mechanically.

Since the first commercial harvest with shakers in 1959, they've found that they can harvest cherries mechanically for \$30 to \$40 a ton less than with hand picking, and generally get fruit of satisfactory quality.

Sour cherries can be separated satisfactorily from the tree with a mechanical shaker, and caught on frames. They can be transported from the orchard to the processor without damage to the fruit.

Spent an Advantage

Aside from cost, another advantage of mechanical harvest is the speed. Shakers can work an 18 to 24 hour day. One Michigan grower, according to Carew, harvested 12 trees per hour with a shaker and catching frame. Put another way, this amounted to 1,000 pounds of cherries per hour, at a cost of less than one cent per pound.

Many leaves, twigs, and cull cherries are shaken onto the catching frame, making for a sorting problem at the processing plant. There is too much tree damage, and the fruit is bruised excessively in some cases. There is a need for improved equipment. These problems are being attacked by individual growers, University researchers, and the industry, according to Carew.

Yields from the heavily pruned trees that were mechanically harvested increased 12 per cent over the yield from the conventionally pruned trees. Dr. Carew says this was due to the thinning and cleaning out of the weaker center branches, which were too limber for the cherries to shake off easily. Heavy pruning increased the ease and speed of harvest.

Use Water Tanks

The brushing problem in Michigan is partially solved by the current trend toward picking into water tanks and transporting the cherries to the processor in water. Cherries moving to one particular processing plant are shaken from the trees onto picking frames, drop into water containers, then into tank trucks from which they are dumped into water vats at the plant.

From the vats, conveyors carry the cherries into large sorting drums, where revolving metal "fingers" pick them up and allow an electronic sorter to scan them and reject all of the cherries with dark spots. This is done by using the degree of light reflection through the cherries as a guide to spot checks, which are shunted to one side.

Ten of these electronic sorters, which can sort cherries at the rate of more than 1,000 per minute, have eliminated the need for 30 to 35 women in this plant, said Dr. Carew. The cherries are actually untouched by

Harvest Machines Now Stop Gap Aid In Orchards

CORVALLIS — Most of the equipment being developed now represents "stop-gap" steps suitable for present orchards and is usable until orchards are redesigned to obtain maximum efficiency from mechanical aids to harvesting, according to Robert L. Stebbins, OSU extension horticulturist.

He spoke during the recent Oregon Horticultural Society meeting in Corvallis.

Some day, Stebbins said, pear and apple orchards will feature "fruiting walls" with close plantings within the row; greater use of growth controlling stocks, and pruning to maintain a continuous wall of bearing surface down the orchard row.

Reviewing the different kinds of mechanical aids, Stebbins noted that most of them are oriented toward one man. Included in these are the Edwards Dyna-Soar, the Trump Girette, both of which lift the picker into the tree above a three-wheeled base and guides the fruit down the boom to a loader which places it in a bin.

The Baerg Tree Farmer is very flexible and allows for many different picking positions. The Wish Basket is designed to fit over the grower's tractor. Stebbins also briefly reviewed mechanical aids which are being developed at the University of California including a lift which features a "swing seat" for the picker.

Multi-man Platforms

Two grower-made machines were designed for use by more than one picker at a time and both feature multi-man platforms, the specialist said.

The first was developed by C. King Benton Jr., Hood River. Mounted on a trailer, pickers standing on platforms extended from the platform can harvest four trees at once. The platform is lifted on hydraulic rams to a height of 15 feet.

The second was designed by Earl Fife, Visalia, Calif., which can handle six pickers at once working on two trees at a time. The pickers stand on catwalks which move out from the base of the platform.

Other research in Michigan stone fruit mechanization described by Dr. Carew include efforts to develop equipment for mechanically shaking and catching apples. There has also been effort to find some means of chemically loosening cherries on the tree, to make harvesting easier. New clamps, which won't damage the trees so much, are also being investigated.

Dr. Carew said that while there has not been much success in developing a sweet cherry harvester, it is inevitable that someone will eventually work out a method of mechanically harvesting the sweet cherries crop.

