

LAND-GRANT QUARTERLY



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WEST VIRGINIA STATE COLLEGE

A LAND GRANT INSTITUTION ESTABLISHED IN 1891

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LAND-GRANT QUARTERLY

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WVSC Regains Full 1890 Land-Grant Status

Contributed by Dr. Orlando McMeans, Dean and Director

West Virginia State College (WVSC) once again became an official and fully recognized 1890 Land-Grant Institution with the passage and subsequent signing of the FY 2002 Agricultural Appropriations Bill. The 1890 Land-Grant Institutions were created by the Second Morrill Act in 1890, which expanded the system of land-grant colleges and universities to include historically black institutions in those states where segregation denied minorities access to the land-grant institution established by the First Morrill Act, in 1862. Now, after more than four decades, since the College's land-grant status was surrendered, WVSC's birthright, has been restored. No words, either written or spoken, can express the enthusiasm and joy felt by the West Virginia State College community.

For the past two years the College has received \$1,000,000 for research activities and \$1,000,000 for extension activities from the United States Department of Agriculture (USDA). As a full 1890 Institution, the College is eligible for many other formula based, competitive and non-financial entitlements. Some of these include Facilities Funds (formula-based), Capacity Building Funds (1890 competitive), and many other 1890 institutional entitlements which

include an array of educational, outreach, research and resource-based funding programs.

The College owes a debt of gratitude to a number of individuals and entities who assisted in the monumental, historical endeavor of full restoration of WVSC's 1890 Land-Grant status. Of course, Senator Robert C. Byrd, played an integral role by proposing, and subsequently supporting language which led to the College being placed back into the 1890 funding line, thus restoring the College's 1890 status. Senator Byrd and his staff worked relentlessly, along with the USDA, the 1890 community, and members of the United States House of Representatives and Senate to make an impossibility a reality. Special thanks also goes to West Virginia's congressional delegates: Senator Jay Rockefeller, Congresswoman Shelly Moore Capito, Congressman Alan Mollahan, and Congressman Nick Rahall, who all voted in the affirmative for the FY 2002 Agriculture Appropriations Bill. Other supporters of the quest for full 1890 status include Governor Bob Wise, Commissioner Gus Douglass, the National Association of State Universities and Land-Grant Colleges (NASULGC), other 1890 Institutions, President David C.

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Hardesty, Jr. of West Virginia University, the USDA and WVSC's faculty, staff, and students. We would also like to recognize the College's chief land-grant strategic advisors, Mr. Carl Butler and Mr. Frank Lee. Of course, none of this would have been possible if it were not for the leadership, vision and untiring efforts of President Hazo W. Carter, Jr., and his key strategist, Dr. R. Charles Byers, Vice President of Planning and Advancement. Last but not least, accolades go out to the Alumni of West Virginia State College, who have been persistent for decades in attempting to restore the birthright of the College, full financial and name recognition as an 1890 Land-Grant Institution.

Federal Matching Requirements for WVSC

Contributed by Dr. J. Ulises Toledo, Associate Dean & Director of Fiscal Affairs

Recently, West Virginia State College (WVSC) was reinstated as a full land-grant institution with the passage of the Fiscal Year (FY) 2002 Agricultural Appropriations Bill. Furthermore, WVSC will be added to the Agricultural Bill language (through a special amendment) to become an official member of the 1890 community. West Virginia State College, like the rest of the 1890 institutions, is consequently mandated by the federal government to obtain state matching dollars for Sections 1444, and 1445 ("Formula Funds") in order to preserve the current level of funding. This mandate will become effective in FY 2002.

State matching is described as those funds derived from non-federal sources made available by the state to the eligible 1890 institution, either through a direct appropriation or under any authority provided to raise revenue, such as gift acceptance or users fees. These funds are used to match programs or activities that fall within the purpose of agricultural research and cooperative extension under Sections 1444 and 1445 of the National Agricultural Research

Extension Policy Teaching Act of 1997 (NAREPTA). The federal regulation also mandates that the required matching funds be used solely by eligible institutions for agricultural research and extension activities, or for qualifying educational activities that have been approved in the institution's plan of work. Furthermore, this regulation also obliges the eligible institutions to certify the availability of matching funds prior to the distribution of formula funds each fiscal year.

