

Chapter One

AGRICULTURE IN THE CLASSROOM

Whether you are currently part of a farm family or you're a city kid, you might not find farming an attractive lifestyle. Many farm kids think life in the big city is more attractive than working on a farm. Some find success away from the farm, many do not and return to the land. And then there are those young people think agriculture as being remote and out-of-step with the high-tech world (see chapter 15 for a list of job possibilities and that will prove that thought wrong). Whatever your reason, it is important that you learn how dependent you are on the agriculture industry for your daily needs.

Without farm and ranch products there would be no food, no clothes, no medicines, and for you sport fans, no balls to play basketball or football. In California alone, 17% of all California employment is agriculture related. This includes growing food and fiber, packaging, processing, shipping, warehousing, marketing and retail sales. And everyone employed in any of the above, use their wages to not only to purchase food, but their clothes, their dry cleaning, movie tickets, gas for the car, and all other basic needs. Yes, whatever employment field you join in the years to come, those agriculture workers indirectly employ you.

Whatever group you fall in, check out your state's *Agriculture in the Classroom* (AITC). It is designed to help you acquire knowledge to become agriculturally literate. Each state has various programs and resources for both students and teachers, and most states have web sites. Check out other state's AITC's web sites as there is a wealth of information. Many offer various publications, some available on-line, while hardcopies are available, some for a small fee and some are free.

The AITCs were formed by farm bureaus, 4-H and FFA clubs, while others are connected to that state's department of agriculture.

Web sites are listed with each state. If for any reason you can not log on (sometimes web site addresses change), try the following: www.agclassroom.org/ and list the 2-letter state abbreviation. If this doesn't work, search for "AGRICULTURE IN THE CLASSROOM", select 'STATE PROGRAMS' and search state contacts, for example "I-L" for Iowa or Indiana or Louisiana, etc.

Three other excellent sites is www.agday.com presented by the Farm Journal, www.agri-ed.com/ presented by Agri-Education, Inc, and American Farm Bureau Federation www.fb.com

Before the Agriculture in the Classroom concept, there were other organizations, such as the FFA and 4-H. Here's how the 4-H began.

4-H - The Very Beginnings

Who invented the wheel? Where was it invented? Was it one person or many individuals around the world? Some historians think the wheel was invented in Mesopotamia (now Iraq) more than 3,500 years ago. That's questionable, who knows for sure. One fact does remain, without the wheel where would agriculture be today?

Like the wheel, it is hard to pin point exactly where 4-H began. *The National 4-H Council* states it didn't start at any one time or place, but was a result of many people in different parts of the United States. As we entered the 20th century, farm groups started to organize. In Iowa and Illinois there was the *Farmer's Institute* that helped youth with rural classes. In Ohio vocational agriculture school clubs were started. In Nebraska was the *Nebraska Boys Agricultural Association* and the *Nebraska Girls Domestic Science Association*. Similar groups were formed throughout the United States.

A lot of credit has been given to Albert B. Graham, a school principal in Ohio with his vocational agricultural clubs in 1901. The Ohio 4-H Council considers him the founder of 4-H. Iowa on the other hand, also lays claim to that title.

A young teacher, Jessie Field, at the Goldenrod School in rural Iowa, adopted the club concept similar to Graham (it is unknown if she know Graham). She introduced science classes in addition to the "3-Rs" The students planted a garden in the schoolyard, and after school she met with the *Boy's Corn Club* in the study of planting and growing corn. On alternated days she worked with older girls, *Girl's Home Club*, to study the art of homemaking.

In 1906 Jessie became *Page County Superintendent of Schools*. She enlisted the assistance of teachers from the 130 one-room country schools to form clubs in each school. She purchased a horse and buggy, drives herself, and visits every school three times during the year, spreading her Boys and Girls Clubs. .

With student enthusiasm they entered a exhibit at the *Farmers' Institute*. With the help of Miss Jessie, they chose the clover to be the emblem to represent their goals of clean living and agricultural conservation

In 1907 3-H pins were distributed to participating students, the "H" on each leaf represented HEAD, HEART and HANDS (she developed this pin 1906). A kernel of corn with their county name, Page, was placed in the center of the clover, and on the stem was the name of the state, Iowa.

In 1909, Jessie helps Page County put together a *County Collective Corn Exhibit* for the *International Corn Show* at Omaha, Nebraska. Page County takes first prize, a one-cylinder automobile which the boys and girls decide Miss Field should drive so she can visit more often.

In 1910 a fourth "H" was added to the Page County pin and stood for HOME. The motto of the clubs was "*Learning by Doing, to Make the Best Better.*" During this time, Jessie and friends wrote the original 4-H creed:

"I pledge my head to clearer thinking,
My heart to greater loyalty,
My hands to larger service,
And my health to better living,
For my club, my community,
My country and my world."

As the clubs grew, additional contests and exhibits were introduced. Such as spelling, ciphering, geography, corn judging, livestock raising, bread baking, sewing, and cooking. Prizes and trophies were awards to students from local and area merchants. In 1910 the *Boy's Farm Camp* and in 1911 the *Camp for the Golden Maids* were started to strengthen the learning of new ideas during the summer and for good fellowship. It has been said that Jessie Filed is best known as "the Mother of 4-H."

In Page County, the *Nodaway Valley Historical Society* has made it possible for you to visit the Goldenrod School with a display of one hundred years of 3-H and 4-H exhibits that includes historical information and artifacts. The museum is located at 1600 South 16th, in Clarinda. The Society also has a book, "The Very Beginning," which contains stories and quotes of Jessie Field and about the early clubs, activities and awards. For more information write: Nodaway Valley Historical Society, P.O. Box 393, Clarinda, IA 51632 or phone (712) 542-3073.

National 4-H

Today 4-H offers youth opportunities in communications, leadership and career development, livestock, home improvement, and computer technology. Programs are now found in rural and urban communities around the world, building life skills and preparing young people to meet the challenges of everyday living..

For 4-H information, write: National 4-H Headquarters, CSREES/USDA, 1400 Independence Avenue S.W., Washington, DC 20250-2225 or log on: www.4h-usa.org

Future Farmers of America

The National Future Farmers of America (FFA) is dedicated to making a positive difference to the lives of young people by developing their potential for premier leadership, personal growth and career success through agriculture education. The FFA motto is twelve short words to live:

Learning to Do,
Doing to Learn,
Earning to Live,
Living to Serve.

To contact the FFA, write: National FFA Center, P.O. Box 68960, Indianapolis, IN 46268-0960. Phone (317) 802-6060 or log on: www.ffa.org

AITC Parade of States

Look over the following parade of states for lots of great information to start your career in the agriculture food industry: To further your education, a number of agriculture private and public universities are listed at the end of each state. For additional agriculture information log on:

www.indiancommodity.com/agrilink/agriuniversities.htm or <http://uhaweb.hartfor.edu/nandigam/agri.htm>

Alabama

Alabama Agriculture in the Classroom (AAITC) was formed in 1987 and offers a variety of items for K through 12. The Alabama AITC is supported by thirteen Alabama agriculture related organizations.

In the *2001 Fall Class Notes*, pumpkins were discussed with poetry and songs. The pumpkin was thoroughly investigated, such as the number of creases from top to bottom. Questions were asked, such as, do larger pumpkins have more creases? Do pumpkins float in water? The seeds were also studied. This was followed by a series of pumpkin math questions. As a classroom project, pumpkin plants were grown in the classroom. Finally a discussion on how pumpkins grow.

The Alabama AITC offered workshops for teachers, links to other agriculture interests and a series of what they call “*Alabama Treasures*” materials, some of which can be downloaded, while others have a fee.

For information contact: Alabama Agriculture in the Classroom, 2101 Bell Road, Montgomery, AL 36117, phone (334) 240-7125. Or log on: www.alabamaitc.org

Alabama A&M University, (205) 851-5410, www.aamu.edu

Auburn University, (334) 844-400, www.agauburn.edu

Tuskegee University, (334) 727-8157, <http://agriculture.tusk.edu>

Alaska

Alaska Agriculture in the Classroom web site describes the various produce and livestock farmed in Alaska. The Matanuska Valley is renowned for their monster cabbage. As of the 2000 Alaska State Fair www.alaskastatefair.org, the record was 105.6 pounds. This valley also grows cauliflower, broccoli and potatoes. In the Tanana Valley, summers are shorter, but hotter and they do well with root crops such as carrots and potatoes. Also barley does quite well in the Tanana Valley. Livestock includes reindeer, cattle, horse and yaks. For information contact: Alaska Agriculture in the Classroom, HCR 10 mile 77, Richardson Highway, Fairbanks, AK 99701, phone (907) 895-4012, or log on: www.wildak.net/~alaskaaitc

University of Alaska, (907) 474-7083, www.iter.alaska.edu

Arizona

Arizona Agriculture in the Classroom was developed by the *University of Arizona* www.ag.arizona.edu with a *Agricultural Literacy Program*. Their goal is to assist educators with information about agriculture. They offer hundreds of books from citrus to wine grapes. Many of the books can be purchased online. There are a number of programs. *Summer Agricultural Institute* with a five-day program to teach teachers about food and fiber and how to incorporate that knowledge in the classroom. *Crop Doctor* is an informative, entertaining classroom experience in kit form as it blends science, social studies and language arts into a six-lesson plan. *Project Food, Land and People* with materials to help students in grades pre-K through 12 have a better understanding of the interrelationships among agriculture, the environment and people of the world. And there are also *4-H*, *Human Nutrition and Health*, and *Native American* programs. Activities include a *State Fair* exhibit, farm experience for students, and *Arizona Agriculture Day* that includes exhibits and a *Celebrity Cow Milking Contest*.

For information contact: Agricultural Literacy Program, University of Arizona, 4341 East Broadway, Phoenix, AZ 85040-1625, phone (602) 470-8086, Ext. 317, or log on: <http://ag.arizona.edu/agliteracy>

University of Arizona, (520-621-7192, www.ag.arizona.edu)

Arkansas

Arkansas Agriculture in the Classroom is a program of the Arkansas Farm Bureau. They offer a vast number of programs for both students and teachers.

There are two *Growing Smart* programs. The first was designed for elementary students. This program is a blend of knowledge and process skills that prepares students to utilize application-based skills that are related in a practical understanding of everyday life. Themes in this program include *Food and Fiber Systems, Agricultural Business, Pork and More*, and *A Bit of History*. The program also explores such subjects as eggs and cotton.

The second *Growing Smart* is for middle grades and deals with much of the above matter, however, is more advanced with additional subjects such as *Beef, Soybeans, Honey, Rice, Strawberries*, and *Forest Farming*.

Other programs include *Young Farmer and Rancher, Food for Kids, Reward Programs*, and *Youth Programs*. Of special interest are their *Safety Education Programs* where staff members come to the school and present slide and talk programs that run from 30 minutes to 2 hours. There are two publications *Front Porch* and *FB Press* and can be downloaded. There's also *Commodity Reports*.

For information contact: Arkansas Farm Bureau Federation, P.O. Box 31, Little Rock, AR 72203, phone (501) 228-1247, or log on: www.arfb.com

Arkansas State University, <http://agri.arstate.edu>

Southern Arkansas University, www.saumag.edu

University of Arkansas, Fayetteville, (501) 575-2251, www.uark.edu

University of Arkansas, Monticello, www.uarumont.edu/agriculture

California

California Foundation for Agriculture in the Classroom (CFAITC) was formed by the California Farm Bureau Federation and includes an Educational Resources Committee with agriculturalists, educators and technical experts and other interested individuals who want to encourage agricultural literacy in today's youth.

CFAITC offers a series programs, services and instructional materials. This includes conferences, summer programs, newsletters and lesson plans.

Instructional materials include a large variety of agriculture subjects. For an example, one middle school lesson: *How Much is too Much? How Little is too Little?* This lesson takes a look at plant requirements of nutrients and lets you discover through hands-on activities, that nutrients are required in proper forms and amounts. Other lesson titles include, *What's Wrong With Me?* and *Can There Really Be Too Much of a Good Thing?* There's also a group of slides available with this lesson. The slides give a visual picture of what happens if plants do not receive the appropriate amounts of nutrients.

