Robert G. Holmes, associate professor of agricultural engineering, is a specialist in the area of crop mechanization. One of his current research projects is the development of a mechanical tomato harvester. An efficient tomato harvester, according to Dr. Holmes, could serve to help keep food prices by cutting down labor problems and costs. He is also researching various possibilities in the mechanization of nursery crops such as garden shrubbery and trees. "Presently, nearly 50 percent of the cost of nursery crops comes from the high cost of labor and production," he said. Dr. Holmes is also responsible for developing an agricultural core course that he is now teaching. The course, Engineering in Agriculture, is designed to show students the interrelation of engineering to the broad spectrum of the agricultural system. Dr. Holmes spends his spare time hiking, camping and furniture building.
Professor’s invention
all-ripe for fields

By Michael Kapsa
and Claire Smith
7-15 - 77

An associate professor of
agricultural engineering at
Ohio State has invented a
field sorter for tomatoes
which will automatically
separate the ripe ones from
the green ones, thereby
reducing labor costs.

The tomato sorter uses a
vibrating surface and a
conveyor belt on which
tomatoes ride. Since green
tomatoes are firmer than
ripe ones, the vibrator de-
tects which tomatoes are
firmer and bounces those
back on the ground.

"Sorting is done manu-
ally today by 10 to 25 people
riding on the machine just
for sorting," said Robert G.
Holmes, the sorter's inven-
tor.

In Ohio and other mid-
western states, tomatoes
are harvested by hand.
Most California tomatoes
are, mechanically har-
vested. Ohio's harvesting
machinery needs to be de-
signed in a lighter weight
and more mud-proof than
California's.

"Our goal has been to
lower the cost of harvesting
in the Midwest and thereby
be more competitive with
the California market,"
Holmes said. He estimates
a decrease in Ohio field
tomato production unless
the cost goes down.

Unlike some crops,
Holmes said, tomatoes are
grown to be harvested at
the same time. A harvester
scoops the tomato plants
from the ground and
shakes the tomatoes off.
"What you end up with is
green, ripe and overripe
fruit," Holmes said. Typi-
cally, between 15 and 20
percent of the crop is green.

Overripe tomatoes prob-
ably will not be sorted out
with Holmes's sorter. They
are either destroyed by the
harvester or disintegrate
in the washing system at
the processing plant.

Holmes estimates the
sorter will be available to a
farmer in three years at the
cost of $6,000. The initial
cost of buying the sorter
could be absorbed by the
farmer in one year.

Holmes conceived the
idea for a vibrating surface
while working on a
mechanical strawberry
harvester in 1973 at North
Carolina State. Strawber-
ries were bruised by this
method, but tomatoes re-
mained uninjured. He de-
cided to test for a cheaper
way to sort tomatoes in the
field than the costly color-
detecting machinery or
manual labor.

The Ohio Agricultural
Research and Develop-
ment Center has applied
for patent rights, and sev-
eral farm machinery com-
panies are interested in
the sorting concept.

One company wants to try
it on potato harvesters. Ad-
justed at the right fre-
quency, the vibrating sur-
f ace could separate
potatoes from dirt clods
and rocks, onions from mud
cloths and freeze-damaged
fruits from undamaged
ones.

Holmes foresees other
uses of the sorter. Conceiv-
ably, it could be used in
fruit and vegetable pro-
cessing. Peaches, pears and
tomatoes must be at an
exact ripeness when can-
ed. Biting into a peach
that was still green when
canned might become a
thing of the past.

Holmes said he feels that
due to the world popula-
tion increase, it will be-
come more difficult to feed
the future world's popula-
tion. "I'm trying to improve
the production of agricul-
tural items so the inci-
dence of famine in world
countries will be less," he
said.
Dr. Robert Holmes, professor in the department of agricultural engineering was the recipient of the Teaching Award of Merit. Holmes is recognized as an outstanding teacher by students and faculty.

He has demonstrated his interest in students by developing new teaching and laboratory materials and being active in student groups. In addition to being a productive member of various departmental and college committees, he has been a member of the American Society of Agricultural Engineers' (ASAE) committees on education and professional development.

Holmes' versatility as a teacher and lecturer is demonstrated by stimulating high school students attending the Youth and Science Day, developing a beginning course which continues to have increasing enrollment, and teaching professional engineering courses.

His outstanding achievements as a teacher were recognized in 1974 at North Carolina State University, and in 1978 by The Ohio State University College of Engineering. Holmes received the award at the Gamma Sigma Delta, honor society of agriculture's annual initiation and awards banquet. Financial support for this award was made possible by COBA/Select Sires, Inc. and NOBA.
on receipt 4-16-92

(LO,AW)

14 OHIO STATE FACULTY RECEIVE TEACHING, RESEARCH AWARDS

COLUMBUS -- Eight Ohio State University professors received the Alumni Award for Distinguished Teaching at the 1992 Faculty Awards Dinner Thursday (4/16). Six other faculty members were given the Distinguished Scholar Award for outstanding research contributions.

The Alumni Award recipients were chosen by a committee of alumni, students and past award winners from nominations made by students and colleagues. The award includes a $1,500 honorarium and a $1,200 increase in base pay. Begun in the 1959-60 academic year, the award is funded by gifts through Ohio State's Development Fund from Amoco Foundation and alumni and friends of the university.

Recipients of the Scholar Award were nominated by departments and selected by a committee of senior faculty, including previous winners. The award includes a $1,500 honorarium plus $20,000 for research, to be used over three years. Begun in 1979, the awards are supported by private gifts through the Development Fund.

Winners of the Alumni Award for Distinguished Teaching are:

- John D. Bonagura of DUBLIN, professor of veterinary medicine.

