Men are not always to blame when women carry a heavier load of housework responsibilities. Women themselves often cling to traditional roles, new University of Illinois research shows.

A mail survey of 450 married U of I employees and their spouses found that husbands’ and wives’ attitudes about housework don’t always match behavior.

Women may perform certain chores, yet believe that the chores—such as food shopping, child care, laundry, cleaning, and making family appointments—should be shared equally.

The wives said their husbands should also prepare food, take children to appointments, shop for clothes, sweep or vacuum, and arrange for someone to clean the house.

Instead of blaming the men for not doing their fair share, couples need to analyze why they are not doing what they believe to be right in sharing household chores, says Vicki Fitzsimmons, associate professor of family economics. (LISA SHEPPARD)

Couples’ Attitudes About Housework Do Not Determine Behavior

Women who refer all the money management decisions to their husbands may not have the necessary skills to handle taxes and investments after widowhood or divorce.

A University of Illinois Extension program, “Take Charge of Your Life by Taking Charge of Your Money,” helps prepare midlife and older women in case of divorce, widowhood, or disability and provides skills in making financial decisions. The program was designed by the American Association of Retired Persons.

In a 1995 Extension survey, 77 percent of participants reported they feel more positive about financial management after taking the program and 78 percent feel better about their financial future.

For more information about the program, contact a local Extension unit office. (LISA SHEPPARD)

Women Gain Financial Confidence

Off-Campus Degree Program a Plus for Professionals

The Crop Sciences Department in the College of ACES offers an innovative program that could be just the ticket for professionals wanting more education and upgraded credentials.

Traditional graduate programs normally require students to live a period of time on campus. But this off-campus graduate studies program is offered at locations throughout Illinois to accommodate schedules of full-time professionals.

“These classes allow students to keep pace with the rapid changes in crop sciences without interrupting current employment,” says Fred Below, recently appointed program coordinator and associate professor of plant physiology.

Below emphasizes that classes, taught by regular U of I faculty, maintain the high standards set by on-campus participants.

“The material in the courses is specifically tailored to the experiences of the agricultural professional,” Below says. “Students learn through face-to-face instruction or through distance learning technologies.”

Courses cover the latest developments in crop sciences and can be part of a non-degree program leading to a certificate of completion or a master of science degree program in crop sciences. (ROB WYNSTRA)
Rising student interest in the College of Agricultural, Consumer and Environmental Sciences has prompted officials at the University of Illinois at Urbana-Champaign to grant the college an increase in its target for incoming freshmen in the fall of 1997.

To match campus facilities and staff with students, UIUC administration sets a number that each college may target for freshmen enrollment each fall. The new admission target for College of ACES 1997 freshmen is 515 students, up 5 percent from the fall 1996 target. Total college undergraduate enrollment in fall 1996 was 1,988.

“This demonstrates both the cooperation of the UIUC administration and the faculty and administration of this college to continue to attract new students to ACES,” says Kirby Barrick, the college’s associate dean for academic programs.

ACES’s increased enrollment target means that for Illinois high-school students and their parents, “there are new opportunities to attend a college that has strong programs,” says ACES assistant dean Rebecca McBride.

To Increase or Not To Increase, That Is No Longer the Question

Trees May Reduce Violence, Strengthen Communities

Could transforming the inner city landscape address some of our most pressing urban problems? A series of U of I studies conducted in Chicago public housing suggests that violence in the home, the despair that comes with intense poverty, and the disintegration of community can be substantially addressed through a simple, low-cost intervention—greening.

Researchers interviewed individuals who lived in architecturally identical Chicago public housing apartment buildings. The only difference was that some apartments gave residents access to natural areas, including trees, while other apartments were surrounded by concrete and asphalt.

Researchers found that in buildings with trees nearby, residents had a greater sense of community, stronger ties to their neighbors, and, most surprisingly, lower levels of aggression and violence in the home. They also felt better adjusted, and safer, than residents who had fewer nearby trees.