CFAITC has lessons from kindergarten through high school. All lessons have been thoroughly researched and field-tested by educators. Lessons help students develop skills in science, mathematics, reading, language, history, health and nutrition. Lesson cost range from \$2.00 to \$10.00 (prices subject to change), with slide shows as high as \$19.00.

Students can also learn from videos. The PBS TV show *California Heartland* www.californiaheartland.org has a series of half-hour previous presented programs produced by KVIE of Sacramento. Each program ranges from visits to farms, restaurants with recipes, to factories (videos are available for a fee). Students learn how produce is grown and harvested, how cheese is made, and the caring of livestock. Each program is exciting, fun and educational.

CFAITC helps students find educational resources on agriculture. They inform you where you can write for books, newsletters, videos, and supplies. Just pick out a subject, from artichokes to wheat, or from farm equipment to worms, or careers subject from agriculture aviation to baking-bread, and the CFAITC can probably help you. There's also a list of books, again on almost every agriculture subject.

California students can take a number of field trips from how cheese is made to history farm tours. One exciting tour is to the *Pizza Farm* www.pizzafarm.com. Here's a living farm, with a field shaped like a pizza. In each slice are plants and animals that make up the pizza, wheat for the crust, tomatoes for the sauce, cows for the milk to make cheese, etc., and at the end of the tour a pizza lunch.

For information contact: California Foundation for Agriculture in the Classroom, 2300 River Plaza Drive, Sacramento, CA 95833-3293, or phone (800) 700-AITC, or log on: www.cfaitec.org

The California Farm Bureau Federation (CFBF) www.cfbf.com publishes the bi-monthly *California Country* for members with a series of articles on California farming. Each issue has recipes and a calendar of events. The CFBF also produces a weekly agriculture TV program www.cacountry.tv. For information contact: California Farm Bureau Federation, 2300 River Plaza Drive, Sacramento, CA 95833 or phone (916) 561-5500.

California Polytechnic State University, (805) 756-2161, www.calpoly.edu

California State University, Chico, www.csuchicoag.org

California State University, Fresno, (209) 278-2061, <http://casticsufresno.edu>

University of California, Berkeley, <http://nature.berkeley.edu>

University of California, Davis, (530) 752-0108, www.aes.ucdavis.edu

University of California, Riverside, (909) 787-1012, www.cjnas.ucr.edu

Colorado

Colorado Agriculture in the Classroom was formed by *Colorado Foundation for Agriculture* and is supported by eleven farm-related organizations. Issued monthly is their eight-page student activity newspaper, *The Colorado Reader*. It is sent to Colorado classrooms and covers a multitude of subjects running from integrated pest management to living with wildlife and is complete with a 4-page teacher's guide. Some of the subjects covered are: *Colorado It's Agricultural, Agriculture is Science, Fire and Water, What is a Weed, Native Plants, Nutrition, Corn, Horses, Harvesting, Wool and Sheep activity book, Wildlife activity book*, etc.

One of special interest is *Ranchers: Caretakers of the Land*. It covers Colorado's cattle industry history beginning in the 1800s when Spanish-Americans moved in with small herds of cattle from Texas.

Another is *Understanding Water* with 72 pages of activities on wastewater treatment, math, science, geography, writing, visual arts and economics.

The Foundation also has activity books from understanding water to wool and sheep farming. One of the highlights of the organization is their Summer Institute, where students can work one-on-one with agriculture producers with anything from herding chickens to repairing fences.

For information contact: Colorado Foundation for Agriculture, P.O. Box 10, Livermore, CO 80536, phone (970) 881-2902, or log on: www.growingyourfuture.com

Colorado State University, (970) 491-6274, www.colstate.edu

Connecticut

Connecticut Agriculture in the Classroom is funded by Connecticut Agriculture Education Foundation and staffed by the Connecticut Farm Bureau. Their goal is to develop agriculture literacy for students from Pre-K through high school. They have developed a Teachers' Resource Guide, *Food for Thought*, with lessons about agriculture. It was written for grades 4 through 8, but works well with students of all ages. A number of agriculture field trips are available, along with traveling farms brought to schools. In addition the *Farm Resource Center of 4-H* has a number of programs for schools.

For information contact: Connecticut Agriculture Education Foundation, 510 Pigeon Hill Rd., Windsor, CT 06095, phone (860) 298-4400, or log on: www.ctaitc.org

University of Connecticut, (860) 486-2836, www.canr.uconn.edu

Delaware

Delaware Agriculture in the Classroom is an educational program of the Delaware Department of Agriculture. The program is for pre-K through 12 with educational hands-on activities while the students

develop an understanding of the processes, effects, practices, and impacts of agriculture. *Project Food Land and People*, a program presented to teachers that include a wide array of activities from math and science to social studies and computer science. Plans are underway to present similar programs to students. *Project Learning Tree* is a series of themes with activities for students. There are a number of projects include an *Arbor Day Poster Contest*, *Tree Seedling Program* and *Fire Prevention*. Books, charts, videos, audio tapes, and other materials are available on a loan basis.

For information contact: Delaware Department of Agriculture, 2320 South DuPont Highway, Dover, DE 19901, phone (302) 739-4811, ext. 281, or log on: www.state.de.us/deptagri
Delaware State University, www.dsu.edu
University of Delaware, (302) 831-2501, <http://bluehen.ags.udel.edu>

Florida

Florida Agriculture in the Classroom offers detailed information on their web site. It provides the public with a listing of the resources, upcoming events in Florida with regard to agricultural education, and a resource guide that is downloadable with vast amounts of information ranging from farming tours, to industry contact in many different commodity groups.

For information contact: Florida Agriculture in the Classroom, Inc., P.O. Box 110540, Gainesville, FL 32611-0540, phone (352) 846-1391, or log on: www.flagintheclassroom.org
Florida A&M University, (850) 561-2794, www.famu.edu
University of Florida, (352) 392-7014, www.ifas.ufl.edu

Georgia

Georgia Agriculture in the Classroom is coordinated through *the Georgia Agriculture in the Classroom Council, Inc.* and the *Georgia Farm Bureau Federation*. Georgia has a curriculum for kindergarten through grade 8 which teachers can obtain by attending staff development classes. Pre-service teachers can also obtain materials through training at their colleges or universities. Teachers who attend the training and Georgia volunteers are added to the mailing list for the GA-AITC newsletter "*Georgia's Growing*." This newsletter can also be accessed by going to the Georgia Farm Bureau web site at www.gfb.org and clicking on "Ag in Class" icon.

For more information contact Georgia Farm Bureau Federation, P. O. Box 7068, Macon, GA 31209-7068, (478) 474-0679 Ext. 5365.

Fort Valley State University, www.agfvsu.edu
University of Georgia, (706) 542-3924, www.ces.uga.edu

Hawaii

Hawaii Agriculture in the Classroom is a project of the *Hawaii Department of Agriculture* and offers international materials and videos to educational institutions in Hawaii (high school, community colleges and universities) that offer agriculture classes. Many of the programs are by the *4-H Council*, *Future Farmers of America* and *Junior Achievement* organizations. At the University of Hawaii at Monoa, *their College of Tropical Agriculture* offers information on their courses. *The 4-H/Youth Development Council* has a kid's page with information on 4-H programs with a list of events on the various islands. The *Farmers Bookshelf* has information on fruit (avocado to pineapple), vegetables (basil to yams) and in the home garden section information on growing beans to tomatoes. *La'akea Permaculture Gardens* www.permaculture-hawaii.com offers courses and links to other sites such as the *Hawaii Organic Farmers Association* www.hawaiiorganicfarmers.org.

For information contact: Hawaii Department of Agriculture, P.O. Box 22159, Honolulu, HI 96823-2159, phone (808) 973-9560, or log on: www.hawaiiag.org
University of Hawaii, (808) 956-8234, www.ctahr.hawaii.edu

Idaho

In 1986, the Idaho Ag in the Classroom Association was founded, to plan, develop and disseminate a quality, easy to use curriculum supplement for Idaho teachers. Originally it was planned to have an AITC guidebook in every 4th grade classroom in Idaho.

In 1987, the Association contacted with the University of Idaho to research and to develop a curriculum guide that would enable teachers to use examples from Idaho agriculture to teach language, science, social studies, mathematics and health/nutrition.

Currently a resource guidebook is now available and provides a wealth of background materials about production of food and fibers, along with a series of activity books for pre-K, 2nd, and 3rd through 12th grades.

Idaho Ag in the Classroom is a cooperative effort between *the USDA, Idaho Sthdh*

open up to show items made from corn and soybeans. A variety of bookmarks mention statistics on corn, soybeans, fruits and vegetables, pork, popcorn, poultry, and dairy.

Two place mats are available. One is a *Food Guide Pyramid* that pictures the pyramid and tells about nutrition. The second place mat helps "*Find the Farmer*".

A 60-second animated video, "*A Slice of Soil*", represents the world and the precious amount of topsoil by cutting an apple. Other videos include "*Amazing Kernels of Corn*," "*Where Does Pork Come From?*," "*Where Does Beef Come From?*," and "*Exploring Planet Pizza*". All have teacher's guides with reproducible materials for grades K through 6 and connect food and farming.

"*Farming the Classroom*" is a program where more than 150 farm women and men go into the classroom and tell about their farming operations. A new program called "*Biotechnology Education Program*" has trained 80 people to present biotech programs to elementary, middle grade and high school classes.

Other materials include activity books, apple pencils, soybean crayons, puzzles and *Food For Thought*.

For information contact: Indiana Farm Bureau Inc., PO Box 1290, Indianapolis, IN 46206, Phone (317) 692 7830, or log on www.infarmbureau.org

Purdue University, (765) 494-8362, www.agriculture.purdue.edu

Iowa

Iowa Agriculture in the Classroom is by the *Iowa Agriculture Awareness Coalition* and is basically a web site for teachers. For information contact: Iowa Ag in the Classroom, 5400 University Avenue, West Des Moines, IA 50266-5997, phone (515) 225-5425,

Iowa Agriculture Awareness Coalition (IAAC) is an alliance of public and private organizations who work together to increase agricultural literacy among Iowa school kids in grades K through 12. IAAC members include Iowa's strongest commodity groups, agricultural educators and public institutions interested in increasing Iowans' understanding of the importance of agriculture to their economy and everyday life.

The IAAC invites you to learn more about your life and the world around you through this web site www.agaware.iastate.edu and the opportunities it offers to teachers and students.

You can write: Iowa Agriculture Awareness Coalition at P.O. Bo.

University of Kentucky, (606) 257-3468, <http://shelley.ca.uky.edu>
Morehead State University, (606) 783-2662, www.morehead-st.edu
Murray State University, www.murraystate.edu/agri

Louisiana

Louisiana Agriculture in the Classroom is part of the *Louisiana Farm Bureau Federation*. They offer lesson plans, learning barns, classroom materials, and Ag Education Links on the web. Their web contains current events with state and national issues. For information contact: Louisiana Agriculture in the Classroom, P.O. Box 95004, Baton Rouge, LA 70895-9004, phone (225) 922-6503, or log on: www.lfbf.org
Louisiana State University, (504) 388-2065, www.statlsu.edu
McNeese State University, www.mcneese.edu
Southern University, www.subr.edu
University of Louisiana, www.ulm.edu/agriculture

Maine

Maine Agriculture in the Classroom has materials available through the *Bangor Public Library*. Materials include books, tapes and other ag related materials. There are farm tours and classroom presentation being offered. "GROWLABS" is a program with a tabletop garden that includes crow tubes, soil and instruction video.