If the state match is not met, the State of West Virginia is at risk of losing millions of dollars in federal support for outreach, research, and teaching programs provided by formula funds. In other words, non-compliance with state matching can work against the current allocation in formula funds. The Code of Federal Regulations (CFR) explains this issue with more detail: "Each 1890 land-grant institution...will be entitled to their allocations of federal agricultural research and extension formula funds less an amount equal to any required matching that the institution fails to provide. For

example, if WVSC is required to match 50% of its formula funds, and has a current allocation of \$2,000,000, the institution would need to obtain funds in the amount of \$1,000,000 from the state. If the institution fails to match its federal formula funds, those funds are immediately cut back from \$2,000,000 to \$1,000,000 for that particular fiscal year. The resulting reduction in federal funds would mean a net loss of \$1,000,000 for the State of West Virginia in federal revenues. The federal dollars that result from these cut backs, are redistributed to the other 1890 institutions through a special formula allocation. Because the federal government will soon raise the state matching requirements to a 100% level (a dollar for dollar match), West Virginia State College and the State of West Virginia are at risk of losing the entire allocation of its federal formula funds. This outcome would exacerbate the current slow growth in the state's economic development and would directly affect the Citizens of West Virginia by ceasing valuable social and research programs currently offered by WVSC.

The Workforce Education & Career Assistance Network For You

Contributed by Mr. Ray Ali, Workforce Preparation Extension Specialist

The Workforce Education and Career Assistance Network For You (www.wecan4u.net), a uniquely holistic web site, is the result of a multi-state cooperative agreement between the Alabama Cooperative Extension System (Alabama A&M University and Auburn University Cooperating) and West Virginia State College. The WECAN4U site puts workforce, business, education, economic, and financial information right at the fingertips of Alabama and West Virginia residents.

WECAN4U was designed to provide easy Internet access to a diverse audience, including limited-resource individuals preparing for the job market. It is also a great tool to help close the digital divide among urban and rural communities.

The site is divided into six categories under each state:

- *Employment* – Direct links to local, state, and national sites that contain employment information
- *Education & Training* – Public and private institutions that offer degrees and certificates, as well as localized training opportunities



Ms. Rosalie Lane (AL) and Mr. Ray Ali (WV)

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- *Legislation* – Federal and state workforce legislation, as per the Workforce Investment Act of 1998 (WIA)
- *Starting Your Own Business* – Local, state, and national resources for both adult & youth entrepreneurs
- *Statistics* – Local, state, and national at-a-glance economic statistics
- *Financial* – General financial resources, including strategies on budgeting, investing, and calculating monetary approaches

Since the site was established on June 1, 2001, there have been over one thousand eight hundred queries at the site.

This cooperative venture between two Historically Black Land-Grant Institutions serves as a user-friendly catalyst for bi-state workforce development via the exposure of historically under-served populations to opportunities extant as per the Workforce Investment Act of 1998 (WIA).

WVSC After-School Program

Contributed by Ms. Kellie Dunlap, Youth Development Specialist

West Virginia State College (WVSC) Land-Grant Programs administers the K-6 after-school programs sponsored by Charleston Housing Authority and the City of Charleston. There are currently six sites within the City of Charleston: Little Page Terrace, South Park Village, Oakhurst Village, Hillcrest Village, Washington Manor and Spring Hill Apartments.

The programs operate for three hours each day with two land-grant extension associates staffing each site. Tutoring, nutrition lessons, character education, recreational opportunities, drug and crime prevention programs and educational fields trips are among the many activities provided to the students. In addition, children are given a nutritious snack every day. WVSC and the West Virginia University (WVU) Cooperative Extension Office partnered to place three new computers with Internet capacities at each site.

Since Land-Grant Programs assumed responsibility of this program on January 1, 2001, we have worked to address several critical areas to include nutrition, literacy, drug and crime prevention.

Nutrition continues to be a problem facing people with limited resources. During the past year Land-Grant Programs partnered with WVU to receive commodity foods. This has allowed us to provide the children with a nutritious snack every day. The commodity foods are also used when the extension associates provide nutrition education lessons.

The extension associates have completed several specialized trainings in the past year including literacy training provided by the Literacy Volunteers of Kanawha County. This program will assist the Associates in working with individual students to increase their reading levels.

A second training session focused on substance



After-School Program Teachers & Program Coordinators

abuse prevention. Extension associates completed a six-week course on talking to children about violence and substance abuse using puppets. By using puppets to present the information, children are more willing to discuss issues they may be facing at home. This allows the staff to become more familiar with the children's issues.

Future plans include incorporating character education, summer recreation programs, specialized academic curriculums, family programs and youth entrepreneurship training. Land-Grant Programs hopes to expand the program to include programming for middle school aged children within the next academic year.