Chit Chat

By JOE COWLEY
Mail Tribune Farm Editor

As you will notice in the various stories elsewhere on this page, the Oregon Horticultural Society talks seem to be continuing the trend of the last two or three years: ever growing concern with the dwindling picker supply, greater study of mechanization to get around that problem, and perhaps a last bitter struggle to keep Mexican Nationals for a steady labor supply.

Growers are increasingly concerned, too, over European Common Market developments as they affect exports of U. S. fruit. The increasing worry over taxation this year resulted in a resolution favoring a sales tax to ease the property tax burden. Speeches and panel discussions, as usual, bore on fruit tree diseases, higher and more uniform quality fruits.

The small fruits (strawberries, raspberries and blackberries) section also focused on labor problems, developments in mechanical harvesting and better quality fruit through development of new varieties. As usual, marketing trends were thoroughly discussed in both sections.

Malcolm B. Douglas, manager of the California Strawberry Advisory Board, told what his growers are doing to meet the labor supply problem. John Cavalero, Everett, Wash., indicated how some growers are whipping the situation. If labor won't come to them, they are going to the biggest supply of cheap labor—Mexico. Small fruit and vegetable areas are increasing extensively and rapidly in Mexico, he noted after a tour of such regions. There was some talk around Medford fruit circles not long ago that some local growers had pooled an investment in Mexican acreage, but we haven't heard any facts to back it up.

One speaker emphasized that U. S. horticulture needs skilled executives to represent the industry, to interest legislators in its problems and participate in international conferences. This, he indicated, is the only way our horticulture will keep up with the increasing competition for world markets. Recent developments in the European Common Market countries, and particularly in France underscores this need.

Incidentally, the Common Market threat is brought home when you learn recently, as we did, that Hood River couldn't get 10 carloads of quality pears into West Germany because that country wanted only the very top quality pears. This means a substantial loss of income to those growers.

The Medford pear district has been fortunate in always having a few men of the executive caliber mentioned above. Although still aggressively active for the pear industry here, these key men are getting on in years. Who will take their places? We haven't heard of anybody.

In fact, the fruit industry may soon be like an army which had to lose to retirement both its key top sergeants such as the veteran orchard foremen and its generals such as veteran shippers.

For the first time any local observers can remember there is acceptance by more and more industry veterans that there may not be a single pear tree standing in the Rogue valley in 10 years. Continued skilled leadership is the only thing that will at least slow down the trend to subdivisions.

The preliminary results of Oregon's recent fruit tree census scared industry people who attended the Hort Society meeting last week in Corvallis. Growers in the Rogue Valley have planted many more pear trees than the industry was actually aware of. Unless more pear markets are found for pears, these new trees will have a depressing effect on the market when they come into production.

Some kind of tie-in with a large processing plant still is not out of the picture for this valley. It will come. We still favor as an intermediate step some sort of farmer's market, but more on that later.

There have been some beautiful editorials written in the last four days on the death of President John Fitzgerald Kennedy. We cannot hope to match these words. So, we will only say that his death has deeply affected both the great and the humble. His persistent efforts toward integration will rank with the efforts of The Great Emancipator, Abraham Lincoln. His words, "Ask not what your country can do for you, but ask only what you can do for the country," will be remembered by these generations and many generations to come.

Apple Shapes Study Under Way at OSU

CORVALLIS — Factors which influence the shape of apples are under investigation at Oregon State University as researchers attempt to find out what causes some to be flatter or more "pumpkin-shaped" than others.

Dr. M. N. Westwood, horticulturist with the OSU Agricultural Experiment Station, is conducting the study. Shape does not influence apple quality, but consumers have shown a preference for elongated fruit.

Dr. Westwood is experimenting with various factors which influence the length-diameter ratio of Delicious apples in an attempt to find at what point, if any, action can be taken to alter the final shape of the fruit. The greater the ratio, the longer the apple.