For information contact: Maine Ag in the Classroom, RR Box 3704, Albion, ME 04910, phone (207) 437-2441, or log on: www.bairnet.org
University of Maine, (207) 581-3202, www.ume.maine.edu

Maryland

Maryland Agriculture in the Classroom is by the *Maryland Agricultural Education Foundation, Inc.* There are *Mobile Science Laboratories* that bring aquatic science to the classroom. *Ag Discovery Days* offers middle grade students a change to visit working dairy farms and to participate in a variety of activities. There's also a variety of training programs for the classroom. For teachers there are five-day summer hands-on workshops. There are two publications *Opening Minds* that covers news and issues on agriculture, and *Classroom Notes* with hands-on ideas.

For information contact: Maryland Agricultural Education Foundation, Inc., P.O. Box 409, West Friendship, MD 21794, phone (410) 208-0701, or log on: www.maefonline.com or www.mdagintheclassroom.com

University of Maryland, (301) 405-1291, www.agnr.umd.edu

Massachusetts

Massachusetts Agriculture in the Classroom and is supported by the *Massachusetts Department of Food and Agriculture* and the *Massachusetts Society of the Promotion of Agriculture*, plus farm bureaus and those in the food business.

The *Farm Field Trip Manual* includes an outline for the farmer on how to develop or expand the farm education program, pre-activities and post-field trip activities for the classroom, suggestions for carrying out the field trip and connections to the *Massachusetts Curriculum Frameworks*. A companion manual outlines ideas and activities for *Farmers Who Visit the Classroom*.

Workshops on the Farm are offered to teachers throughout the year.

It's Your World offers 20 classroom activities for grade K through 8, focusing on agriculture and agricultural products. Lessons on school gardening, farmer's market, nutrition, aquaculture, soil, seeds and more look closely at agricultural issues and offer an understanding of the agricultural industry today.

The Newsletter lists a calendar of meetings, along with available resources such information on chickens and eggs in the Winter 2002 edition. A large source of ag information that includes apples, aquaculture, aquaponics, bee keeping, corn, cranberries, herbs, maple sugar, school gardening and lots more are available.

For information contact: Massachusetts Agriculture in the Classroom, P. O. Box 345, Seekonk, MA 02771, phone (508) 336-4426, or log on: www.aginclassroom.org
The Arnold Arboretum of Harvard University, (617) 524-524-1718, www.arboretum.harvard.edu
University of Massachusetts, (413) 545-0111, www.umass.edu

Michigan

Agriculture, science, natural resources and education are the focus of the Michigan Ag in the Classroom lesson plans. The lessons are utilized by teachers as well as *Michigan Farm Bureau* members to assist in educating students about natural resources and the importance of farming on everyday lives.

Seven lessons are available through the *Michigan Farm Bureau* or on the Farm Bureau web site. Lessons include bugs, seeds, water, soil, fiber products, foods amazing journey – from the farmer to the grocer and cycling back to you.

Promotion and Education Resource Guide: The Resource Guide is a compilation of useful educational tools available for loan or purchase that will help others learn about our food and fiber industry. The “guide” includes audiocassettes, CD-ROM’s, lesson plans, brochures and children’s books. Included in the guide is a listing of *Agricultural Commodity Organizations* in Michigan with addresses and telephone numbers.

Commodity Fact Card: A very informative mini-brochure that gives “A *Quick Look at Michigan Agriculture*”. Though small, the information included gives a quick look at the many commodities and the amounts they produce annually in the state.

Michigan Farm Market and U-Pick Directory: This handy book includes over 250 farm markets and u-pick farms where fresh Michigan produce is available for purchase. There are descriptions of products available at each location as well as a county map of Michigan to help with directions.

For more information contact: Manager-Promotion & Education, Michigan Farm Bureau, 7373 West Saginaw Highway, Lansing, MI 48909, phone (800) 292-2680, ext. 3213 or log on: www.michiganfarmbureau.com/education

Michigan State University, (517) 353-7268, www.canr.msu.edu

Minnesota

Minnesota Agriculture in the Classroom is by the *Minnesota Department of Agriculture*. They have *AgMag and Teacher Guide Series*, a popular student magazine with a variety of agricultural topics and a ready-to-use teaching module with a primary target audience of grades 4 through 6. *Minigrant Program* provides cash awards to help K through 12 educators more integrate agriculture into their curriculum. There are 19 *Commodity Cards* offer information on Minnesota’s top ranking plant and animal agricultural commodities. *Pest Patrol Activity Book* has 22 pages with a look at backyard pests. It is complete with a glossary and a teacher’s guide. There are science and career videos, *Ag-tivity Books*, and classroom presentations given by farmers and ag related business people. Many of the teacher materials are free and can be downloaded on their computer.

For information contact: Minnesota Department of Agriculture, 90 West Plato Blvd., St. Paul, MN 55107, phone (651) 296-6688, or log on: www.mda.state.mn.us/maitc

University of Minnesota, (216) 624-3009, www.coafes.umn.edu

Mississippi

Mississippi Agriculture in the Classroom is a program of the *Mississippi Farm Bureau*. One program is their *Learning Barn*. The interior is filled with videos, books, games, and brochures, along with teacher guides and lessons.

For information contact: Mississippi Agriculture in the Classroom, Mississippi Farm Bureau Federation, P.O. Box 1972, Jackson, MS 39215-1972, phone (601) 977-4245 or log on: www.msfb.com

Alcorn State University, www.alcorn.edu

Mississippi State University, (601) 325-2110, www.ais.msstate.edu

Missouri

Missouri Agriculture in the Classroom offers programs coordinated by *Missouri Farm Bureau Federation* in cooperation with the agricultural community. The purpose of the program is to enhance agricultural literacy among students, grades K through 12. Credit courses for graduate/undergraduate credit are offered throughout the state each year in an effort to assist teachers in taking the agricultural message to the classroom.

Mini-grants totaling \$10,000 are awarded to teachers to assist as they infuse agricultural concepts into the classroom. This allows teachers to purchase appropriate teaching materials and expendable items to assist in teaching about agriculture.

The *Ag Mag* developed by Illinois Farm Bureau Agriculture in the Classroom has been purchased to utilize in 4th grade classrooms. They are appropriate for all states to use. Three popular editions are *Pizza*, *Dairy*, and *Careers*.

For information contact: Director, Promotion and Education Programs, Missouri Farm Bureau Federation, P.O. Box 658 / 701 South Country Club Drive, Jefferson City, MO 65102, phone (573) 893-1414, or log on: www.mofb.org

Central Missouri State University, www.cmsu.edu/agriculture

Southwest Missouri State University, <http://ag.smsu.edu>

University of Missouri, (573) 882-2644, www.asra.agri.missouri.edu

Montana

Montana Agriculture in the Classroom. For information write: Ag in Montana School, 7950 Bird Rd., Wolf Creek, MT 59648, or phone (406) 562-3562. At press time Montana Agriculture in the Classroom had no web site. For information e-mail: mvbaker@3rivers.net

Also contact the *Montana Farm Bureau Federation* with their kids page: www.mfbf.org For more information contact: Montana Farm Bureau Federation, 502 South 19th, Suite 104, Bozeman, MT 59718 or phone (406) 587-3153

Would you like to go on a Montana cattle drive? The *Half Moon Ranch* offers a cattle drive with the Nelson family. The 6-day drive includes horses, tack, 3 meals a day, tents, evening entertainment and even portable showers. There are 2 drives each year. In the spring you will drive 500 cattle 30 miles from the Twin Coulee Ranch on the prairie to the Half Moon Ranch in the snow-covered mountains. In fall, the cattle are driven back to the prairie. For information log on: www.cattledrivemontana.com

Montana State University, (406) 994-3681, www.montana.edu

Nebraska

Nebraska Agriculture in the Classroom is supported by the *Nebraska Farm Bureau* and is a program of the *Nebraska Foundation for Agriculture Awareness*. Workshops are given to educators to teach them how to work agriculture into the regular school curriculum. Resources include books, games, maps and activities. There is an *Ag Pen Pals* program where farm families explain what they do to non-farm students. The kids can ask questions which are then answers by the farm families. Often some of the farm families make classroom visits.

Also there are *Mobile Learning Barns* and information on Ag careers.

For information contact: Nebraska Farm Bureau Federation, P.O. Box 80299, Lincoln, NE 68209, phone (402) 421-4400, ext. 2002 or (800) 546-3496, or log on: www.fb.org/nefb/ag-ed/

University of Nebraska, (402) 3401, www.ianr.unl.edu

Nevada

Nevada agriculture is one of the state's major industries. However, few people have been exposed to farm and ranch life, or even a basic understanding of how food and fiber are produced in Nevada. Nevada Agriculture in the Classroom helps students develop an understanding how agriculture affect their daily lives,

encourages students how to function more effectively in agriculture and to participate in environmental polices and programs. A number of teacher aids are available including activities, posters and presentations.

For information write: Nevada Agriculture in the Classroom, P.O. Box 99, Golconda, NV 89414-0099, phone (775) 623-5970, or log on: www.nvaitc.org
University of Nevada, (702) 784-6701, www.ag.unr.edu

New Hampshire

New Hampshire Agriculture in the Classroom is part of the New Hampshire Farm Bureau and offers training and materials to educators. Teachers who take the training receive a quarterly newsletter, have use of materials, kept up to date on agricultural subjects and are able to attend upcoming workshops. Some of the resource materials include an apple packet, information on bees and pollination, classroom gardening, cranberry information, maple sugaring, lots of dairy materials and New Hampshire agricultural history. Monthly *Barn Boxes* are available for sale and relate to that month's harvest such as apple in September, pumpkins in October and maple sugaring in February.

For information contact: New Hampshire Agriculture in the Classroom, 295 Sheep Davis Road, Concord, NH 03301, phone (603) 224-1934, or log on: <http://pubpages.unh.edu/~pcj/aitc.html>

In addition to agriculture in the classroom, the University of New Hampshire offers 4-H Youth Development Programs. For information log on: <http://ceinfo.unh.edu/4hyouth/documents/4hnew.htm>
University of New Hampshire, (603) 862-1450, <http://arethusa.unh.edu>

New Jersey

New Jersey Agriculture in the Classroom is supported by the *New Jersey Agricultural Society*. The organization has farm tours and workshops for teachers, a *Farm-City Week Poster Contest* and *National Agriculture Week Essay Contest* for students, an *Educational Grant Program*, and their publication, *The Garden View*. New Jersey has five agriculture-related museums: *New Jersey Museum of Agriculture* www.agriculturemuseum.org in New Brunswick, *Howell Living History Farm* www.howellfarm.com in Titusville, *Fosterfields Living Historical Farm* in Morristown, *Historic Cold Spring Village* www.hcsv.org in Cape May, and *Longstreet Living History Farm* in Holmdel Township.

For information contact: New Jersey Department of Agriculture, P.O. Box 331, Trenton, NJ 08625, phone (609) 292-8897, or log on: www.state.nj.us/agriculture/agsociety/classroom.htm
Rutgers State University of New Jersey, (732) 932-9155, <http://aesop.rutgers.edu>

New Mexico

New Mexico Agriculture in the Classroom is a program of the *New Mexico Farm and Livestock Bureau* in cooperation with PNM Foundation, Beef Council, New Mexico Cattlegrowers, New Mexico Department of Agriculture, and New Mexico State University. Many kids, even adults, think food is produced at the grocery store. Ag in the Classroom is designed to increase student's ability to function more effectively as agriculturally literate citizens and to support environmental polices and programs.

Educators teach students on how the role of agriculture by incorporated general subjects in social studies, art, science, history, English, and math with a series of fun hands on projects. .

Of special interest is the *Young Farmers and Ranchers* program. It is designed for both men and women between the age of 18 to 35. The objective of the program is to provide leadership in building a more effective New Mexico Farm and Livestock Bureau to preserve their individual freedoms and expand their opportunities in agriculture. Along with competitive events and educational conferences, participates have the opportunity to network with farmers and ranchers around the world.