In an age where many children go home to an empty house or spend many hours in front of the television, this exciting partnership between WVSC, Charleston Housing and the City of Charleston allows children to have adult interaction and supervision while at the same time giving them access to quality academic programs.

For more information, please contact Ms. Kellie Dunlap, Youth Development Specialist at 766-4285 or dunlapke@mail.wvsc.edu, or Ms. Krystal Smith, Program Coordinator at 766-5723.

Transitional Housing Groundbreaking Ceremony

Contributed by Ms Nicki Bentley-Colthart, Family Development Extension Specialist

West Virginia State College Land-Grant Programs held the groundbreaking ceremony for its transitional housing projects on November 14, 2001. West Virginia State College received funding from the Department of Housing and Urban Development's (HUD) program for Historically Black Colleges to provide transitional housing on campus for at-risk youth and formerly homeless and battered women. Representatives from the College, Land-Grant Programs and both partnering agencies, Daymark, Inc and the Charleston Area YWCA, were on hand to speak on the importance of the partnership, the need for these programs, and the excitement of breaking ground.

The first transitional housing project is called the WVSC HOUSE project (Helping Our Undergraduates Succeed in Education). This grant was funded as a collaboration with New Connections of Charleston. New Connections, a program of DAYMARK, currently provides GED education, life skills, job skills, independent living, case management, and evening support groups for young people in the Kanawha Valley. The purpose of the project is to expand the program to assist at-risk youth in transitioning into the college environment at West Virginia State College. The overall goals for the WVSC HOUSE project are to help improve the economic prospects for the members of the community, revitalize our neighborhood, and provide transitional housing for highrisk youth to give them an opportunity to attend and succeed at college.



L to R: Mrs. Dana Glenn, President Hazo W. Carter, Jr., Mrs. Elizabeth Morgan, Ms. Debbie Weinstein, Dr. R. Charles Byers, and Dr. Orlando F. McMeans

With the HOUSE project, New Connections will expand its transitional living program to include youth who are interested in attending West Virginia State College. The program will be similar to New Connections' existing program where residents live in supervised apartments for six to nine months before moving out into the community. This project will involve providing housing and supportive services to college age youth who would not normally go to college because of financial difficulties or other barriers. Students will be housed in a facility adjacent to campus where they will receive professional supportive case management, advocacy and short-term crisis intervention. The case manager will also provide group education and some basic living skills instruction (time management, living on a budget, balancing a checkbook, practicing safe sex, dangers of alcohol and drugs, etc). After one semester, most students

will possess enough maturity and understanding of the college "culture" to move into a student dormitory, where they will have continued to have access to the case manager and other supportive services offered by New Connections.

The second facility, called Phase II, is a collaborative effort with the Charleston Area YWCA. This program will be very similar to the HOUSE project but provide housing for women and their children who have been former victims of domestic violence or who have been homeless.

The YWCA's long term goal with their social services programs for battered and homeless women and families is to empower the participants with the skills, support, knowledge, and self-esteem necessary for them to attain long-term self-sufficiency, and to become productive members of our community and society. The YWCA strives to teach them techniques to enhance the self-esteem of their

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children, as this is a critical ingredient that impacts all aspects of the children's future success or lack thereof. The programs work toward exposing these children to many productive and exciting avenues for their creative and expansive intellects and energy, as well as prioritizing their development of healthy conflict resolutions and alternatives to violence. With the rich and successful history of providing housing and supportive services to low-income women, the YWCA is the ideal agency to operate a successful transitional housing program for homeless and battered women on the West Virginia State College campus.

Residents of the Phase II Project will be able to stay at the facility while they are enrolled at West Virginia State College in a two -year, four-year or community college program. They will be required to pay 30% of their adjusted income for rent. The YWCA will use current HUD regulations regarding "adjusted income" guidelines in determining

each individual's rental figure. Phase II will consist of three units for the women and their children.

The YWCA will be providing case management services to all residents of the program in order to help them achieve long term self sufficiency. Individuals will meet bi-monthly with either a homeless or a domestic violence case manager (if they have moved into transitional housing from one of the shelters then they will have the option of continuing to meet with that case manager). Short and long term self sufficiency issues, goals and strategies will be mutually identified and addressed during these meetings. The case managers are thoroughly trained in and knowledgeable about the resources available to provide education and job training opportunities, daycare, healthcare, employment options, etc. Young adults who reside in the transitional housing project will be required to have a more extensive relationship with their existing New Connections case manager than other residents,

and will meet with their case manager weekly to address self-sufficiency issues. They will be held to the same standards as the other adults. Case management services will also be available for all transitional housing residents to access for one year after they move into permanent housing in order to help resolve issues that may impede their ability to remain self sufficient.