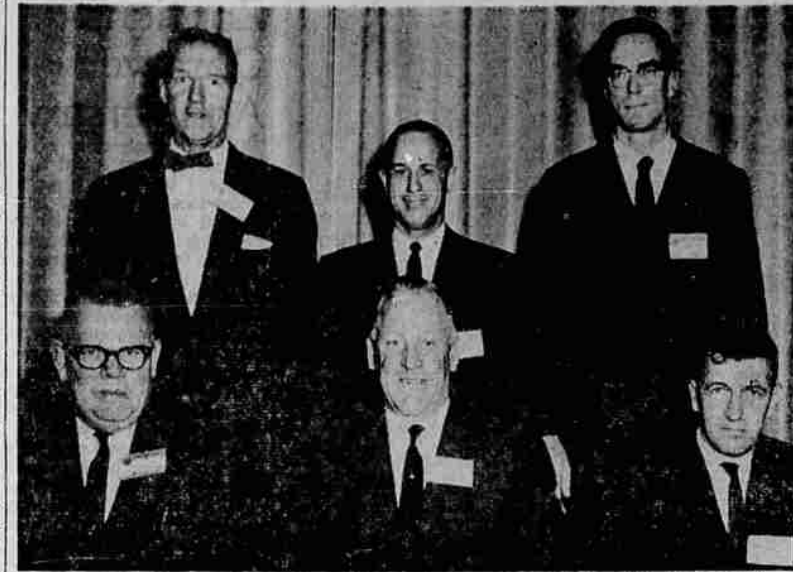
In general, where climate is constant, fruit length parallels that of tree growth. Dr. Westwood has found, as the same growth mechanisms work in both stems and fruit. When tree shoots are short, apples tend to be shorter than those on long shoots. This results in differences in shape among apples on the same tree.

For instance, the tree shoot springing from a terminal bud is longer than one from a lateral bud. The same is true with the fruit. The apple coming from the "king" or center flower in a blossom cluster is longer than one coming from a flower on the side of the cluster.

Other Factors

But other factors besides position are at work in determining the final shape of the apple. Dr. Westwood points out. Growth hormones and climate are two keys to shape which he is examining.

The final shape of the apple depends to a large degree on the way its cells enlarge. Dr. Westwood has found that cell numbers in the apple are more or less fixed four weeks after full bloom. Final shape is determined not by the addition of cells, but whether cells enlarge



HORTICULTURAL LEADERS—New officers of the Oregon Horticultural Society were elected for the coming year at the society's 78th annual meeting at Oregon State University Nov. 20-22. In the rear row, from left: Dunbar Carpenter, Medford, third vice president; R. M. Ohling, Eugene, treasurer; R. L. Stebbins, OSU extension horticulturist, secretary. Seated, from left: William Vollmer, Jr., Parkdale, immediate past president and new society trustee; Paul Culbertson, Medford, president, and Don Marsh, Hood River, second vice president. Not shown is Cornelius Bateson, Salem, new first vice president, and Don Root, Medford, new society trustee.

Medford Men New Officers; Hort Society Event Briefed

CORVALLIS — Paul Culbertson, Medford, was named Horticultural Society president at the annual meeting in Corvallis last week.

Cornelius Bateson, Salem, was made first vice president; Don Marsh, Hood River, second vice president; Dunbar Carpenter, Medford, third vice president. Don Root, Medford, was named trustee.

Prof. Ernest H. Wiegand, Corvallis, founder and former head of the Oregon State University department of food science named the 1963 recipient of the Hartman cup, presented annually for outstanding service to the horticultural industry.

The society went on record favoring a public vote on a "moderate realistic" sales tax to reduce the property tax burden, particularly on agricultural land. A second resolution asked that the "no residue" registration be clearly defined in terms of the method of residue analysis at the time registration is granted.

This year's voluntary fruit tree census reveals Jackson County has 433,930 Bartlett pear trees compared to the 1959 agricultural census total of 305,172, for an increase of 128,758 trees. Winter pear trees totaled 491,345 compared to the census count of 387,645, or an increase of 103,700 trees.