“In buildings with nearby trees, residents functioned better in their everyday lives. They were more proactive, had made more progress toward solving their problems, and felt they were closer to reaching some of their most important goals,” says Professor Frances Kuo, U of I environmental psychologist.

Co-author and Professor of Environmental Planning Bill Sullivan says that when outdoor spaces with trees are available, residents spend more time outside, making it more likely they will encounter, get to know, and form friendships with their neighbors.
Thornless Blackberry Variety Yields Long-Sought Patent

It took 17 years for U of I Horticulture Professor Bob Skirvin, of the ACES’s Department of Natural Resources and Environmental Sciences, to develop a unique thornless blackberry variety—and another 6 years to patent it.

He and colleague Ken McPheeters received patent number 9,407 on December 26, 1995, for a truly thornless blackberry called, appropriately enough, Everthornless. The new variety was genetically engineered from tiny pieces of thornless skin of the blackberry variety Thornless Evergreen, which was not truly without thorns.

Commercial growers can keep the old-fashion Thornless Evergreen blackberry bushes smooth-skinned by pruning the shoots. The big disadvantage is that pruning takes a tremendous amount of labor.

Skirvin likens thornless plants to baldness in humans.

“Thorns are really hairs,” Skirvin says. “It’s an epidermal trait. And so these thornless blackberries are just bald plants.”

Skirvin recalls planting 1,000 bushes in the hope that they would turn out both healthy and thornless. All the bushes were thornless, but only one of them produced any berries. The rest were sterile.

“It only took one bush out of that original thousand for us to produce this new variety though,” explains Skirvin.

Field trials in Oregon found that the newly patented variety is bigger and has more sugar and less acid than other varieties, so the new variety may have the traits for commercial success.

An Oregon firm, Sakuma Bros., has purchased the rights to propagate and sell the thornless blackberries. Half the royalties from sales go to the U of I Foundation, which shares the income with the inventor and his department.

Skirvin is currently working on a thornless rose and a new deep-red pear. (GARY BEAUMONT)

U of I Corn Breeders Mark 100 Years

Corn breeders in the Department of Crop Sciences at the University of Illinois recently passed the first-century mark in research on oil and protein selection in corn.

“This effort today ranks as the longest continuous directed selection experiment in higher plants, with only a four-year halt during World War One,” says John Dudley, professor of plant genetics.

The research, which began in 1896 under C.G. Hopkins, first focused on demonstrating that selection could change the nutritional value of the corn kernel. Today, all that has changed.

“The results accumulated over the last century suggest that the limits to selection may be higher than anyone imagined,” Dudley says. “We have already seen protein concentrations more than triple, and oil has increased some fourfold.” By comparison, similar progress for increasing yield would result in tripling current corn harvests to around 600 bushels per acre. (ROB WYNSTRA)
Endowed Chair Announced in Soybean Strategy

Illinois farmers, through the Soybean Checkoff, have contributed $1.25 million to the University of Illinois College of Agricultural, Consumer and Environmental Sciences to establish an endowed Soybean Industry Chair for Agricultural Strategy.

“The chair will provide a very stable center for industrywide leadership and strategy so that all soybean programs may be integrated into an effective package,” says Alan Puzey, chairman of the Illinois Soybean Checkoff Board (ISCB).

Steve Sonka, professor of agricultural management, has been selected to fill this post, and becomes director of the National Soybean Research Laboratory.

Sonka has written more than 125 books, articles, and other publications. He has received national awards for outstanding research and teaching.

“The leadership activities of the chair will provide a focal point for the soybean industry to successfully respond to agriculture’s dynamic business challenges today and in the future,” says Sonka. (ROB WYNSTRA)

Market-Advice Providers: Bullish or Bearish?

A joint project of the University of Illinois College of Agricultural, Consumer and Environmental Sciences and The Ohio State University will give farmers a way to compare the track records of market-advice providers.

Agricultural Market Advisory Services (AGMAS) is the creation of Darrel Good, U of I Extension marketing specialist, and OSU agricultural economist Scott Irwin.