For information contact: New Mexico Agriculture in the Classroom, P.O. Box 20004, Las Cruces, NM 88004-9004, phone (505) 532-4704 or log on to their web site:
www.nmfb.org/ag%20in%20classroom.htm

New Mexico State University, (505) 646-1807, <http://elroy.nmsu.edu>

New York

Less than 2% of America's population actually produces food on a farm. However, more than 20% of the nation's workforce is in some way, shape, or form involved in the processing, marketing, distribution and sales of agriculture products. New York Agriculture in the Classroom is a partnership with *Cornell University, New York State Department of Agriculture and Markets, New York State Department of Education* and the *New York Farm Bureau*. Some of the programs include *Kids Growing Food, Be Aware of Ag Contest, Food and Fiber Course* and *Summer Programs*. Students learn the appreciation of economic, social, historical and scientific importance of agriculture in their society. Students will explore the many career opportunities in all areas of agriculture.

For information contact: New York Agriculture in the Classroom, 408 Kennedy Hall, Cornell University, Ithaca, NY 14853-5901, phone (607) 255-8122, or log on: <http://cerp.cornell.edu/aits/>

Alfred State College, www.alfredstate.edu

Cornell University, (607) 255-3081, www.cals.cornell.edu

State University of New York, (315) 684-6083, www.snymor.edu

North Carolina

North Carolina Agriculture in the Classroom is sponsored by the *North Carolina Farm Bureau Federation*. The program benefits North Carolina public and private school teachers and their students by promoting and appreciation for their state's food and fiber production from the raw sources to the consumable product.

Ag in the Classroom enables teachers to meet the education needs of their students through competency-based grade level-specific curricula, three-day summer teacher in service workshops, and local/county Farm Bureau support. This includes grades K through 5 science, middle school thematic units, learning styles, cooperative learning, reading, writing and math strategies, and 4th grade social studies.

The NCAITC staff has developed lesson plans, activities, and videos. This includes competency-based grade level plans for each teacher K through 8, and each 9th grade social studies teacher. Videos and video grades for each K through 5 teacher. Bulletin board booklet for each teacher, K through 2. And North Carolina commodity kits for each 4th grade teacher.

The North Carolina Farm Bureau awards scholarships to students to attend a college pursuing a degree in ag related fields.

For information contact: North Carolina Farm Bureau Federation, Inc., P.O. Box 27766, Raleigh, NC 27611, phone (919) 783-4319, or log on: www.ncfb.com

North Carolina A&T State University, www.ag.ncat.edu

North Carolina State University, (919) 515-2694, www.2.ncsu.edu

North Carolina Agricultural and Technical State University, (336) 334-7979, www.ag.ncat.edu

North Dakota

North Dakota Agriculture in the Classroom helps K through 12 teachers integrate agricultural information into the science, math, socials, language arts and other classes as they teach. Available are teacher resources, student activities, *Ag Mag*, and *Living Ag Classrooms* that rotate hands-on activity booths by commodity groups and agricultural organizations at events such as Ag Expo's and fairs.

Food, Land and People offers lessons that teach problem solving, critical thinking, group work and more skills while helping students understand interrelationships in agriculture. Lessons include insects, grocery bags, tomatoes to ketchup, chickens to omelets, and from fiber to fashion.

For information contact: North Dakota Ag in the Classroom Foundation, 2975 Highway 25, Mardian, ND 58554, phone (701) 663-8442, or log on: www.ndaginclassroom.org

North Dakota State University, (701) 231-7656, www.ndu.nodak.edu

Ohio

Ohio Agriculture in the Classroom is sponsored by the *Ohio Farm Bureau Federation*. Offered are summer courses, a mobile classroom, the *COSION Wheels* featuring hand-on agriculture adventure. Publications include *Ag Venture magazine*, books, and *Celebrate the Harvest A-Z*. The Farm Bureau also produces the *Buckeye Farm News* and *Out Ohio*. Under *Learning Resources* the Ohio Farm Bureau Federation offers a number of links, of special interest is *Links to Kids Ag Pages*.

For information contact: Ohio Farm Bureau Federation, Inc., P.O. Box 182383 Columbus, OH 43218-2383 phone (612) 249-2473, or log on: www.ofbf.org and click on Learning Resources.

Ohio State University, (614) 292-7912, www.agecon.ag.ohio-state.edu

Wilmington College, (937) 382-6661, www.wilmington.edu/ag.htm

Oklahoma

Oklahoma Agriculture in the Classroom is a cooperative program of *Oklahoma State University*, *Oklahoma Cooperative Extension Service*, the *Oklahoma Department of Agriculture*, and the *Oklahoma State Department of Education*. Materials are developed in the 4-H Youth Development office at Oklahoma State University. Lesson plans are available grades 3 through 8 and can be downloaded. A newsletter, *The Corner Post*, is available for teachers. Literature is also available from *Oklahoma 4-H*.

For information contact: Oklahoma Agriculture in the Classroom, 205 4-H Youth Development, Oklahoma State University, Stillwater, OK 74078, phone (405) 744-5390, or log on: www.clover.okstate.edu/fourh/aitc/

Oklahoma State University, (405) 744-5398, www.okstate.edu

Oregon

Oregon Agriculture in the Classroom was developed at the *Oregon State University*. It covers K through 12 with lesson plans written by Oregon teacher who participated in the *Summer Agriculture Institute* and are organized by subject and age level. *Earth as an Apple Video*, there's a *Free Loan Library* with books, kits, and activities are also available. One science project is on hydroponics and titled "What's dirt got to do with it?"

For information contact: Oregon Agriculture in the Classroom Foundation, Oregon State University Extension, 105 Ballard Extension Hall, Corvallis, OR 97331-3608, or log on: <http://aitc.orst.edu>

Oregon State University, (541) 737-2942, www.orst.edu

Pennsylvania

Pennsylvania Agriculture in the Classroom is a project of the *Agriculture Awareness Foundation of Pennsylvania*. The purpose is to show the economic importance of agriculture from food to fiber. They offer teacher workshops and have lessons for K through 12. Some lessons available: *Seed Knowledge*, *From Seed to Plant*, and *Race to the Eating Line*.

For information contact: Ag Awareness Foundation of Pennsylvania, 534 Kennedy Road, Arrville, PA 17302, phone (717) 862-3486, or log on: www.cas.psu.edu/docs/casprof/agclassroom/agclassroom.html

Delaware Valley College, www.devalcol.edu

Pennsylvania State University, (814) 865-2541, www.cas.psu.edu

Rhode Island

Rhode Island Agriculture in the Classroom is part of the *Rhode Island Farm Bureau Federation*. They offer lessons, activities, free field trips, educational materials, and a newsletter.

For information contact: Rhode Island Farm Bureau Federation, Inc., 225 Plainfield Pike Rear, Johnston, RI 02919, phone (401) 647-3570, Fax (401) 647-0410, or log on: www.riaitc.org

University of Rhode Island, (401) 874-2957, www.uri.edu/cels

South Carolina

South Carolina Agriculture in the Classroom is a program sponsored by the *South Carolina Farm Bureau Federation*. The primary goal is to help teachers instill in students an appreciation of the sources of their food and fiber using grade level-specific lesson plans. Lessons are available to all South Carolina public and private school teachers from pre-K through 8th grades. Lesson plans integrate agricultural concepts using math, language arts, science and social studies. Teacher workshops familiarize teachers in innovative ways to use the lesson plans with students. Students learn hands-on along with farm and agribusiness tours.

In addition, South Carolina Farm Bureau offers *Ag Awareness Tours* for high school students to learn about agricultural careers, a *Youth Leadership* program to recognize and develop future ag leaders, and sponsors competitive college scholarships for students pursuing ag-related degrees. South Carolina Farm Bureau has an *Ag Promotion Trailer* that promotes agricultural commodities at fairs, festivals and malls.

For information contact: South Carolina Ag in the Classroom, P.O. Box 754, Columbia, SC 29202-0754, phone (803) 936-4409, or log on the web: www.agclassroom.org/sc
Clemson University, (864) 656-3225, <http://agweb.clemson.edu>

South Dakota

South Dakota Agriculture in the Classroom is designed to help students learn about food and fiber. Teachers are offered summer workshops. South Dakota Agriculture in the Classroom has large collection of lessons, videos, kits, books and games in America.

There are 23 pages of lesson plans for K through 12 that include ag careers, animal products, fruits and vegetables, grains, and poultry. Some subjects offered: *Ag Awareness* - grades 3 through 8; *Crete a Hybrid* - grades 3 through 8; and *Art in Agriculture* - grades 3 through 6.

There are 9 pages of videos and kits, that include: *Agriculture's Air Force* – grades 3 through 6; *Amazing Wheat* – grades 4 through 6; and *Food Doesn't Grow in the Supermarket* – grades 4 through 8. Also available are computer programs, science activities and experiments, as well as guest speakers.

For information contact: South Dakota Ag in the Classroom, P.O. Box 577, Pierre, SD 57501, phone (605) 945-2306, or log on: www.sdagclassroom.org
South Dakota State University, www3.sdstate.edu

Tennessee

Tennessee Agriculture in the Classroom is a project of the *Tennessee Farm Bureau Federation*. They offer teacher workshops, garden grants, and lessons for preK through 12 grades. Some lessons include: *Plant a Seed in Tennessee*, *Cultivating Agriculture Knowledge*, *Operation Soybean*, *Bringing Agriculture to Life*, *Farm Facts*, and *10 Things Kids Want to Know about Farms*. In addition their web site offers links to University Institute of Agriculture, 4-H, and FFA. For grades 6 through 12, information on careers in agriculture and forestry are offered.

For information contact: Tennessee Farm Bureau Federation, P.O. Box 313, Columbia, TN 38402-0313, phone (931) 388-7872, or log on: www.tnfarmbureau.org

Austin Peay State University, www.apsu.edu

Middle Tennessee State University, www.mtsu.edu

Tennessee State University, www.tnstate.edu

University of Tennessee, Knoxville, (423) 974-7439, <http://web.utk.edu>

University of Tennessee, Martin, www.utm.edu

Texas

Texas Agriculture in the Classroom is a program of the *Texas Farm Bureau*. Ag in the Classroom teaches students in grades 1 through 6 how agriculture touches their lives daily. From the time kids wake up from sleeping on cotton sheets, packing their lunch in a brown paper bag, ride to school in a car or school bus with rubber tires, until they brush their teeth before going to bed at night; agriculture touches every one all day, every day. Using Ag in the Classroom resource materials available through each County Farm Bureau,

teachers guide their students in exploring the source of food and fiber, and the many steps it takes from the field to their homes.

Ag in the Classroom is successful because of the participation of Farm Bureau members who farm and ranch in the local community. These volunteers bring the program to life for students by speaking to classes about agriculture in the community; providing animals, crops, farm equipment and other hands-on experiences; hosting *Ag Fairs*; becoming *Farm Pen Pals* with individual classes; and being a local resource for assistant and information.

Food and Fiber for the 21st Century contains lessons for grades 1 through 6. The resource guides uses as its foundation a unit entitled *The Importance of Agriculture*. The next unit, *The Earth Under Our Feet*, shows how every living thing depends on the soil, either directly or indirectly. *Plants We Eat, Wear and Use*, lessons in this unit cover the major crops grown in Texas. *Plant Science Activities* contains lessons on the structure and function of plant parts, plant parts kids eat and plant science activities for students to investigate.

Two videos are available. “*What’s to Eat?*” that give a brief 12 minute tour of Texas agriculture and livestock. The second video “*Let’s Visit Texas*” is a four volume collection exploring the mountains and basins, high plains, central plains and the coastal plains. Each video takes students on a tour of that region and examines the diversity of agriculture, along with history, climate and geography. Each video runs about 30 minutes and is best for grades 4 through 7.

Teacher summer workshops are held at Tarleton State University in Stephenville. The workshops provide teachers with hands-on activities, field trips, farm tours and demonstrations.