Commodities with only minor influence will bear the brunt of any agricultural tariff cuts under the administration's trade expansion program, according to Dr. G. Burton Wood, head of the OSU agricultural economics department. Many Pacific Northwest crops fit into this category.

If the importation of Mexican Nationalist as supplemental farm workers under provisions of Public Law 78 is ended, the losses to industries allied to strawberry production alone could amount to more than \$30 million, according to Malcolm B. Douglas, manager of the California Strawberry Advisory Board at Santa Clara.

Dr. John Carew, chairman of the department of horticulture, Michigan State University, stressed that "advances in the production and marketing of fruits and vegetables in countries outside our own are occurring with blinding speed. We shall not be able to ignore them. We owe it to ourselves to anticipate them."

"The housewife doesn't want to buy just food. She wants and demands maid service, too—and this must come out of her food dollars and the processor must provide this service," said Roy Moser, OSU food technologist.

Most of the fruit harvesting equipment being developed now is usable until orchards are redesigned to obtain maximum efficiency from mechanical aids to harvesting, according to Robert L. Stebbins, OSU extension horticulturist.

Mechanical Harvesting

Michigan sour cherry growers are finding economics and convenience of mechanical harvesting methods outweigh their disadvantages, said Dr. John Carew, head horticulturist, Michigan State University.

Increasing the number of spray applications can reduce mildew infection and increase yields, reported Dr. Norman Dobie, OSU plant pathologist.

With the winter injury problem in mind plus the changing of equipment used, space planting has not been accepted to any degree by Northwest Washington strawberry growers, according to Richard C. Holland, Washington State Nursery superintendent, Bellingham, Wash.

Third party grading is an assurance that an impartial inspector will be establishing grade, according to M. D. Murphy, Salem, federal supervisor.

The value of the virus-free program for tree fruits initiated by OSU in 1944 is recognized today by both nurseryman and orchardist and is contributing to the success of each, said Dr. J. A. Milbrath, OSU plant pathologist.

The only reason for orchard intercropping is added income during the early life of the orchard. Management determines the success or failure of an intercropping program, according to D. L. Rasmussen, Marion county extension agent and panel moderator.

All Wool Sales Must Wind Up By Year's End

All details of marketing either wool or lambs will have to be completed not later than Dec. 31 to receive payments for the 1963 marketing year, Albert Straus, Chairman, Agricultural Stabilization and Conservation Committee, pointed out today.

Marketings completed after Dec. 31, 1963, will be eligible for payments for the 1964 marketing year.

As announced by the U. S. Department of Agriculture in October, 1962, the 1963 marketing year under the wool payment program has been shortened to the nine month period from April 1 through Dec. 31, 1963, to shift the wool marketing year to a calendar-year basis.

Therefore, if any part of a sale of lambs or wool is not settled by Dec. 31, the sale will not be considered as one taking place in the 1963 marketing year. This means that all the information needed to complete the sales documents and show the net sales proceeds for wool has to be determined and available by Dec. 31 to be eligible for wool program payments for the current (1963) marketing year. Under program regulations, wool is not marketed until title has passed to the buyer, the wool has been delivered to the buyer either physically or through documents which transfer control to the buyer, and all the information (price per pound, weight, yield, etc.) needed to determine the buyer's total purchase price is available.

Payments Scheduled

Payments for the 1963 marketing year will likely begin in April of next year, after the program payment rates are determined, based on the average prices received by producers for short wool sold in the nine-month period from April through December, 1963. Payments for the 1964 marketing year on marketings taking place or completed after Dec. 31, 1963, will be made in the spring of 1965.

Wool producers may file applications for payment for the 1963 marketing year with ASCS county offices up until Jan. 31, 1964.

Strawberry Winter Injury Affected by Plant Space

CORVALLIS—Experience with winter injury of strawberries is influenced by space planting was related during a panel discussion before the small fruits section of the Oregon Horticultural Society Thursday.