Construction is underway and scheduled to be complete in early summer. Students will be enrolled in the programs beginning with the fall semester of 2002. For more information contact Nicki Bentley-Colthart at (304) 766-4283.



Floor plans for the transitional housing project

WVSC Graduate Attends Exeter University in England

Contributed by Ms. Shea Hamilton, WVSC Graduate

Not long ago, a generous opportunity was extended to me while studying at West Virginia State College on my Bachelor of Science in Molecular Biology. Collaborations between the Biology Department of WVSC and Exeter University, in Great Britain, made it possible for me to study in England during the last year of my degree. These two institutes share a common interest in many international environmental problems, such as waste management and the control of pathogens in our food and water supply. The opportunity to do research abroad later developed into a Ph.D. offer to study under Professor Hilary Lappin-Scott, head of Environmental Microbiology and Ecological Research Group at Exeter (EMERGE).

In addition to the high standard of research taught at Exeter University, working on my Ph. D. abroad has afforded me the chance to present my results in other countries and to work with other labs to develop novel techniques for studying bacteria that cause food-borne illnesses. During the first year of my Ph.D. program, I have represented WVSC and Exeter University at conferences in Scotland, Holland and England, forming relationships with many European labs that are working toward similar research aims. I also submitted an abstract to be presented in Tokyo, Japan at the March 2002 Biofilm Conference.

I have become affiliated with several Biological Societies both at home and abroad, such as the American Society for Microbiology and the Society of General Microbiology in the UK. In



Ms. Shea Hamilton, WVSC Graduate

September of this year, I co-authored a chapter published by the British Biofilm Club entitled "Identification of Genes Involved in Biofilm Formation." This chapter discusses alternative ways of studying biofilms, which are bacteria that aggregate on a surface (living and non-living) and surround themselves in a polysaccharide coating of their own synthesis. This sessile state of bacteria is of particular importance in food manufacturing and hospitals because these bacteria are more tolerant to stress, such as antibiotic therapy, and can persist on surfaces designed for implants and in food manufacturing. These are but a few examples of where biofilms can be found in our bodies and in the environment.

I have just begun the second year of my Ph.D. program and, although far from home, it has proven to be the most intense yet rewarding year of my life. My project, entitled "Identification of Genes Involved in Pathogenic Biofilms" concentrates on genetic investigation of food pathogens, such as *Salmonella* and *Escherichia coli*. These bacteria are of particular

importance to public health given that many strains are resistant to multiple antibiotics and show enhanced tolerance to stresses that are encountered from "farm to fork." Cases involving food-borne illness caused by *Salmonella* are a continuing problem in the U.S. and in the U.K. Recent publications, in 2001, by the Public Health Lab for England and Wales show that *Salmonella* still has the highest mortality rate, especially in elderly and immuno-compromised individuals. My project allows me to explore the genes that regulate biofilm formation and the subsequent virulence of these bacteria. I am using specific technology, such as gene cloning and microarray expression analysis, to try and elucidate those genes responsible.

As I begin my second year, I look forward to continuing my studies and extend my greatest thanks to all of my professors in the Biology Department at WVSC for preparing me so well. The program collaboration between WVSC and Exeter University is still in its infancy and I was fortunate enough to be the pioneer. Heather Mellert, another recent graduate of WVSC, has recently begun a joint Ph.D. program that involves exploring events of cell division. She will also be awarded her degree through Exeter University.

I would like to acknowledge WVSC Land-Grant Programs and the Honorable Gus R. Douglass, Commissioner of the West Virginia Department of Agriculture. Both have contributed greatly to my Ph.D. study abroad.

Waste Not! - Striving for a Sustainable Future in West Virginia.

Contributed by Dr. Mark Chatfield, Associate Director of 1890 Research

The Bioplex project at West Virginia State College (WVSC) involves research scientists that are developing novel biological ways to utilize wastes. The Bioplex concept arose at the University of Cardiff, U.K. from cross-departmental thinking about waste. The word was derived from Coal Board developments ("Coalplex") in U.K. and now adopted in South Africa, and is based on systems whereby the whole output of coal from mines is to be profitably converted into useful products. Accordingly, our basic outlook on waste is that all waste must be regarded as a valuable resource and only disposed of by unprofitable processes as a last resort. The wastes of interest include livestock wastes, food and sewage wastes, oil and petrochemical wastes. The essential feature is that an organic waste is converted by the metabolism of living organisms into a variety of useful products. Often the organisms are important end products.