“This new advisory service is especially significant today, given the policy shift away from price supports and deficiency payments,” explains Good. “Farmers are increasingly looking to the private sector for advice and information.”

Each Wednesday, researchers study the analysis and commentary for corn, soybeans, wheat, cotton, live hogs, and live cattle as they appear on the Data Transmission Network (DTN) and FarmDayta networks. Each service is ranked on a scale of one to five according to bullishness (prices will rise) and bearishness (prices will fall).

These ratings are converted to a scale of zero to 100 and averaged for each commodity. The ratings are released each Thursday and uploaded on the Internet at the web site http://www.aces.uiuc.edu/~agmas.

This fall, FarmDayta and DTN began offering AGMAS on the Internet as a premium service. An “ask-the-expert” component is planned. Good, Irwin, and project manager Tom Jackson will answer questions, though they will not recommend services. (BOB SAMPSON)
Gene silencing has begun to attract widespread interest as a possible key for overcoming some of the problems that have plagued plant biotechnology. This process was first described in transgenic plants where insertion of multiple copies of the same gene from one species into another species resulted in less, rather than more, expression of the inserted gene.

“A rough analogy would be finding out that one plus one doesn’t always equal two,” says Lila Vodkin, professor of plant genetics at the University of Illinois. “Sometimes in fact it appears that one plus one can even equal zero.”

To better understand this process, Vodkin is investigating expression of genes in the seed coats of soybeans that have different forms of what is known as the inhibitor gene. Dominant forms result in yellow seed coats, while the recessive mutations result in black seed coats.

Research has shown that the enzyme for synthesis of a group of compounds known as flavonoids is greatly reduced in yellow seed coats, which have the dominant form of the inhibitor gene.

“Flavonoids are found only in plants,” Vodkin says. “These compounds appear to have a major role in human health and nutrition, possibly even as anticancer agents in soybean food products.”

Vodkin’s research clearly indicates that the locus of this gene in the soybean exhibits naturally occurring spontaneous mutations that show the gene-silencing form.

The molecular basis of the gene-silencing mechanism is still unknown. However, examination of the naturally occurring mutations in the soybean hopefully will lead to a better understanding of gene silencing and to better ways of overcoming this problem in transgenic plants. (ROB WYNSTRA)

Property Tax Reform Would Likely Benefit Illinois Farmers

Even if it led to higher state income taxes, property tax reform would be a boon to Illinois farmland owners, a recent University of Illinois study indicates.

David A. Lins, professor of agricultural and consumer economics and U of I Extension farm finance specialist, led the study. He was assisted by graduate student Ngamboko Papa Muzinga.

Lins notes that farmers might benefit from reform, but proposals to reduce property taxes in exchange for higher income taxes might introduce more uncertainty by creating difficulties for local taxing bodies due to the fluctuations in yearly tax receipts.

“Overall, it appears likely that the agricultural sector would benefit from property tax reform. Total taxes paid by farmland owners would vary more from year to year, but total tax payments would still correlate highly with net farm income,” says Lins.

Greater reliance on income taxes would result in farmland owner tax payments more reflective of current income, though shifting from property taxes to state income taxes could result in fewer federal tax deductions for many farmers.

Computer model projections were used in the study to create different scenarios involving taxes.

“Although the variability of total tax payments increases with reform, the farmers have only a small probability of paying higher total taxes,” says Lins, referring to the models’ outcomes. (BOB SAMPSON)
Warren Farmland Gift Celebrated

A gift of 80 acres of Piatt County farmland from the estate of Milton W. and Claradine Warren of Mansfield, Illinois, will support 4-H and other agricultural youth programs by the U of I College of Agricultural, Consumer and Environmental Sciences. The gift is a memorial to Milton Warren and his sister, Anna May Warren, and adds to a previous gift of 40 acres from the estate of Elizabeth Warren.

The Warrens have a long history of supporting the U of I. In 1955, Milton’s mother, Elizabeth Warren, donated 40 acres in memory of her family. Her gift supported such events as 4-H Day, as well as long-term research.