For information contact: Texas Farm Bureau, P.O. Box 2689, Waco, TX 76702, phone (254) 751-2608, or log on: www.txfb.org

Abilene Christian University, www.acu.edu

Prairie View A&M University, <http://acad.pvamu.edu>

Stephen F. Austin State University, <http://ag.sfasu.edu>

Sui Ross State University, (915) 837-8200, www.sulross.edu

Tarleton State University, (817) 968-9227, www.tarleton.edu

Texas A&M University, College Station, <http://coals.tamu.edu>

Texas A&M University, Commerce, (903) 886-5350, www.tamu-commerce.edu

Texas A&N University, Kingsville, (512) 593-3712, www.tamuk.edu

Texas Tech University (806) 742-3808, www.ttu.edu

West Texas A&M University, (806) 656-2000, www.wtamu.edu

Utah

Utah Agriculture in the Classroom is a joint project of the *Utah State University Extension* and the Utah Foundation for Agriculture in the Classroom.

Everyone partakes in agriculture everyday, whether it’s the food you eat, the clothes you wear, the medicines you use, even the houses you live in, all comes from agriculture. It might be hard to believe, but only two percent of the population is on a farm. The Utah Agriculture in the Classroom program offers teacher workshops, classroom materials, kits and other instructional units for grades K through 12 teachers.

There are a number of teacher resources and instructional materials that include information about animals, food and nutrition, plants and microorganisms, social studies and economics, conservation and natural resources, general agriculture, and soils. Many hand-on kits can be purchased for classroom use. These resources are available by visiting their web site www.agclassroom.org/ut

Utah State University Extension Agents offer a variety of student field trips to farms. While FFA and 4-H are not part of UAITC, they do offer some field trips with specific schools.

Many lesson plans for teachers are available on the web such as instructions on how to make a farm. They include ideas, suggestions and Utah teachers can download instructions.

Classroom activities are many. The UAITC Field Guides offers almost 50 activities that are, complete with instructions, such as making bread in a bag and make butter in a jar. Other activities include *Fool-Proof Yogurt*, *Tin Can Ice Cream*, *Sprouting Seeds in a Glove*, *Cornstarch Plastic*, the *Exploding Cheeseburger*, *Tortillas in a Bag*, and a *Living Necklace*.

Their Newsletters offers a variety of subjects that can be downloaded from back issues. The Spring 1995 issue teaches students that it take more than 30 minutes to build pizza, plus a look at pizza ingredients. In another newsletter are activities with bees and insects.

Curriculum tips, farm field days, virtual workshops and a variety of agricultural literacy questions can be found on their web site at www.agclassroom.org/ut.

For information contact: Utah State University, 2315 Old Main Hill, Logan, UT 84322-2215, phone (435) 797-1657

Brigham Young University, <http://bioag.byu.edu>

Utah State University, (435) 797-2233, www.usu.edu

Vermont

Vermont Agriculture in the Classroom Partners (VTAITC) is a collaboration of agriculture, natural resources, and education organizations in Vermont. Their mission is to help teachers and students develop a better understanding and appreciation for agriculture and to build networks among students, teachers, and farmers. They offer mini grants through the *Grow Vermont Mini Grant* program, professional development opportunities, as well as curriculum guides, resources and activities to help educators integrate agriculture education into their teaching.

Agricultural Resources Library is housed at the *Vermont Department of Agriculture* is a collection of both locally and nationally developed resources to accommodate a wide range of experience in agricultural education.

Shelburne Farms' www.shelburnefarms.org offers a collection of hands-on, season-based activities that help elementary educators integrate agriculture into the curriculum. It is called "Project Seasons." *Shelburne Farms* is a 1,400-acre agricultural estate and has field trips for K through 6 grade students, plus hands-on workshops at schools.

Food Works' has "Digging Deeper," a comprehensive guide for integrating youth gardens into schools and communities.

The Project Food, Land and People curriculum provides education resources and approaches to learning that help educators and students in grade K through 12 understand the interrelationships among agriculture, the environment, and people of the world.

The Resource Library also contains information on past projects, newsletters, information sheets about various agricultural topics, videos, field trip lists of farms and processing plants, learning kits, coloring books, and tons of great activities to use in the classroom or on the farm.

Field Trips and Classroom Presentations offers Field trips and classroom presentations can be arranged with many agriculture businesses in Vermont, including:

Adams Farm offers maple syrup products, a garden harvest, and a chance working with farm animals, from bottle-feeding a calf to milking a goat. www.adamsfamilyfarm.com

Schools can contact the *American Morgan Horse Association* for information on field trips to Morgan horse farms. www.moganhorse.com

A magical place is the *Applecheek Farm* where students are offered field trips during their maple sugaring, garden harvest and other farm tours. Fun events are also available including scavenger hunts and sleight rides. www.applecheekfarm.com

The *Billings Farm and Museum* is a working Jersey dairy farm that continues a century-long tradition of agricultural excellence and offers farm programs and historical exhibits that explore Vermont's rural heritage and values. www.billingsfarm.org

Cabot Creamery offers two AITC guides, one each for students in elementary and in middle school, provided within the context of core subject areas and addressing the Vermont Framework of Standards and Learning Opportunities. Each guide offers activities and videos. When in Vermont, you can stop by the *Cabot Creamery* to watch cheese being made. *Cabot* is closely associated with the *Vermont Farmers' Association*. Individual tours of some of our dairy farms can be arranged. www.cabotcheese.com

Do you want to know more about llamas? *Champlain Valley Alpacas* has both field trips, as well as bringing live animals to schools. www.wcut.com/~alapaca

The community farm at *Bennington College* gives students the opportunity to learn the value of land in their outdoor laboratory to explore agroecology. www.bennington.edu

The *Vermont Farm Bureau* is a grass-root's farmer's organization working to advance farmers economically, educationally and socially. They offer classroom presentations on almost every agriculture subject. The *Farm Bureau* also will locate farms for field trips and connect teachers with the agriculture industry.

The *Vermont Agriculture in the Classroom* include: *Vermont Department of Agriculture, Vermont Department of Education, Career and Lifelong Learning, Vermont Dairy Promotion Council, Vermont Beef Industry Council, Vermont Maple Promotion Board, Food Works, Vermont Farm Bureau, Northeast Organic Farming of Vermont (NOFA-VT), Shelburne Farms, Vermont Farms! Association, Vermont Farm Youth Corps, Vermont Department of Environmental Conservation, National Gardening Association, UVM Extension Service, Cabot Creamery, NE Dairy and Food Council, and Billing Farm and Museum.* All have programs for students and/or teachers.

Bringing the Barn to Vermont Schools is an idea from the *Louisiana Farm Bureau*, several portable learning barns are transported from school to school. While each barn is a little different, all contain a tremendous amount of resource materials for teachers, as well as educational and fun activities for students. There are videos and books that focus on Vermont produce, livestock and products

For information contact: Vermont AITC, 116 State Street, Montpelier, VT 05620-2901, phone (802) 828-2099 or log on: www.vermontagriculture.com/aitc

University of Vermont, (802) 656-2930, <http://ctr.uvm.edu>

Virginia

Virginia Agriculture in the Classroom is supported by the *Virginia Farm Bureau* and offers many hands-on activities, field trips and classroom experiments. On the web they define such subjects as irrigation, honey, grapes, cows and corn.

They have a school garden project for elementary school classes that teach kids how to care for vegetable plants that includes science, math and nutrition.

Best of Virginia Farms Cookbook is available on line and can be down loaded.

Their newsletter, *What's Growing on in Virginia?* Can be down loaded and has many subjects such as milk, wheat, peanuts, corn, beef cattle, pigs and poultry. This newsletter is published twice a year.

Classroom support material with such topics as *Farm Facts, Wheat is Neat, Producing Virginia's Small Grains, The Honey Files, No-Nut Peanut Teacher's Kit* and many more.

Teacher workshops for grades K through 5 with hands-on activities are held in public schools and at the Henrico Ag Institute.

For information contact: Virginia Foundation for Ag in the Classroom, P.O. Box 27552, Richmond, VA 23261, phone (804) 290-1141, or log on: www.a

Wisconsin

Wisconsin Agriculture in the Classroom is supported by the *Wisconsin Farm Bureau Federation*. They offer a number of resource materials, student activities, lesson plans and books. There are web sites for kids with farm facts and Agri-Science workshops for K through 8 grade teachers.

For information contact: Wisconsin Agriculture in the Classroom, Wisconsin Farm Bureau Federation, 1212 Deming Way, Madison, WI 53717, phone (608) 828-5717, or log on:

www.wisagclassroom.org

University of Wisconsin, Madison, (608) 265-3003, www.cals.wisc.edu

University of Wisconsin, Platteville, (608) 342-1547, www.uwplatt.edu

University of Wisconsin, River Falls, (715) 425-3784, www.uwrf.edu

Wyoming

Wyoming Agriculture in the Classroom has teacher resources and workshops, contests for students, and agriculture tours. Information can be downloaded from the web on many subjects. An example is “*Wildlife and Agriculture*” where students can learn what animals eat: frogs eat insects, snakes eat frogs, coyote eat snakes, etc. Also there are lots of quizzes and puzzles on the web.

Chapter Two

AGRICULTURE CAREERS

Did you know the nation's largest employer is agriculture? It's true, and it includes more than 250 career fields. No, you don't need to be a farmer to have a career in agriculture, in fact only two percent of those involved in agriculture work in the production of agriculture. Let's take a look at just some of the careers available today..

Animal Behaviorists study what animals do in their natural environments. They study animal relationships such as herding instincts, hierarchy, and which species get along with one other. Remember it's not just animals on the farm, your education could even lead you to become a zookeeper.

Business Manager must be able to balance accounts, sell farm produce to market, be responsible for making payments and payrolls, keep track of equipment, products, and land.

Ecologists work with plants, animals, and the environment in remote, unpopulated locations, along with areas where people live. As environmental problem increase around the world, ecologists become more important. Some ecologists teach collage classes, in nature centers, public lecture halls, and museums.

Ecologists are also hired to advise government and private agencies. They work at universities, for governments, in research laboratories, consulting firms, and private industries. To be an ecologist you must be interested in the environment of plants and animals.

Engineers must know how to plan and construct fences and buildings, build irrigation ditches and control the flow of water, use natural resources to grow products.

Florists design floral arrangements, works with customers, delivers flowers and processes incoming flowers.

General Managers help in the development of advertising, make decisions about which products to sell, and supervise employees. Managers also meet with customers to finalize arrangements for special events, such as weddings.

Food Scientists use their knowledge of chemistry, biochemistry, engineering and microbiology to develop grain, livestock, fruit, and vegetables into new food products. They help to enhance your food supply by assuring its flavor, color, texture, nutritional quality and safety. Food processing companies, government agencies, and food equipment and ingredient suppliers all hire food scientists.

Forest Rangers must be able to recognize the various kinds of trees, detect fires and know the methods for controlling them and to clear trees from land to prevent soil erosion.

Marine Scientists deal with issues and problems facing marine life. They gather data in the field or laboratories, interpret and evaluate the data and then write reports. They may also work for universities, government resource agencies or consulting firms.

Mechanics are needed to operate and maintain simple and complicated farm machinery, make repairs and keep machines in good working order.

Nutritionists and Dieticians help counsel people with advice on diet, weight loss, cholesterol reduction, etc. They also can be teachers, researches, healthcare workers, and managers. They also provide services by working with doctors, nurses, and therapists to help patients with recoveries.

Scientists must understand soil composition and determine the best fertilizer and seed for largest produce, and the effect of chemicals on animal and plant life.

Veterinarians provide medical help to animals by diagnosing, treating, and helping to prevent disease and disabilities in animals. Veterinarians can be practitioners, researches, public servants, administrators, and teachers. They work in their own business or with others, work for pharmaceutical and nutrition companies, or conduct research or enforce regulations for government agencies. Some also work with racetracks, zoos and breeding farms

Wildlife Biologists conduct research that helps to manage resources. Physiology, genetics, ecology, animal and plant behavior, disease, nutrition, popular dynamics, land-use, and pollution are areas a wild biologist may specialize in.

Other careers include lawyers, conservation police offers, media writers, and cooks. There are a number businesses you could be involved in, such as in a coffee shop where you could be a kitchen or counter worker, cashier, bookkeeper, maintenance, or handle the advertising.