Intensive poultry production and processing in the northeastern counties of West Virginia has provided scientists at WVSC with an opportunity to apply the Bioplex concept. There were 91 million broiler chickens produced in West Virginia in 2000 with a value of over \$132 million. Over 100,000 tons of manure was associated with this production. The management of this manure is a serious issue. Nobody wants to talk about it - much less live near it, because poultry wastes smells bad, threatens water supplies, and reduces farm profits.

"Entremasures," or scientists at WVSC are developing several avenues of research to convert these wastes into assets. By refining the concept of thermophilic anaerobic digestion, research projects are optimizing how to use microbes in bioreactors to convert poultry waste into biogas (methane), solid and liquid fertilizers and also utilize the microbes produced as livestock feed

additives. Thus the fiscal and environmental deficits normally associated with the waste are being converted into payoffs for the farmer. The biogas can be converted into electricity and sold back to the power grid. The fertilizers can be diverted to local fields to support corn, soybeans and pasture growth or greenhouse hydroponic and aquaculture operations that produce vegetables and fish.

Seven scientists in the Biology Department of WVSC have continued to refine the Bioplex concept by studying novel ways to utilize materials derived from the anaerobic digester pilot plant. Dr. Mark Chatfield, a plant physiologist, is evaluating the fertilizer value of digester solids in field trials of several vegetable crops, blueberries and a pasture grass mix. The digester solids are being compared to a bridge fertilizer (pelleted municipal sludge), commercial fertilizers formulated for each crop. The fertilizer value of liquids from the digester is being evaluated in hydroponically grown tomatoes and lettuce. Dr. Jonathan Eya, an aquaculturalist specializing in the culture and nutrition of commercially farmed fishes, and Dr. Rob Harris an animal physiologist, have developed a program assessing the feasibility of using various digested waste products as a base to prepare fish feeds. Initial trials will evaluate the growth of trout, koi and tilapia supplied with a poultry waste-derived feed. Dr. David Huber is a microbiologist specializing in the ecology and genetics of fungi. He is identifying and characterizing the microbes living in the digesters. Dr. Tim Ruhnke a parasitologist is determining the effectiveness of the thermophilic digester at eliminating certain pathogens associated with the waste. Initial experiments have been on *Cryptosporidium* - a human pathogen that is more frequently appearing in drinking water systems. Dr. David Stafford, a visiting research

professor in the WVSC Department of Biology is the brainchild of the digester pilot plant and the Bioplex projects at WVSC. He is a well-known industrial microbiologist, a research fellow at the University of Exeter, U.K. as well as head of his company Enviro-Control, Limited. Dr. Stafford is currently designing three laboratory-scale digester plants. The laboratory-scale plants will be used to test the feasibility of novel strategies in waste recovery.

As domestic livestock agriculture increases to meet global demands, new strategies must be developed to handle associated waste that becomes increasingly harmful to soil, water, and air and nearby biotic resources. West Virginia poultry producers, environmental regulators and regional planners must have access to knowledge and technologies that eliminate pollution and enhance competitiveness. Technology developed at WVSC in the Bioplex program will assist in reducing pathogen and nutrient pollution in watersheds currently impacted by poultry industries while maintaining, or increasing market shares. The wastes associated with livestock production will become a marketable asset rather than a fiscal detriment. This will be reflected in 1) greater opportunities for US waste management industries that will expand into the livestock waste management sector; 2) increases in value-added poultry products such as novel fertilizers, aquaculture feeds and energy; 3) reductions in human pathogens and inorganic nutrients in impacted watersheds.

The digester facility at West Virginia State College is one of only a few in the country and complements such work in other colleges such as NC State University, Florida State University and the Clay Center Institute, Nebraska. It will be the only one coupled with fish farming aquaculture studies as well as hydroponics and fertilizer studies.

West Virginia State College Receives Grant to provide Wireless Internet Technology

Contributed by Mrs. Dana Glenn, Assistant Director of Cooperative Extension Programs

West Virginia State College (WVSC) is a member of a distance education consortium leading a 4 million dollar project to develop and deploy advanced Internet services and technologies over satellite to help close the "digital divide" that separate rural and low-income Americans from their urban and higher-income counterparts.