Claradine Warren, who took over operation of the farm after her husband’s death, participated in the Piatt County Home Extension Club and, along with her husband, led a Piatt County 4-H club. (BOB SAMPSON)

Solving a 17-Year Packaging Puzzle

Researchers have developed a device that might make it safe to “aseptically” process and package certain foods for human consumption. Soon scientists may be able to package and distribute safe and sterile food products, such as stew, that contain both liquids and solids.

The sensing device could revolutionize packaging and distribution of food worldwide, says Bruce Litchfield, College of ACES professor of agricultural engineering. Ken Ghiron, a U of I post-doctoral research associate in agricultural engineering, and Litchfield came up with the promising technique.

Every soccer mom knows about the small, rectangular, laminated containers of juice often consumed after games. The juice, because of its aseptic packaging, needs no refrigeration. The packaging has been used seventeen years in the United States for food in liquid form, but has not been usable for foods combining liquids and solids. But that limitation may not apply if researchers using the sensing device can ensure sterility.

The sensing device takes the temperature of sterile, embedded beads in solid food particles as the liquid and solid food is processed together. This measurement indicates the temperature of the solid food and whether it is sterile. The magnetized beads give off a signal allowing their temperature to be read before they are removed and the food is packaged. (DOUG PETERSON)
C-FAR Gives Shape to Research Goals

Scientists in the College of ACES are using new resources to help Illinois meet some of the crucial challenges in the food and agricultural sectors.

New projects that match research priorities of the Illinois Council on Food and Agricultural Research, a coalition of more than fifty organizations in the food and agricultural sectors, are becoming a reality. C-FAR’s efforts to increase state funding allocated to research brought $6 million to the University of Illinois at Urbana-Champaign, Southern Illinois University at Carbondale, Western Illinois University, and Illinois State University last year.

“Agriculture, including food and fiber and all who work with the food and ag sectors, is a tremendous industry in Illinois,” says Terry Wolf, C-FAR chair. “This investment will pay off in terms of new and better utilization of what we produce now, new products, foreign market development, and other ideas to help feed the world in the future—I don’t know of anything that’s more important.”

Another C-FAR goal is to provide ideas on research directions. At a retreat last spring, C-FAR members identified broad areas of research priorities. The College of Agricultural, Consumer and Environmental Sciences used that information to solicit and evaluate proposals for the C-FAR funds. More than sixty C-FAR projects are underway at the University of Illinois at Urbana-Champaign.

Citizens can contribute ideas for research by calling 1-800-CFAR-991 or sending email through the C-FAR web site: http://www.ag.uiuc.edu/~c-far. This spring, C-FAR will further refine research priorities for the participating universities. In addition, the coalition will engage in a “visioning” exercise to develop long-term goals for the Illinois food and agricultural research sectors. (TINA PROW)

New Program Tackles World Food Issues

To be able to put enough food on tables worldwide, it’s important to put all of the issues on the table as well. That’s the message underlying a new University of Illinois program that aims to coordinate discussion of world food problems through a variety of approaches.

For example, the Illinois World Food and Sustainable Agriculture Program is taking full advantage of the Internet. It recently developed a web page to get information out to the general public (and researchers) on threats to agricultural production, says Jerry Nelson, professor of agricultural economics and leader of the program.

According to Nelson, the program has commissioned papers on the current status and the potential future productivity of five key products—corn, soybeans, wheat, swine, and beef. The papers will be written on a semi-technical level and will be discussed at a workshop in early May.

Finally, the Illinois World Food and Sustainable Agriculture Program will be bringing internationally recognized speakers to the Urbana campus. Lester Brown, president of the World-Watch Institute, will be the keynote speaker on April 22 for the College’s Earth Day activities.

Other speakers scheduled to come to campus include Dennis Avery, director of global policy issues for the Hudson Institute, and Alexander McCalla, director of the agriculture department for the World Food Bank. (DOUG PETERSON)

Illinois World Food and Sustainable Agriculture Program: http://www.aces.uiuc.edu/~ILwfood
A New Era in Farm Policy

by David Lins, Professor
Eric DeVuyst, Assistant Professor
Department of Agricultural and Consumer Economics

The Federal Agricultural Improvement and Reform Act of 1996, or the “1996 Farm Bill,” contains changes that could profoundly influence agricultural production, prices, and conservation programs into the next century. Many believe the law is the most significant change in agricultural policy in over 40 years.