As you see, there are many job careers. Today's opportunities are best in agricultural scientists in the protection and preservation of soil, water and ecosystems, especially if you have an advanced degree. Also, an expanding population and an increasing public focus on diet, health and food safety will result in job opportunities for food scientists and technologists. Discuss your interest with a school consultant, visit a local farm bureau, and/or contact your state's department of agriculture.

Agri-Education Can You Set Your Direction

So you are interested in agriculture, but what direction do you want to go in? To look at the overall picture you will want to log on: www.agri-ed.com for information that covers students from elementary through high school. This web site is by *Agri-Education, Inc.* They are in the business of providing educators, students, and producers a multi-media approach to agriculture based information. Programs cover a variety of topics. Not only do they help with instruction in school, but also assist farmers in governmental regulations and consumers concerns.

It's a known fact that as our cities grow, farmland is being lost to construction of houses, factories, and office buildings. As land disappears forever, it is important for new technology in agriculture be put in place.

Agri-Education has available a series of programs. They begin with an Introduction to Agriculture for elementary students. Students take a look at America's early settlers and investigate clothing, food, games, traditions and more. Featured are popular "*Pioneer Days*" and "*Modern Farming*" computer games that allow you to make decisions about clearing the land, livestock production, purchasing tools, feed and livestock. This is part of their *Farm and Food Bytes*® series that includes *Animal Agriculture and Soil*, and *Water Conservation*.

Middle grades and high school students advance with a look at various agricultural skills. This series focuses on careers, horticulture, sales and service, and ag safety. When it comes to looking for a career Agri-Education helps you look for a job, help in filling out a job application, learn how to answer and ask the interviewer questions, and how to keep the job once you obtain it.

Suppose you pick out *Sales and Service* as your career choice. You will learn the skills required, the importance of understanding the products, and the steps required to complete some of the necessary paperwork. You will become involved in the exchange of goods and/or services, learn about pricing, how to cover base cost and expenses, and how to show a profit at a fair and competitive price. You will also create an advertisement designed to persuade a potential customer to inquire about or purchase your product or service.

Other subjects include horticulture, conservation compliance, crop production, ag machinery, milk safety and quality, and helping to keep water clear programs. Suppose you decide to enter a horticulture program. You will learn about sexual and asexual plant propagation. This includes identification of seed parts, seeding growth, budding and grafting.

To learn more about agriculture and their many programs, write to: Agri-Education, Inc. P. O. Box 497, Straford, IA 50249, phone (515) 838-300, or log on: www.agri-ed.com

So You Want to be a Farmer

Do you have the desire to be a farmer? There is a need for you and there is help to make you a farmer.

Farms are disappearing throughout North America. In Iowa alone, 100,000 farms are gone. That's 40% fewer than a decade ago.

Reasons Vary

Some farm property becomes taxed so high it is impossible to make a profit. These lands are then sold off to builders and what was once a beautiful green field is now a sea of factories or new houses.

Some farms go out of business because a farmer retires and there are no family members to continue the business. This is where you may come in, if you have the desire, but you don't have the land. You probably also don't have the financial means to purchase property and equipment. However, maybe you do

have the time, energy, resources, education and most of all the sweat to be a farmer. It is possible you have some capital to start a farm, but you don't want to go into debt to obtain remaining funds.

Here's the Answer

There are farmers who plan to retire in five to ten years. They have no one to continue with their farm. These farmers want the farm to continue. These same farmers are looking for you, a beginning farmer.

The retiring farmer is looking for avenues where him/she can take maximum advantage of tax savings, such as reduced capital gains and income tax. Programs are available to help both the retiring farmer and the beginning farmer.

In Iowa, a service has been set up for both beginning and retiring farmers, called *FarmOn*. This service furnishes the beginner with forms to completed and returned. Each applicant will then be matched up with a retiring farmer. The Iowa Agricultural Development Authority has a beginning farm, low interest loan program to help young farmers get started.

FarmOn has seminars for those who plan to join a farm operation. They also provide individual consultation and education materials.

For more information on FarmOn, contact the Iowa State University, Outreach Center, 2020DMACC Blvd., Ankeny, IA 50021 or call 1-800-447-1985. Information is also available on the web: www.extension.iastate.edu/pages/bfc/

To find out about the low interest loan program, phone (515)-281-6444. Similar programs are available in other states. Check with the United States Department of Agriculture, your state department of agriculture, and schools and universities that offer agriculture courses.

Careers in Agricultural Aviation

Like all modern industries, today's farmers need aircraft for their agriculture. Aircraft are used to apply crop protection products in a safe, efficient, economical, and environmentally friendly method.

Like the human body, all plants need proper nutrition and protection from diseases and pests to attain maximum growth. Without crop protection products to control insects, weeds and diseases, crop yields per acre would drop by more than 50%. This would cause food prices to skyrocket and hunger to increase. It also means more land would be required for farming, hence our already fragile land would have to be cleared of forests and at the same time there would be less land for wildlife.

Aerial application is often the safest, fastest, most efficient and most economical way to get the job done. An aircraft can accomplish more in one hour than ground equipment can in a day. You might call this aerial job as "crop dusting." Probably a better term is if you go into this career, you would be a "Crop Doctor." After all you must know how to administer the proper treatment, the correct dosage, and at the right time to keep the plants healthy.

In addition to controlling insects, weeds, and diseases, the aircraft can perform other duties as well, such as planting seeds. The best way to plant seeds in flooded rice fields is by air. Also, crop planes plant rye grass seeds to prevent soil erosion. Planes are also used to fertilize the required nutrients to the soil for healthy crops. Aircraft are also used to plant fish in high mountain lakes, and even to feed fish in both the mountain lakes and the ocean harbors. And aircraft are also used to fight wildfires.

If you are interested in becoming one of these highly-trained aerial professionals, now is the time to prepare. Your education will include mathematics, earth science, chemistry, biology, physics and even a bit of history. Yes, you will need to know a lot more than just flying a plane or a helicopter. To be a true ag aviation pro, you should consider at least two years of college, four years is better.

To help you in your decision to you can read books, periodicals and a visit to an agricultural airport where you can talk to these crop doctors. If you are in Jackson, Mississippi, stop by the National Agricultural Aviation Museum. There are a number of government agencies you can visit, such as the Forest Service and various departments of agriculture.

To learn more about this industry write: National Agricultural Aviation Association, 1005 E Street SE, Washington, DC 20003, phone (202) 546-5722, or log on: www.aviation-ag.com

Is Fish Farming for You?

Regardless of what business you plan to enter, there are always a set of questions that must be answered first. Farming can be a very complicated business, and each type of farm has its own set of rules and problems.

Aquaculture, the term used for fish farming, has attracted the attention of farmers, landowners, and investors. Like all farms, aquaculture involves not only a capital investment, but you must also know who is going to do the work, and are you capable of management? And don't forget the risks.

The following list of questions was written for fish farming. However, the same questions apply to other kinds of farming:

1. Location, location, location. Is the fish farm near where you live so that you can make frequent observations?

2. Do you have the skills, capital and time?

3. You need to know that it is biologically feasible in your area to fish farm.

4. What about government regulations? Do they all allow fish farming? You must check with federal, state and local governments.

5. Are good quality feeds available at a competitive price?

6. Where are you going to find fish eggs, fry or fingerlings? Or must you be the one to raise your own eggs, fry and fingerlings?

7. Water, water, water. Is there a good year-around source for water? A lack of water has put many farms out of business.

8. What about the quality of the water? More and more water sources are contaminated with farm chemicals and chemicals from unknown sources.

9. What is the year around temperature of the water and is it suitable for the fish you want to raise? Depending upon the fish, too warm or too cold water can kill some species.

10. Can you make or purchase aeration equipment? Are there parts locally available when needed? If the aeration breaks down in the middle of the night, what's going to happen to the fish? Many farmers have seen healthy fish in the late afternoon and a pond of dead fish the following morning. Maybe the equipment broke down or maybe there was a power failure. Many farmers hire a night watch just for that reason.

11. Labor, labor, labor. Many businesses do not succeed because either local or qualified labor is not available.

12. Just like you, fish get sick. Do you know how to diagnosis the disease? Is there a good source of drugs and chemicals needed to treat that disease.

13. Up until now, everything is just great. But where are you going to be marketing your fish?

14. Is there demand for your type of fish, or must they have to be frozen and shipped to other markets?

15. Will your fish price be competitive?

16. Stress is another factor when it comes to any business. Can you handle it?

17. If you need emergency capital, is it available? It is always best to talk to your banker prior to any problems that might arise.

18. Education, education, education. No one should enter a business without the proper education for the business you plan to enter. Check with your school counselor for available schools.

19. Join an aquaculture organization. There are international, national and local clubs. Contact the *World Aquaculture Society*, 143 J.M. Parker Coliseum, Louisiana State University, Baton Rouge, LA 70803 or log on: www.was.org. The society also offers aquaculture books and they publish the *World Aquaculture Magazine* www.aquaculturemag.com.

20. Write to the *Iowa State University*, 119 Printing and Publications Building, Ames, IA 50011-3172 or log on: www.iastate.edu and request a copy of their *ISU Extension Materials Catalog* since they have many publications on aquaculture.

Tractor Restoration

If you like to work on cars, you will enjoy working on farm tractors as well. First you must decide what type of tractor restoration you want to do. Maybe it is a simple repair job as you learn more about

tractors. Maybe you have an old tractor that needs to be completely rebuilt, and if that is the case, you probably will need some help.

Restoration can mean bringing the tractor to a usable, operational status. Restoration could also mean rebuilding with new or modified parts. Hobbyists involved in tractor pulls, often modify their tractors for this event. Still others, restoration means rebuilding to near new condition, complete with new paint and appropriate decals. True restoration means restoring the tractor to the way it was when it left the factory, not just the way you wish it was. You will need to develop a plan and set goals. As you restore, keep a record of what you do. It is best to discuss your plan with a friend or an adult who is also interested in restoration. You might hear ideas and suggestions you have not considered.

You will need to arm yourself with resource printed material. Check with *Successful Farming*, P.O. Box 9310, Des Moines, IA 50306-9319 or log on: www.agriculture.com for their book *Ageless Iron, Tractors that Live On*. Another good book is *John Deere Tractors and Equipment*, request volume one 1837-1959 from *American Society of Agricultural Engineers* at 2950 Niles Road, Saint Joseph, MI 49085-9659 or log on: www.asae.org.

You will need to locate and use a shop manual for the tractor you plan to work on. Check the telephone yellow pages for the closet dealer or repair shop. Most can help you with printed material. The *Jensales Company* might have printed materials for what you need. Call them (800) 443- 0625 or write to P.O. Box 277, Clarks Grove, MN 56016. Or log on: www.jensales.com.

Plan to subscribe to a magazine, a good choice is *Gas Engine Magazine*, published monthly by *Stengas Publishing Company*, P.O. Box 328, Lancaster, PA 17608 or log on: www.gasenginemagazine.com. This publisher also produces the *Steam and Gas Show Directory*. This directory lists shows and swap meets in the United States.

Another resource is *Classic Motorbooks*, P.O. Box 1/HM066, Osceola, WI 54020-0001 or log on: www.motorbooks.com.

At your computer, log on the web for new and used tractor parts: www.yesterdaytractors.com/store/index.htm

There are also a number of organizations you might want to join. *The Central Hawkeye Gas Engine and Tractor Association* has a web site: www.netins.net/showcase/bd/indexch.html. You can write to Barbara Kalsem, RR 1, Cambridge, IA 50046. Two other clubs have newsletters, *Antique Power*, P.O. Box 838, Yellow Springs, OH 45387; or log on www.antiquepower.com, and *Old Abe's News*, Route 2, Box 2427, Vinton, OH 45686 or log on: www.oldabe.com.