Richard C. Holland, superintendent of the Washington State Nursery at Bellingham, reported on work which the nursery started in 1957 as an evaluation of space planting over matted row and double space planting of strawberries.

Space plantings were made of Northwest, Pudget Beauty, Marshall and Siletz varieties. Winter damage to Northwest has been considerable, while other varieties showed only negligible damage from freezing, he said. As high as 68 per cent of the Northwest plants were dead at the end of the first winter season.

In the last five years, production of Pudget Beauty and Siletz matted row plantings averaged just over five tons per acre. During the same period, the space planted plots yielded slightly over ten tons. However, he added, no appreciable advantage in space planted Marshall's, produced over the matted row planting method was found.

With the winter injury problem in mind plus the changing of equipment used, space planting has not been accepted to any degree in Northwest Washington, Holland said.

The nursery is now working to find a possible solution to freeze damage in the Northwest variety. For the past three years, plants have been covered with two or three inches of soil in late November or early December. This was removed in early March.

However, he said, "no particular conclusions have been made as only one winter was severe enough to get any amount of winter damage."

A grower's experience with Northwest double row planting was recounted by Roger Madson, Hillsboro, who planted approximately 14,500 plants per acre with 12-inch spacing between double rows, 18 inches between plants in each row and 48 inches from center of row to center of next row.

One Year's Damage

The 1962-63 winter was the only year damage was experienced to any noticeable degree, he reported. The three year old field had considerable winter damage in weaker portions on more exposed areas. Only scattered plants in healthy areas with good foliage had winter kill. Only isolated plants in the two year old field showed damage, Madson reported.

Disadvantages in picking were found to be tangled vines with overlapping of berries and the fact that berries were more easily missed. It was also more difficult and expensive to control runners. If not controlled, a real problem results in a wide heavily matted row, he stressed.

He also found it more expensive to control weeds, especially if they cannot be controlled chemically and also found plants and fertilizer more expensive.

However, on the plus side, Madson reported a higher potential of production on limited acreage and a significant plant population in a poor stand.

Also describing his experiences as a grower was Harvey Tofte, Canby.

Americans To Bring Korean Orphans Home

SEOUL, Korea (UPI)—Fifty-four American couples will leave here Friday for the United States with 83 adopted Korean children.

The couples arrived at Seoul Monday.

The mass adoption was arranged by Harry Holt of Creswell, who operates an orphanage in Seoul.

Garden Tips

By JOHN McLOUGHLIN
County Agent

Now that gardening activities are slowing down you have the time to inspect the shade trees on your property.

Shade trees are a major attraction to most property and should not be neglected. Some trees, if neglected, can become, or are so defective that they are a definite hazard to life and property.

A check list of possible defects in trees and of conditions that may adversely affect their health in the future should include the following: Large dead branches, cavities in the trunk or major limbs, split branch crotches, decaying branch stubs, broken and hanging branches, decay of heartwood at the base of the trunk, wounds on the trunk or large limbs and narrow V-shaped branch crotches.

Also remember, trenching near trees for the installation of underground utility lines or soil drainage can adversely affect the health of the tree.

Many of these defects are readily seen. One commonly seen defect that is the result of improper pruning is stubbing. Stubbing is seen in the upper part of the tree where there are long dead branch stubs. From such stubs wood decay organisms can easily become established in the tree.

Heartwood Decay

A defect that is difficult to detect is the decay of heartwood in the central portion of the trunk at the ground line. When this condition exists, the entire weight of the tree is supported by a dangerously thin shell of living wood tissue. Often there are external signs of this condition. Often it can be determined only by taking trunk borings.

The leveling of property almost always results with more soil around some trees on that property. This filling around trees often escapes notice by prospective home buyers, especially if a lawn is established over the filled area.

The amount of soil that can be placed on the ground a tree is growing on without adversely affecting the tree depends on the type of soil, type of tree, previous and past cultural conditions plus other intangible factors. Anyway, whenever the depth of soil is changed around a tree the chances of adversely affecting the tree are great.

Do you like trees on your property? If you do, take care of the trees you have and plant new ones with characteristics that fulfill your desires.