The National Science Foundation is funding the three-year grant of nearly 4 million dollars for the Advance Internet Satellite Extension Project. The American Distance Education Consortium (ADEC), based at the University of Nebraska-Lincoln, is leading the research and development project, which seeks wireless Internet solutions to better serve rural and remote learning centers, businesses and offices. It is also focusing on improving Internet delivery to tribal colleges, historically black colleges and universities and Hispanic-serving institutions. ADEC membership consists of 58 state universities and land grant colleges.

ADEC and WVSC will work together to deliver Internet services without landlines at a reasonable cost to rural and underserved learning communities. WVSC will also eventually be involved in a study to determine how to assure that networking and learning applications developed within the second generation of Internet, known as Internet 2, can be made available to the college as well as rural learning centers.

As a consortium member, WVSC received the equipment to provide wireless Internet services at one of our three Community Connection Centers at no cost for three years. The Avesta Drive community center was the first center chosen to test this new technology. Land-Grant staff provides basic computer instruction to community members using this technology. In the spring of 2002, a second wireless Community Connection Center will be opened at the Booker T. Washington Community Center in London, WV.



Clay County CAMP: Standing Like the Willows, Instead of the Oaks

*Contributed by Mr. Ray Ali, WVSC Workforce Preparation Extension Specialist
with contributions by Mr. Steve Zaricki, WVU Clay County Extension Agent*

Clay County, West Virginia, is an area that national and state economic growth of the 1990's has principally ignored. The population has remained at approximately ten thousand individuals for several decades. Furthermore, county per capita income and unemployment are among the worst in a state that has economically lagged behind the rest of the country. Most compelling, beyond the residual statistics, is the fact that nearly one out of three residents, of all ages, lives in poverty.

Clay County has its tribulations. However, filling this page with negative statistics and extant dilemmas would contradict the purpose of this pen, for these have been well documented and deliberated upon. Instead, this discourse serves as a description of the evolution of an endeavor intended to document and propagate the humanistic assets of this area.

Last September, at a national Workforce Development conference in Denver, Colorado, I had the occasion of meeting my colleagues from West Virginia University (WVU). Both U.S. Departments of Agriculture and Labor hosted this event, providing a competitive opportunity for participants to receive a mini-grant, in the amount of five thousand dollars, for an innovative workforce preparation program involving community asset-mapping.

Community asset, or resource, mapping is a technique utilized by economic developers to ascertain both the expertise and associations of individuals. Financial resources of large businesses and industries are not predominantly addressed. Also, this process is implemented independent of community needs. After data has been collected, an opportunity presents itself to link both individuals and/or associations with one another in order to affect augmented economic development

at the grass-roots level: the individual. Fundamental progressive networks are the hopeful product.

West Virginia State College and WVU partnered, without mandate, to develop a grant proposal addressing asset-mapping opportunities in Clay County. The proposed project was entitled the Clay County Workforce Development and Community Asset-Mapping Program, or Clay County CAMP. We were awarded the full five thousand dollars in December of last year.

Mr. Steve Zaricki, WVU Extension Agent for Clay County, and I developed a framework for implementation. This involved hosting town forums in five communities, through which we would explain the concept of resource mapping, discuss its importance, and obtain the information.

Within a few weeks, my partner and I were able to obtain a place on the agenda of a community-wide meeting. The host organization was funded by a federal department, and was charged with economic development throughout the county. For Steve and I, this was our first collaborative asset-mapping venture from the philosophical into the real.

As we entered the basement of the elementary school, we noted a total of thirteen people present. The chairman opened the meeting by asking the participants the following question: What are the needs and problems of Clay County? Two hours later, with this sole question addressed, the meeting was over. Steve and I were able to speak for only five minutes to an already perturbed group of residents. We obtained no information.

Hindsight is always twenty-twenty. Maybe it was the thirteen people, or rather, the one hour and fifty-five minute contention of quandaries. At any rate, Steve and I

realized that we must modify our modus operandi drastically.

Who better to ask for help from than the persons you are trying to help? We therefore enlisted, or humbly beseeched, five persons representing five geographically distinct areas of the county for their counsel regarding the process of this initiative. Their admonishment first: Town forums hosted by institutions of higher education so you can gain information and write a paper? For what? Their wise advice second: If you want to hear from the "everyday" people of the county, those who do not attend the normal town meetings, or political functions, then have community festivals which can involve as many people as possible.

And so it was during the period of September thru December, 2001. Steve, I, and the five residents developed and implemented these festivals in the Lizemore, Clay, Ivydale, Bomont, and Widen communities. Food, entertainment, and free markets for local entrepreneurs were secured with grant funds, while all monies raised were re-invested in the respective communities. Information regarding the assets of individuals is currently being processed, with the findings publishable by March of next year.