There are lots of activities that you can participate in or you can even organize one yourself as you gain your tractor skills. Plan to attend an antique tractor show, tractor pull event, or a swap meet. If there isn't one near your home, plan a family vacation around such an event. Some of these shows and swap meets will provide you an opportunity to find parts you will need, and you will gain lots of valuable information.

If you are not already a member, join the 4H club (www.4h.org, www.4h-usa.org, or www.fourhcouncil.edu) or Future Farmers of America (www.ffa.org), as well as your local Grange (www.nationalgrange.org, click on state locations, then your county). All are great organizations where you can share, and receive information on your tractor restoration project.

Watching the Family Farm Budget

Living and working on a farm is unlike working on an eight to five job, five days a week. Farm life is 365 days a year, 24 hours a day, and it's possible that all the income comes from one single harvest. A farm is an entire family thing. Everyone needs to know what everyone is doing, and everyone needs to be involved in the family budget.

It's important to hold family meetings to talk about such things. No one should be left out, regardless of the age. Maybe it's not important to know all the details, but everyone needs to know generally what is happening.

Whether you live on a farm now or not, the following can apply to most family conditions. You might notice Mom and/or Dad are upset, but you don't know why. Sometimes, you might think you are the problem, but more often it is finances. There are just not enough funds in the cookie jar to satisfy all the needs.

It is important that your parents communicate why they are stressed or why things they have been able to provide in the past is not available now.

Set up regular family meetings. Present the facts and answer all questions. The meeting should have no distractions from radio, television, and if possible even turn off the phone. Between meetings, post any changes. The refrigerator door is a good place to post this information.

Always start each meeting on a positive note, with compliments and words of appreciation. Look at old business, what has worked out and what hasn't. Present new business, problems or concerns. Everyone needs to offer suggestions on how to solve a problem. Revisit these suggestions from meeting to meeting. If they are working, figure why, and if not, why.

Everyone likes to have fun. If there are no funds for a movie, maybe renting a video that the whole family will enjoy could solve that problem. Movies can be quite expressive these days. Adding the cost of movie popcorn and drinks can set a family back quite a bit. It's easy and fun to make popcorn at home, and a healthy glass of fruit juice can often replace a cola drink.

Other family fun can be sport activities, such as a Little League game. Bring your own refreshments. Better still, make it a day-long picnic, since most games are at a park, and plan a nature hike or even a game of Hide n' Seek.

Often just before the harvest, times are the worst. There are no extra funds for anything. Remember, along with having fun, funds have to be set aside for groceries, utilities, and even a new pair of shoes. When making purchases during the rough times, switch from name brands to generic products.

Between meetings it is a good idea to have a suggestion box. You can make the box and decorate it as you wish. Many times between meetings ideas will pop into your head, but more than often they will be forgotten before the next meeting. Write these ideas down and drop them in the box. Also, sometimes it is easier to write down feelings, since many times the written word is more powerful than a spoken word. Also write down any appreciation you wish to share with another family member. When money for material things are short, remember, that love, affection, hugs and kisses are the least expensive gifts and the most appreciated.

Careers in Biotechnology

What is biotechnology? *It is the science of manipulation of DNA (deoxyribonucleic acid) molecules to produce commercial products from living organisms. DNA, the carrier of the genetic code for all forms of life, can be transferred into any other form of life.* This means there are a multitude of possibilities for genetically modifying plants, animals, and microbes not found on earth, that is until now.

All life is composed of cells that contain genes and genes are made of DNA molecules. Scientists are now learning how to transfer genes from one animal, plant or other organism into another. This process is called genetic engineering. It can be used to produce modified crop plants, livestock, proteins, vaccines and drugs.

This means a gene is transferable from an animal to a plant and vice versa. Sounds strange, but true, as your DNA is the same as a redwood tree. Is it possible to find the gene from a redwood tree that makes the tree grow large and transfer it to you to make you grow taller? It's possible, but who wants to be as tall as a redwood tree? And what happens if suddenly you spout an extra limb or two, maybe even with leaves?

In the movies, they have already created weird beings: "the swamp thing," "human carrots from outer space" and other kinds of monsters. Will some mad scientist actually create a "killer tomato?" Scary, isn't it?

Today you are eating modified foods and don't even know it. These modifications make plants and animals grow bigger and faster. Other modifications make plants and animals resistant to insects and diseases. Some people think this is good, while others caution the public about the unknown, since these modifications have not proven that they are safe to the body.

Many agricultural universities have grown fields of engineered crops. Those who are against messing with "Mother Nature," found out where they were and destroyed years of research. Now much of this research has to be done in secret, or grown in places where the public cannot enter, such as large green houses on top of buildings.

Before you think all biotechnology is bad, consider some of the successes. Human insulin was a good example in the treatment of diabetes and is one of the first genetically engineered products. Since then,

biotechnologists are working on new ways of developing products health care professionals can use to detect and fight disease.

Improvements have been made in heart disease, cancer, AIDS and other diseases. Vaccines are made from viruses or bacteria that are harmful. However, with gene modification they are not only safe, but can cure. Proteins have been developed to attack cancer cells, to control blood clotting after a heart attack, and to stimulate red blood cell production to fight anemia.

Yes, the field of biotechnology will continue and grow. If you are thinking for career, now is a good time to look at the many possible branches you could enter. Individuals will be needed to manage and direct the manufacturing process, to ensure quality control, and to engineer the systems needed to create the product.

Chemists will be needed to find natural products, such as amino acids, enzymes and vitamins that can be manufactured more efficiently using biotechnology.

As the world's population grows, so does the problem of waste disposal. Experts in biotechnology will need to find safe bacteria that can break down all kinds of waste.

Biotechnology will be used to separate mixed minerals from ore-containing rock. Today this is done by heat, called smelting. However, microorganism can be used to dissolve and absorb the minerals. Other bacteria can force oil out of rocks where conventional drilling is not possible.

Many waste products from trees and plants, such as wood chips and corn stalks, can be converted into useful products with biotechnology.

Do you have to be a biotechnologist to enter this field? No, there are many jobs related to biotechnology that require no extensive science or engineering expertise. However, these jobs do require an understanding of the science of biotechnology. Here are a few examples:

REGULATORY OFFICIALS will be needed to develop guidelines in biotechnology research and development of new products and processes. If you choose this field, you will be involved in safe biotechnology, which must be approved by government agencies.

PUBLIC RELATIONS PEOPLE must understand enough about biotechnology to present understandable information to the general public.

SALES PEOPLE must have the expertise in marketing new biotechnology products.

LAWYERS must file patent applications for scientists, companies and universities to protect legal rights to new discoveries.

GRANT WRITERS are needed to seek funding. Now is the time to learn more about biotechnology careers. Hopefully, your school career guidance counselor can provide you with current course studies prior to guiding you into the best colleges and universities.

Some of the courses you need to consider are: *agricultural and biosystems engineering, agronomy (a study of crops, soils, climate and other components of the environment), animal science, biochemistry, biophysics, botany, biology, chemical engineering, computer engineering, food science, human nutrition, forestry, horticulture and plant pathology*. There are various social and religious studies connected with biotechnology that you can also explore.

Visit your library for such books as: *Biotechnology for All, DNA for Beginners, Opportunities in Biotechnology, and Understanding DNA and Gene Cloning*.

Many of the biotechnology schools have publications to help your guide your career. Publications are available from the *Biotechnology Industry Organization*, 1625 K Street NW, Suite 1100, Washington, DC 20006 or log on www.bio.org or www.bio.com.

If you are on the internet, the Iowa State University has many publications available: www.extension.iastate.edu/pages/pubs/ or write to Iowa State University, 119 Printing and Publication Building, Ames, IA 50011-1050 or phone (515) 294-5247 for their ISU Extension Materials Catalog.

The Internet

There's an abundance of information on the Internet. Generally all you need to do in type in a product and it will appear. Take the word "*pumpkin*" for an example. Type in "*pumpkin*" and there are 1,200,000 web sites that provide information on everything from growing, carving and recipes. When you add the word "*farming*" there are 16,000 pumpkin web sites that provide information on farming pumpkins. Say you are in the business of selling pumpkins, add the word "*sales*" after pumpkin and

there are 77,000 web sites to help you sell pumpkins. Suppose you have a bug problem in your pumpkin patch, add the word “*pests*” and you will find 8,700 web sites to help you rid the bugs.

True not all web sites will have the information you will need, however, if you check out between 10 to 20 of the top web sites you will receive the needed information.

There are a number of Internet addresses that can help you in your search for the agriculture job you are looking for. If you interest is in cattle ranching, contact the *National Cattlemen’s Beef Association* at www.beef.org. There’s an abundance of information on that web site, and like many web sites there are links to other web sites.

Other animal Internet addresses include the *American Dairy Goat Association* at www.adga.org, the *American Sheep Industry Association* is www.sheepusa.org and the *National Pork Producers Council* at www.nppc.org.

When it comes to produce, check out www.pma.com or www.aboutproduce.com for the *Produce Marketing Association*. And there’s also www.5aday.com for the *Five A Day* program and the *Leafy Greens Council* at www.leafy-greens.org.

An important web site is the *United States Department of Agriculture*, log on to www.usda.gov for lots of great information with links to the Food Guide Pyramid, Foodborne Illness Education, and the links go on and on. Also check out the *Food and Drug Administration* at www.fda.gov, the *Gateway to Government Food Safety Information* at www.foodsafety.gov and *FightBac Partnership for Food Safety* at www.fightbac.org/kids.cfm.

The government printing office, better known as the *United States General Services Administration Federal Citizen Information Center* will send you their free *Consumer Information Catalog* by logging on to: www.pueblo.gsa.gov. There are publications about your education, such as college financial planning; employment, such a job outlook through 2010; and dozens of food publications. Many publications are free with a small service fee for mailing.

International Agricultural Schools

AUSTRALIA: Australian Maritime College, www.amc.edu.au

James Cook University, www.jcu.edu.au

University of Queensland, www.uq.edu.au

Victoria University, www.vu.edu.au

CANADA: Nova Scotia Agricultural College, www.nsac.ns.ca

University of Alberta, Faculty of Agriculture, www.afhe.ualberta.ca

University of Guelph, <http://tdy.res.uoguelph.ca>

University of Sackatchewan, College of Agriculture www.ag.usask.ca

CHINA: Beijing Agricultural University, www.ihep.ac.cn/uni/bau/agri/html

FINLAND: University of Helsinki, <http://honeybee.helsinki.fi>

GERMANY: University of Bonn, www.uni-bonn.de
University of Hanover, www.ifgh.uni-hanover.de
University of Kassel, www.wiz.uni-kassel.de

HUNGARY: Institute of Plant Sciences, www.abc.hu/institutes/plant/

MALAYSIA: Malaysian Agricultural Institute, www.mardi.my

NETHERLANDS: Wageningen Agricultural University, www.wau.nl/welcome.html

PUERTO RICO: University of Puerto Rico, www_num.upr.clu.edu

SWEDEN: Swedish University, www.slu.se

UNITED KINGDOM: Bishop Burton College, www.bishop-college.ac.uk
Harper Adams University, www.haac.ac.uk
University of Aberdeen, www.abcdn.ac.uk
University of London, Wye College, www.wye.ac.uk
University of Nottingham, www.nottingham.ac.uk

Agriculture Links

Check out www.indiancommodity.com/agrilink/agriuniversities.htm for more than 20 links with such subjects as: Agriculture Organizations, Agriculture Publications, Agriculture Weather, Agriculture Libraries, Agri-Technology Math, and lots more.

Chapter Three

COOKING SCHOOLS

The food service industry is one of the fastest growing businesses in the nation. Currently that is more than \$320 billion a year in the United States and that's not counting baking, pastry, ice cream and chocolate businesses. Quality sous-chefs and chefs are in short supply and it is expected to grow almost 40% in the next few years. Now is the time to look at a career in the culinary arts. It could be financially rewarding. Many of the schools listed are demonstration only classes in cookware stores and classes are only a few hours long. See *The ABC's of Food* for more schools (pages 127 to 129).