NEED MORE WATER

Cows need more water per unit of body weight than other farm animals. A cow producing 30 pounds of milk a day may drink as much as 300 pounds of water.

FARM Woodlot Facts

By RICHARD OLSON
State Farm Forester

One Wednesday, Nov. 13, the third forestry tour, sponsored by the Jackson County Farm Forestry committee in Jackson County was held. Approximately 20 interested landowners attended. The main topics of discussion were tree planting and Christmas tree culture. The weather co-operated to make it a very successful and pleasant tour.

Tree planters will be glad to hear that order blanks for seedlings from the state forest nurseries are now available. For your order blank, contact your State Forestry office or County Extension Office.

In all, eighteen conifers and five broadleaf species are available. These are: Conifers . . . Westside Douglas Fir, Eastside Douglas Fir, Sierra Redwood, Rocky Mountain Juniper, Norway Spruce, Port Orford and Incense Cedar, Chinese Arborvitae, Ponderosa, Scotch, Lodgepole, Shore, Austrian, Knobcone, Monterey and Sugar Pines, Grand, White, Noble and Shasta Firs, Broadleaves . . .

Black Locust, Caragana, Chinese Elm, Russian Olive and Honey Locust (Thornless).

Tree Orders

Minimum orders are for 50 trees for \$1. Thereafter, trees are sold in multiples of 50 trees at \$12 to \$15 per thousand for conifers and \$10 to \$12 for broadleaves, including shipping costs. Douglas Fir (Westside), Ponderosa and Lodgepole Pine, and Noble Fir in amounts of 10,000 or more are \$9 to \$12 per thousand, purchaser paying shipping costs. Limits per customer are generally higher than previously.

Christmas tree buyers and sellers are becoming quite active in this area. If you are a seller or buyer and wish to make some contacts write: P. O. Box 71, Medford or call 664-1213 and leave your name and address and telephone number. Also the number and species of trees wanted to buy or to be sold.

Thought for the week: The real key to our future timber supply lies in the one-out-of-every-ten American families who own small forests.

North Korea Charges Live Targets Used

TOKYO (UPI)—The Communist Central News Agency of North Korea charged in a broadcast today that nine South Koreans killed last Thursday were used as live targets by U. S. Army troops during rocket practice.

U. S. Army sources announced the nine were killed while scavenging scrap metal from a firing range when a non-nuclear U. S. Army Honest John rocket exploded among them.

FIELD LOSSES

More than 75 per cent of field losses of hay is through loss of nutritious leaves. To prevent leaf loss, hay should be raked while still tough enough to prevent leaf shattering.

MONARCH MONARCH

calves on the ground are like MONEY IN THE BANK

It costs a lot of money to keep a cow. A lot of that money is lost if she fails to settle or drops small, weak calves that die or develop into "tail-enders."

BIG CROPS of husky calves are a must, if a fellow is going to make money ranching. This is especially true when the price of cattle is off.

Your range needs help. It takes more than grass alone to give your cows what they need to grow and drop the kind of calves that will bring top prices next fall.

PURINA RANGE CHECKERS have proved their worth in research tests and on thousands of ranches. This favorite range supplement has what it takes. Cattle love Checkers, do well on them. Cows stay up in good shape at calving time, have lots of milk for the calves, too.

Feed for big calf crops the Purina Way. Purina Range Checkers can help you keep your operation on the profit side of the ledger.

COME IN. We'll visit about Purina Range Checkers and profitable ranch management. Make it soon!

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MADE RIGHT
PRICED RIGHT
PROVED RIGHT
MICRO-MIXED

STOCKMEN FEED PELLETS

Your coarse or unpalatable roughage will make a base for a modern balanced ration that you can feed with little labor and no wastage. The increased meat or milk produced will give you maximum returns on a small cash investment.

MORTON MILLING CO.
500 Ross Lane, Medford

MONARCH SEED FEED

8TH AND BARTLETT, 10TH AND SOUTH HWY

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