This learning experience calls to mind an adage my mother gave me before I left Philadelphia for school, "In life, son, do not stare at the storm with the unyielding face of an oak, for you shall splinter and break. Instead, face the storm with the resolve of a willow, so that you may bend and turn with the windy rain. As the sun rises, so shall you, intact."

Clay County CAMP was all the more stronger and wiser because of the people of Clay County, whose resolve is partially manifested by their patient interest and counsel of this program.

Nutrition Education in Putnam County

Contributed by Ms. Heather Shott, Nutrition Education Extension Specialist

Over the past few months Land-Grant Programs has implemented nutrition lessons from the FF-NEWS (Families First-Nutrition Education and Wellness System) curriculum in Putnam County. The lessons are presented in a group setting before lunch is served and usually require about an hour of instruction. Methods of delivery involve group discussion, lecture, presentation, and video.

The John Henson Senior Center located in Hurricane, WV is committed to completing at least one entire module in which pre and post-tests will be administered. Attendance is taken by way of a sign in sheet and has been very favorable. On average, a class consists of twenty-five seniors. Participants who recently completed the health status module will begin the first lesson from the management skills section in January of 2002. Some of the lessons that have been taught include: obesity, weight management, diabetes, hypertension, and cardiovascular disease. Future topics covered in the management module consist of food buying practices, meal planning, food selection, extending food resources, and home gardening.

The Hometown Senior Center in Putnam County is another location visited. While a commitment to do

an entire module has not yet been made, there is an interest in the health status module. The senior citizens of this center have benefited from lessons such as, diabetes and age-related nutritional needs. There is strong attendance for every lesson taught at this facility.

The evaluation piece built into these lesson plans helps to determine the amount of nutritional information retained. On the next visit, the partakers at the John Henson Center will take the post-test. The pre-test was given a few months ago before the lessons were taught. Both tests are the same and consist of ten questions. The participants answer the questions by circling either rarely, sometimes, or most of the time. An example of a question in the health status module evaluation section is, "How often do you eat healthy snacks?" When assessing the pre and post-tests for each individual, the post-test should reflect the nutritional knowledge gained from the sessions. This information will be useful in determining the effectiveness of the program. For further information, please contact Ms. Heather Shott, WVSC extension specialist, at (304) 766-4282.

The Putnam County Youth Center

Contributed by Mr. Ray Ali, WVSC Workforce Preparation Extension Specialist

The Federal Workforce Investment Act (WIA) of 1998 directed workforce development service providers to efficiently address the educational and economic requisite needs of adults, dislocated workers, and youth. The legislation clarifies the latter to be those ages 14 thru 21, both in school and out, who unfortunately encounter numerous barriers to financial empowerment.

In an attempt to address this situation, the Court Appointed Special Advocates of Putnam County, Inc. founded the Putnam County Youth Center (PCYC) in August 2001. The Region II Workforce Investment Board, via the area Youth Council, awarded funding of this endeavor via a competitive grants process.

The mission of the PCYC is to educate, train, and reintegrate out of school youth back into society, in order that they can become acceptable, responsible, productive and successful members of our community. A non-exhaustive list of available services includes: educational opportunities (e.g. GED High School Equivalency Diploma Test preparation); exploration of social problems; life skills instruction; and job readiness and preparation.

The Department of Cooperative Extension Programs (DCEP) at West Virginia State College (WVSC) has been involved with the PCYC since its inception. Mr. Ray Ali, Extension Specialist, was a member of the Implementation Team in the center's developmental stages, and is currently a member of its advisory board. Furthermore, a number of extension specialists and agents representing various offices within the department (e.g. Nutrition Education, Family Development, Youth Development, etc.) currently instruct customers on a weekly basis. This venture continues to serve as a collaborative catalyst for workforce development in Putnam County partially via the integrated educational exposure of underserved youth to the programmatic areas of WVSC Extension professionals.

For further information, including opportunities to volunteer, please contact Mr. Ray Ali, WVSC Extension Specialist, at (304) 766-4284, or Mr. George Paugh, PCYC Project Director, at (304) 586-0682.

THE HORT CORNER

Chocolate

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With the recent celebration of Valentine's Day, it seems quite appropriate to talk about **chocolate** (*Theobroma cacao*), one of the most associated pleasures of this much-celebrated day of love. In the passage below, I will attempt to give you an overview of the culture, religious significance, preparation and affects (to human senses and emotions) of chocolate.