Bonagura is an expert on veterinary cardiology, but his students say he puts his own heart into his teaching. Noted for

-more-
- Robert G. Holmes of UPPER ARLINGTON, professor of agricultural engineering
  Over and over, Holmes' students praise his ability to apply course material to real-life situations. In his engineering design and farm machinery management classes, he is able to communicate clearly and help students bring together information to solve problems. His students find his interest in the subjects infectious and are motivated by his enthusiasm.
  Inventor of seven pieces of agricultural machinery, Holmes is also active as a researcher and consultant.
  Holmes earned his Bachelor of Science and Master of Science degrees both in 1962 and his doctorate in 1967, all from Ohio State. He then taught at North Carolina State University for 10 years before returning to Ohio State as a faculty member in 1977.

  Jensen has a way of making even large classes for non-majors interesting and engaging.
  He employs a variety of techniques to pump up the enthusiasm of students. For instance, when he teaches DNA replication and protein synthesis, he hands out colored balloons to students who line up in specific arrangements and act out what is happening in the cell.
  Similarly, when he teaches basic genetics, he dresses up as Gregor Mendel. Students leave his classes with new appreciation for science and for the difference an outstanding teacher can make.
  Jensen came to Ohio State in 1984 as dean of the College of Biological Sciences after 27 years as a faculty member and administrator at the University of California-Berkeley. He stepped down as dean in 1989 and began teaching full-time. His bachelor's (1948), master's (1950), and doctoral (1953) degrees were all earned at the University of Chicago.

- Elizabeth A. Stasny of COLUMBUS (43085), associate professor of statistics
  Professor Stasny teaches statistical simulation, statistical methods, regression modeling and other subjects, including her specialty, sample surveys.
  Students praise her ability to translate, explain and convey ideas clearly, as well as her well-organized presentations. They consider the pace of her classes challenging, her homework assignments heavy and her grading standards strict, but nevertheless find the classes to be rewarding, useful and even fun. They also appreciate the way she encourages questions and her availability outside of class.
  Stasny earned bachelor's degrees in both mathematics and statistics, magna cum laude, from West Virginia University in 1976. Her Master of Science in 1978 and doctorate in 1983 are from Carnegie Mellon University. She joined the Ohio State faculty in 1984.
Distinguished Teachers

Robert G. Holmes
Professor
of agricultural engineering
Faculty member since 1977
B.S. and M.S., '62, and Ph.D., '67,
Ohio State University
on receipt 6-2-95

(AO)

 For release

COLUMBUS -- The Ohio State University Board of Trustees on Friday (6/2) appointed Susan L. Huntington as acting dean of the Graduate School, reappointed chairs of anesthesiology and obstetrics and gynecology, granted 47 emeritus titles, and conducted other business.

Huntington named acting dean of the Graduate School

Susan L. Huntington, University Professor and professor of history of art at The Ohio State University, was formally appointed acting dean of the Graduate School.

She will replace Roy Koenigsnecht, dean of the Graduate School since 1985, who last autumn announced his intention to retire as dean and return to his faculty position as a professor of speech and hearing.

Huntington has been a member of the Ohio State faculty since 1971. She is an authority on Asian art, particularly that of ancient India, and has conducted extensive field work in India and other Asian countries. She is the author of three books on the art of ancient India, as well as numerous articles, book reviews and other publications.

Reappointment of chairs

The board reappointed John S. McDonald as chairperson of the Department of Anesthesiology effective July 1 and

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-- Thomas J. Byers of WORTHINGTON, Department of Molecular Genetics, professor emeritus.
-- Emilio Casetti of GRANVILLE, Department of Geography, professor emeritus.
-- Samuel C. Chu of COLUMBUS (43214), Department of History, professor emeritus.
-- Albert L. Clovis of PATAKALA, College of Law, professor emeritus, retroactive to June 1.
-- David W. Cole of UPPER ARLINGTON, Department of Finance, professor emeritus.
-- Joseph Foley of COLUMBUS (43214), Department of Communications, professor emeritus, retroactive to June 1.
-- Abbot Gaunt of UPPER ARLINGTON, Department of Zoology, professor emeritus.
-- Jack George of UPPER ARLINGTON, Department of Internal Medicine, professor emeritus, retroactive to May 1.
-- Roger Gerkin of UPPER ARLINGTON, Department of Chemistry, professor emeritus.
-- Werner Haas of COLUMBUS (43235), Department of Germanic Languages and Literatures, professor emeritus.
-- Glenn Himes of UPPER ARLINGTON, Department of Agricultural Engineering, professor emeritus.
-- Robert G. Holmes of HILLIARD, Department of Agricultural Engineering, professor emeritus.
-- Michael Kindred of COLUMBUS (43214) College of Law, professor emeritus, retroactive to June 1.
-- P. John Kozyris of UPPER ARLINGTON, College of Law, professor emeritus, retroactive to June 1.
-- Mary MacVicar of UPPER ARLINGTON, Department of Adult Health and Illness, professor emeritus.
-- Norman Rask of UPPER ARLINGTON, Department of Agricultural Economics and Rural Sociology, professor emeritus.
-- Donald Redman of WOOSTER, Department of Veterinary Preventive Medicine, professor emeritus.
-- Rhonda Rivera of COLUMBUS (43201), College of Law, professor emeritus, retroactive to June 1.
-- John Rule of COLUMBUS (43206), Department of History, professor emeritus.
-- Lars G. Sandberg, Department of Economics, professor emeritus.
-- Philip Sorensen of COLUMBUS (43212), College of Law, professor emeritus, retroactive to June 1.
-- James Stephens of UPPER ARLINGTON, Department of Poultry Sciences, professor emeritus.

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