Commodity Program Payments Phasing Out

The law provides for seven years of payments to producers decreasing from about $5.6 billion in 1996 to about $4.0 billion by 2002. Payments would then end.

To be eligible, producers or owners who assume all or part of the risk of producing crops must sign a seven-year “production flexibility contract.” Only the croplands previously enrolled in a federal farm program are eligible.

Virtually all eligible land has now been signed up. Payments under the contract are received independent of commodity prices and yields.

The program provides almost complete flexibility on planting decisions, except for some restrictions on fruits and vegetables. The program significantly alters factors bearing on production. The state’s farmers used to be required to idle some productive acres and limit acreage of corn or wheat, or both, to get payments.

It’s the Farmer’s Choice

Farmers now must assess the economic and agronomic consequences of growing one type of crop versus another, including planting all corn, for example. The planting flexibility increases chances of overproduction or underproduction of a given crop.

It also creates the potential for greater variability in commodity prices. Faced with more price fluctuation, farmers need good risk-management strategies.

Increasing flexibility and eliminating set-aside acres have increased the potential supply of commodities. But this potential for greater supplies and the adverse impact on commodity prices have been masked so far. Short supplies going into 1996 and poor growing conditions during the 1996 season raised commodity prices to near-record highs.

More Consolidated Farms, Decreased Land Values?

Long term, one should expect larger supplies and reduced commodity prices compared to prior farm program levels. Increased financial pressure on less efficient producers will likely speed the process of consolidating farms into larger, more efficient units.

Considerable uncertainty remains over the potential impacts on farm land values. Clearly, the fixed program payments under the production flexibility contracts have been bid into current land values. However, if supplies increase and prices decline, land values could decrease.

Conservation Measures Renewed

The 1996 Farm Bill contains many conservation measures. Perhaps the most significant, the Conservation Reserve Program (CRP), was renewed. The legislation caps CRP enrollment at 36.4 million acres.

Exprired or terminated contracts may be replaced with new enrollments. Owners can decide to terminate contracts on acreage not highly environmentally sensitive after giving written notice.

Wildlife Habitat and Water Quality

The law delivers mixed news for Illinois wildlife supporters. With set-aside programs gone, idle land that would have provided wildlife habitat will again be farmed.

On the other hand, the renewal of CRP assures, for western and southern Illinois, that wildlife habitat will be protected. East-central Illinois has very little land classified highly erodible and very little enrolled in CRP. The revised CRP allows farmers to enroll filter strips to protect surface water quality.

Wetlands Reserve Program Renewed

The Wetlands Reserve Program (WRP) was renewed with a cap of 975,000 acres. One-third of the enrolled acres must be in permanent easements, one-third in thirty-year easements, and one-third in “restoration only, cost-share agreements.”

Cost sharing is available on restoration, ranging from 50 percent to 100 percent. The amount of cost sharing depends on the easement and needed restoration. Much land surrounding Illinois rivers qualifies for WRP. Not all land offered will likely be enrolled, as in past years.

Flexible Swampbuster Program

Flexibility in complying with wetland conservation requirements (swampbuster) and other conservation requirements is featured. There is more flexibility in cost sharing for farmers if it improves farm wildlife habitat. The local Farm Service Agency can provide details.

Environmental Quality

A new program, the Environmental Quality Incentives Program (EQIP), was established. It provides cost sharing, incentive payments, and technical assistance for implementing management practices that improve or protect the environment.

Eligible for EQIP is agricultural land that “poses a serious problem to soil, water, or related resources.” In fiscal year 1996, $130 million is available; afterwards, $200 million will be available annually.

Fifty percent of the funding is for livestock-related conservation measures. Many, if not most, Illinois farms could have some land that qualifies.