



"... reality better than the dream."

JUDGE SHIELDS'  
CENTENNIAL MESSAGE

*Charter Day at Davis was an especially memorable event. This 94th anniversary of the establishment of the University of California coincided with the celebration of the 100th birthday anniversary of Peter J. Shields, the father of the Davis campus. Judge Shields was the moving force behind the act of the California Legislature establishing the Davis campus. This year is also the 100th anniversary of the Land-Grant College system in the United States. The bill was steered through Congress by Justin Morrill and signed by Abraham Lincoln.*

*The Land-Grant College Act established in each state an institution of higher learning devoted to agriculture and the mechanic arts. The act was to provide college education opportunities to a group neglected by private universities of that day which prepared students in the areas of law, the ministry, liberal arts and medicine. The federal government was short on money but long on land. A 150,000 acre grant of land was given to California and by act of the State Legislature in 1866, an Agricultural, Mining, and Mechanical Arts College was established, later becoming the University of California.*

*Chief Justice of the Supreme Court Earl Warren came from Washington, D.C., to give the main address at the Davis Charter Day celebration and to pay his respects to Judge Shields. President Clark Kerr of the University of California, Chancellor Emil Mrak of the Davis campus, and Edmond Brown, Governor of California, also honored Judge Shields in short speeches. Judge Shields previously had been awarded one of the rarely conferred Certificates from the University (1946) in recognition of his outstanding service to California agriculture. He was also given an Honorary LL.D. degree from the University in 1955.*

*As a part of this Charter Day celebration, an oak grove in the Arboretum, and a plaque to be installed on a boul-*

*der in the grove, were dedicated to Judge Shields. The dedication was made by Dean of Agriculture Emeritus Knowles Ryerson. Judge Shields was present at the ceremonies but his health would not permit him to make the response in person. The response was dictated by Judge Shields and was read by Mrs. Alyce W. Lowrie, Public Affairs Officer of the Davis campus. His remarks were considered so significant that they are reproduced here.*

PETER J. SHIELDS' RESPONSE  
CHARTER DAY DEDICATION  
APRIL 5, 1962

**T**HE PRIDE, the gratitude, the happiness that this honor has brought to me at the sunset hour of my life are beyond expression. Can you perhaps imagine how meaningful these tributes are to me—from the lips of the President of the world's greatest public institution of higher learning, of the Chief Justice of the Supreme Court of the United States, of a man whose life has been dedicated to agriculture, here and abroad, and whose faithful friendship has gladdened the lives of my wife and me for twenty-five years? How grateful I am that I have been spared to be present for this celebration of my 100th birthday, here on the campus that has been my life's chief pride.

We Californians are especially proud of Chief Justice Warren, one of our own sons, who, in these troublous and uncertain times, is stalwartly and fearlessly holding America to the democratic principles laid down in the Constitution. Through his unswerving adherence to these Constitutional guarantees, he is pursuing and illumining the course that our beloved country must follow through all the years ahead.

This is an occasion that calls for some great utterance, some brilliant prophesy, some sage prediction of the future. Yet, despite my five score years of accumulated experience and observation and, I hope, some wisdom, I must confess that the future is beyond me.

In the long hours that I spend in thought, I think of everything that is going on in the world, and I long for someone to tell me where we, the people of this world, shall be—tomorrow, a decade, a century hence. Where are we going? Are we leading or following? Are we guided by ideals or pressed by expediency?

I think of Jefferson and Webster and Jackson and Lincoln, known to and revered by you all, and of less renowned men like the late Judge Adams of North Carolina, who left such a deep imprint on Vanderbilt University. I think of them with a quiet sense of satisfaction that such men have lived and accomplished their destiny, thereby contributing immeasurably to the destiny of America.

My faith in youth remains unshaken. I have great hope that President Kennedy's education bill will be adopted, because I believe that it would attract to the teaching profession men and women of dignity and prestige who will be capable of awakening in children and youth a desire to seek and find the truth, the deeper meaning of life. If this can be accomplished, these young people will be equipped to lead us all to the light.

I think of world affairs, and I am especially concerned with the Common Market. In it I see the promise of a federation of small nations and sovereign states, each of which would retain a measure of autonomy but which would be united with its fellows in trade and in defense. Such a union would endow them with shared strength, which would in turn relieve them of the prospect of Khrushchev coming down from his icy stronghold in the north to exercise his ruthless might and to tempt weaker nations with false promises built upon barbaric principles.

I think of the pressure of population in many areas of the world—in India, in China, in Indonesia. I ponder the questionable birthright of infants born in such countries; then I dare to hope that our knowledge and our ideology and our resources—natural, industrial, and human—may enable us to make the fate of the children, the people, of these crowded lands more optimistic.

No, I am not dismayed by the conflicts and friction and lust for power that threaten to rend the world and exterminate the peoples of the earth, for I believe in the capacity of my country to chart a course for survival and human betterment. I believe that America is in a stronger position than ever before in history. We have survived Puritanism and religious strife; the reign of wealth and the curse of class stratification; the dark stain of slavery. We have fought through perils, learned our lessons, been toughened by experience, held fast to our ideals. Now, emancipated and wise, we are better prepared than ever before to meet our problems, national and international, to fulfill our pledge, "with liberty and justice for all."