- Chocolate is harvested from a new world plant that was collected by the Conquistadores and brought back to Europe in the 1500's. It has become very important and no one can imagine the German Swiss, or Belgians surviving without chocolate.
- Chocolate is made from the seeds of the very large fruit of the Cacao tree. The fruits are large and resemble a half-sized football. They are cut open and the seeds and a cottony mass that surrounds them are harvested and fermented for a few days to remove the cottony material. This fermentation is done in different ways in different parts of the world; some of the flavor given to unusual chocolates arises during this process. The fermentation lasts a few days.
- After fermentation the beans and their husks are dried in preparation for chocolate making. The beans are usually shipped from where they were grown (usually in tropical regions of Africa or South America) and sent to processors. The beans are roasted. They crack open to yield "nibs" which are pressed to



yield cocoa and cocoa butter. The nibs contain about 53% **cocoa butter**. Once the cocoa butter is pressed out, the remainder is pressed into a cake that can be cooled, pulverized, and sifted into cocoa powder.

- Cocoa butter is a very expensive and useful product. It is unique in that it is very stable and resists rancidity and can be stored for years without spoiling. It melts at temperatures between 89° to 93° F so it is used often for makeup, skin preparations, and suppositories. Therefore, much of the cocoa butter goes into businesses other than making chocolate. The result is an excess of cocoa.
- Chocolate is made by mixing cocoa butter and cocoa back together in various concentrations. The higher the cocoa butter concentration, the better quality the chocolate. About 10% of the price of a candy bar is used to pay for the cacao beans used to obtain the chocolate, the rest is for processing and added

compounds. Because there is a shortage of cocoa butter, much chocolate is made with little cocoa butter. Some brands substitute less expensive oils. Chocolate made with little cocoa butter is runny and melts easily. Paraffin is sometimes added to make it more solid (e.g. hand dipped chocolates).

- Much of the cocoa is used in processing such things as chocolate cake, chocolate milk, candies, Nestle's Quik®, etc. Other chocolate is made into candy.
- This story may or may not be true. In the first world war (1916 or so) a German general in North Africa was concerned that the morale of his men was bad due to lack of chocolate. It was too hot for chocolate, especially the low cocoa butter stuff that was available, and it melted everywhere. One night he had an inspiration: if he put a candy coating on the chocolate, his men could have chocolate any time they wanted. This became the British candy called "Smarties". Forrest Mars discovered the famous candy-coated treat, bought the American rights to the product, and with a friend, Bruce Murrie, made a new product called M&M's (Mars and Murrie). (Source: discussions with Dr. Jules Janick, Purdue University; thanks to Ms. Sara Fox (1997) for use of her honors paper titled "Chocolate from a Chocoholic's View"; and Brenner, J.G. 1999. The emperors of chocolate: inside the secret world of

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Hershey and Mars. 1st ed. New York: Random House).

- The active ingredient of chocolate is called **theobromine**. It is a stimulant or soothing agent to people and is apparently not harmful (except for the addiction to chocolate that some people encounter).

However, theobromine is very poisonous to dogs and cats. Cats seldom eat chocolate so it is not a problem. However, dogs beg for everything their partners eat, so children sometimes give chocolate to dogs. An M&M is probably no problem, but a chocolate bar could kill an animal. Theobromine is a nerve stimulant and can stimulate the nervous system enough for the dog to go into "hyper" mode and die. White chocolate has little theobromine, baking chocolate and other bitter chocolates have much higher levels of theobromine. A 22-pound dog can get sick after eating only 0.40 ounces of baker's chocolate or 4 ounces of milk chocolate.

- Is chocolate really an aphrodisiac? This is one of the most frequently asked questions. For centuries chocolate has been associated with love. But, does chocolate really have an aphrodesiac affects on those who consume it.

Some people have produced evidence that the answer might be yes. Chocolate contains the substances caffeine, theobromine and phenylethylamine, which may be related to the myth for the following reasons. Caffeine acts as a stimulant; theobromine is a heart and nervous system stimulant; and phenylethylamine is a reputed mood elevator and anti-depressant. The result of all these stimulants acting in concert give increased energy, make your heart beat faster, and may make you a slight bit giddy and jumpy.....I guess you can see the association with love. In fact, it has been documented that Montezuma, an Aztec emperor, would drink a chocolate beverage before visiting his wives. However, before you try to seduce you lover with this beverage, I must convey to you that these stimulants are found in relatively low concentrations in chocolate.

Now you can not only impress your significant other with the gift of chocolate, the sweet confection of so many admirers, but you can now educate them as well with more information than they would want to know about it.

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