In a century of living, I have seen incredible changes, almost unbelievable developments in electronics, jet transport, mechanization, automation and material provision for human comfort and welfare. But looming loftily above these things, I see the spreading light of education; the benison of medical science; the willingness of business executives to negotiate with labor representatives and the steady upward climb of laboring people; the election of a Roman Catholic to the presidency, symbolic of constitutional freedom of worship and separation of church and state. I wish that Thomas Jefferson, I wish that Abraham Lincoln might have lived to witness these milestones in the progress of human dignity.

As for me, I am a humble man who sought for half a century to make the court a human institution, while preserving the letter of the law. To me, justice has been more than word or symbol and the courtroom is a place where sentence can be strengthened by counsel; where men and women, buffeted and bewildered, may be guided to a future less shadowed than their past.

The orbit of my life has not been wide, measured by today's standards, but it has led me where I wanted to go, since I never yearned to travel far. I descended from plain people—who tilled the soil industriously, dealt honestly with their fellowmen, were racially and religiously tolerant, and were good neighbors to all who knew them. I have never sought to separate myself from their simple philosophy of life.

Sixty years ago I had a dream—a vision of a school of agriculture—here in the Sacramento Valley. I resolved to spare no effort toward its realization. In 1900, I prepared and submitted a bill which passed the legislature but was appropriately vetoed by the Governor, as inadequate for the needs of young men seeking education and training in agriculture. No wonder! As its author, I had meagre knowledge of the essentials and offerings of a school of agriculture. I knew only that it was needed, in this state of tremendous agricultural promise and potential.

It was five years later that the enabling legislation was adopted. The story of those five years is one of groping and searching, of gradual illumination and clarification under the knowledgeable guidance of Dean W. A. Henry of Wisconsin, pathfinder in the Land Grant movement. Through ensuing decades the dream unfolded: the University Farm became a full-fledged College of Agriculture; the College of Agriculture has become a complete campus of the University—and I have lived to know that the reality is better than the dream.

I am most honored that a grove of oak trees in your Arboretum will commemorate my part in the founding of this campus. Oak trees are sturdy and unspectacular; sheltering, and strong against the storm. It is good to know that my monument here will be living and growing, with roots deep in the earth that I have so genuinely loved, with crowns compact beneath the quiet stars.



# GRAPE

## MECHANICAL HARVESTING

*comes closer to reality*

L. H. LAMOURIA • I. J. SZLUKA • H. L. BREWER • A. J. WINKLER

Refinements in the U. C. grape harvester resulted in significant operating improvement during the 1961 mechanical harvesting tests with raisin grapes. Positioning of the harvester operator behind and below the cutter bar successfully solved the problem of steering inaccuracies that has existed since the original design was introduced in 1957. Use of a crawler tractor to pull the harvester and operator allowed adequate steering stability in freshly-disked soil. Synchronization problems were minimized by installing an intercom system for communication between harvester operator and tractor driver. Adequate trash removal was provided (except for pieces of cane accidentally cut off) by twin air ducts mounted below the automatic-positioning cutter bar. A summary of harvesting efficiency for the 1961 tests indicated that 62 to 87 per cent of the grape clusters on the vines were removed by machine and dropped onto the paper as it unrolled from the side of the machine.

**I**N THE 1961 TESTS, grapes were harvested by machine from plots at Davis and at Di Giorgio Farms, Kern County. The two-acre mechanical harvester plot at Di Giorgio Farms included 26 rows of 38 vines per row (37 spans) on an 8 x 12 foot spacing. Trellising followed the basic pattern devised originally for the machine. Three wires are attached to the underside of the 3-foot horizontal cross-

arm with the outside wire used as the guide line for the automatic-positioning cutter bar on the harvester. In this plot, rows 8 and 10 were put on short cross-arms because of the need to shift the direction of crossarms on the adjoining rows. Rows 1 through 7 had crossarms with overhang to the South; rows 9 through 18, to the North and rows 20 through 26 had arms overhanging to the South. Rows 8 and 10 were not harvested by machine.

Vine handling costs for the Black Monukka variety vines in the test plot at Di Giorgio Farms added up to \$8.14 per acre for a total of 73.8 man hours per acre at \$1.10 per hour. Pruning the 24 rows of 912 vines was calculated to require 26.3 man hours per acre; tying, 12.2 man hours per acre; opening vines the first of May, 10.9 man hours per acre; and opening vines and freeing bunches at the end of May, 24.4 man hours per acre.

### *Pre-harvest procedures*

Other pre-harvest procedures included the necessity to tighten crossarm wires to return some arms to within 10 degrees of horizontal. Hand removal of canes from the entry end of vine rows, required to allow visibility and easier positioning of the cutter bar by the harvester operator, was handled at about 115 openings per man hour. Hand harvesting of all fruit in line with the stakes was also necessary, along with the control spans. All spans were tagged for statistical sampling. Grape maturity identification was also an important consideration for the one-shot mechanical harvesting procedure.

A crawler tractor (D-4) replaced the