A COOKS TABLE COOKING CLASSES offers hand-on cooking classes by guest chefs from restaurants. For information write: A Cooks Table Cooking Classes, 125 West Lee Street, Baltimore, MD 21201, phone (410) 539-8600, or log on: www.acookstable.com

ALAIN & MARIE LENÔTRE CULINARY INSTITUTE: This culinary school is for beginners of every age and background, yet at the same time offers continuing education for professionals of all levels, plus technical assistant for the industry. The apprenticeship training lasts ten weeks, which is faster than most other culinary schools. This course is limited to 15 students per classroom with cooking lab running 30 hours a week, 90% is hands-on. Programs include cooking and catering, baking and pastry, and desserts. For information write: Alain & Marie Lenôtre Culinary Institute, 7070 Allensby, Houston, TX 77022-4322, phone (713) 692-0077 or log on: www.lenotre-alain-marie.com

AMY MALONE SCHOOL OF CAKE DECORATING offers workshops on cake decorating, working with chocolate and pastry techniques. For information write: Amy Malone School of Cake Decorating, 4212 Camino Alegre, La Mesa, CA 91941, phone (619) 660-1900, or log on: www.amymalone.com

ASIA TRANSPACIFIC JOURNEYS offers cooking tours of Thailand, India and Vietnam. For information write: Asia Transpacific Journeys, 2995 Center Green Court, Boulder, CO 80301, phone (303) 443-6789, or log on: www.southeastasia.com

A STORE FOR COOKS has classes on both cooking and baking and specializes in Italian, French, Mexican and Chinese recipes. For information write: A Store for Cooks, 30100 Town Center Drive, Suite R, Laguna Niguel, CA 92677, phone (704) 495-0445, or log on: www.storeforcooks.com

A TASTE OF THE MOUNTAINS COOKING SCHOOL offers a unique cooking opportunity every May and December. Four weekend classes provide hands-on experience at The Bernerhof Inn located in the foothills of the White Mountains. Also during the winter months, daily classes are available. For information write: A Taste of the Mountains, P.O. Box 240, Glen, NH 03838, phone (800) 548-8007 or log on: www.bernerhofinn.com

ATLANTIC CAPE COMMUNITY COLLEGE SEASHORE GETAWAYS is where you can earn a culinary art degree or attend a seminar. For information write: Atlantic Cap Community College Seashore Getaways, 5100 Black Horse Pike, Marys Landing, NJ 08330, phone (909) 343-4829, or log on: www.atlantic.edu

BUEHLER COOKING SCHOOLS are located within Buehler's supermarkets in four Northeast Ohio towns: Dover, Wadsworth, Medina, and Wooster. Featuring "local talent" guest instructors, demonstrations classes are offered for adults. Hands-on classes are offered for "Jr. Chefs" ages 6-12, as well as their very popular "Cook Your Own" birthday parties. Private classes and educational tours are also available. For information write: Consumer Affairs, Buehler's Food Markets, P.O. Box 196, Wooster, OH 44691, or phone (330) 264-4355, Ext. 306.

BYERLY'S SCHOOL OF CULINARY ARTS has both hands-on and demonstration cooking classes for both adults and kids with classes in world cuisine featuring French, German, Italian, Mexican, Thai, Chinese and Japanese. Other subjects include etiquette, catering, baking, knife skills, party planning and basic culinary education. Byerly's also has a kids summer cooking camp. For information write: Byerly's School of Culinary Arts, 3777 Park Center Blvd., St. Louis Park, MN 55416, phone (952) 929-2100, or log on: www.byerlys.com

CALIFORNIA CULINARY ACADEMY offers an Associate of Occupational Studies (AOS) Degree in both classical and contemporary cuisine in a comprehensive, hands-on training. For information write: California Culinary Academy, 625 Polk Street, San Francisco, CA 94102-9977, phone (800) 229-2433 or log on: www.baychef.com

CAMP NAPA CULINARY has cooking classes based on eleven cookbooks by Hugh Carpenter. Wine and dinner tours are also offered in the wine country. For information write: Camp Napa Culinary, P.O. Box 114, Oakville, CA 94562, phone (707) 944-9112, or log on: www.hughcarpenter.com

CHEF JEAN PIERRE'S COOKING SCHOOL offers food of the Mediterranean. For information write: Chef Jean Pierre's Cooking School, 1436 North Federal Highway, Fort Lauderdale, FL 33305, phone (954) 763-8861, or log on: www.chefjp.com

CHEF PATRICK MOULD'S LOUISIANA SCHOOL OF COOKING offers a number of programs geared toward your needs. For information write: Chef Patrick Mould, 112 South Main Street, St. Martinsville, LA 70582, phone (337) 394-1740, or log on: www.louisianaschoolofcooking.com

The CHEF'S GALLERY has a cooking school that offers classes in seafood, sauces, baking and more. For information write: The Chef's Gallery, 324 North Main Street, Stillwater, MN 55082, phone (651) 351-1144, or log on: www.thechefsgallery.com

The CHEF'S SHOP offers in store cooking classes by national chefs. For information write: The Chef's Shop, 290 Naub Street, Great Barrington, MA 01230 or phone (413) 528-0135.

The CHINESE COOKERY INC. offers light and healthy Chinese and Japanese cuisine. For information write: The Chinese Cookery Inc., 14209 Sturtevant Road, Silver Spring, MD 20905, or phone (301) 236-5311.

The CHOPPING BLOCK COOKING SCHOOL emphasis on vegetarian cooking. For information write: The Chopping Block Cooking School, 1324 West Webster, Chicago, IL 60614, phone (773) 472-6700, or log on: www.thechoppingblock.net

CLASSIC GOURMET COOKING SCHOOL offers a 9-week course in all cuisine. For information write: Classic Gourmet Cooking School, 3764 Hillsboro Road, Nashville, TN 37215, or phone (615) 383-8700

COOKING AT TOBY'S offers a variety of sauces, baking, stocks, soups, desserts, seafood and ethnic classes. For information write: Cooking at Toby's, 2721 East Main, Ventura, CA 93003, phone (805) 644-5608, or log on: www.tobyscooking.com

COOKING AT TURTLE POND offers weekend cooking vacations. For information write: Cooking at Turtle Pond, 210 Axehandle Road, Quakertown, PA 18951, phone (215) 538-2564.

The COOKING COTTAGE AT CEDAR SPRING FARM offers hands-on bread baking, along with cooking tours to New York and Europe. For information write: The Cooking Cottage at Cedar Spring Farm, 1731 B Old Bethlehem Pike, Scellersville, PA 18960 or phone (215) 453-1828

COOKING IN SONOMA offers small groups one-week hands-on cooking classes in California's wine country. For information write: Cooking in Sonoma, P.O. Box 1386, Sonoma, CA 95476 or phone (877) 817-2665

COOKING SCHOOL OF ASPEN offers one of the largest variety of cooking school pleasures in the nation. You will reap the benefits of working alongside some of the world's top culinary talent, who will guide you step-by-step through all aspects of cooking. You can combine a ski or an outdoor fun vacation with international cuisine adventures. It could be a Greek feta pie, Hawaiian pineapple fried rice, a Mardi Gras celebration with duck gumbo, or how about cowboy cuisine with tamales and tomatillo salsa? There's also children's program rated as "one of the most talked-about kids' programs in the nation" by *Gourmet* magazine. This includes Food of Long Ago, Noodlemania, and a Siesta Fiesta. The school also offers culinary adventures to other countries. For information write: Cooking School of Aspen, 414 East Hyman Avenue, Aspen, CO 81611, phone (800) 603-6004, or log on: www.cookingschoolofaspen.com

The COOKING SCHOOL AT EAGLE'S NEST has 4 day courses in French and Italian cuisine. For information write: The Cooking School at Eagle's Nest, 221-213 George Street, Louisiana, MO 63353, phone (573) 754-9888

COOKING WITH LIZ CLARK offers French, Italian and American cuisine featuring fresh local ingredients in a restored antebellum home. For information write: Cooking with Lis Clark, 335 Messenger Road, Keokuk, IA 52632, phone (319) 752-2731, or log on: www.secc.cc.ia.us

COOK'S GARDEN offers both regional and ethnic dishes. For information write: Cook's Garden, 306 Cottage Hill Road, Mobile, AL 36606, or phone (334) 476-6184.

COOKTIQUE has kids classes featuring French, Italian and Chinese. For information write: Cooktique, 9 West Railroad Avenue, Tenafly, NJ 07670, phone (201) 568-7990, or log on: www.cooktique.com

CUCINA CASALINGA offers home-style regional Italian cooking classes. For information write: Cucina Casalina, 171 Drum Hill Road, Wilton, CT 06897, phone (203) 762-0768, or log on: www.cucinacasalina.com

CUISINE INTERNATIONAL is unlike most cooking schools, as they offer courses in many locations, such as in Virginia, Italy, France, Portugal, Brazil and England. Picture yourself 6 nights with famous chefs, learning regional cuisine, enjoy excursions and with time to relax in an historic hotel. For information write: Cuisine International, P.O. Box 25228, Dallas, TX 75225, phone (214) 373-1161, or log on: www.cuisineinternational.com

CULINARY ADVENTURES COOKING SCHOOL offers a series of afternoon cooking demonstrations, some classes are hands-on, for kids and adults. For information write: Culinary Adventure, 6267 Lake Lucerne Dr., San Diego, CA 92119, (619) 589-6623, or log on: www.sandiegoinsider.com

CULINARY ADVENTURES IN TUSCANY offers cooking tours to Italy. For information write: Culinary Adventures in Tuscany, P.O. Box 644, Solana Beach, CA 92075, phone (619) 980-9416, or log on: www.tuscany-adventurers.com

CULINARY VACATIONS, INC. goes to Italy and France with cooking classes. For information write: Culinary Vacations, Inc., P.O. Box 747, Roswell, GA 30077, phone (888) 636-2073, or log on: www.culinaryvactionsinc.com.

DESIGNER EVENTS COOKING SCHOOL: Classes are offered quarterly by pairing food with wine and theme specific classes. Focus is on baking and pastry, confectionery, vegetarian and health conscious recipes. There are also regional classes in American, French, Italian and Mexican. Classes for kids are also available. The school is held in the Vintage House Restaurant located at the Messina Hof Winery and Resort in the Brazos Valley. For information write: Designer Events Cooking School, 4545 Old Reliance Road, Bryan, TX 77808, phone (979) 778-9463, or log on: www.messinahof.com

EAT YOUR WAY THROUGH LA offers hands-on culinary cooking tours. For information write: Eat Your Way Through LA, 267 South El Molino Avenue, Pasadena, CA 91101, or phone (626) 744-3174.

EPICULINARY INC. has cooking vacations in Spain, Italy and France. For information write: Epiculinary Inc., 321 East Washington Avenue, Lake Bluff, IL 60044, phone (847)295-5363, or log on: www.epiculinary.com

ERNA'S ELDERBERRY HOUSE COOKING SCHOOL: Whether you are interested in surprising your family with something more creative than meat and potatoes or have your heart set on treating everyone to a *Babette's Feast*, you will have the opportunity to hone your culinary skills. Each three-day class is limited to 12 students, where you will learn secret recipes and exciting techniques. Unlike most schools, there are no pre-requisites required, just an open mind with lots of enthusiasm and of course comfortable shoes. The school is located in the Sierra foothills at the Castle Hotel. The estate will make you think you have stepped into the French countryside. This feeling extends to the kitchen as well. For information write: Erna's Elderberry House Cooking School, P.O. Box 2413 Oakhurst, CA 93644, phone (559) 683-6800 or log on: www.elderberryhouse.com.

FOOD FEST offers a weekend food adventure twice a year with cooking classes and seminars with regional chefs and authors. For information write: Food Fest, The Kahler Grand Hotel, Rochester, MN 55902, phone (800) 733-1655, or log on: www.kahler.com

FOODSEARCH PLUS INC. offers basic techniques on pastry and baking. For information write: Foodsearch Plus Inc., 258 Florida Road, Ridgefield, CT 06877, or phone (203) 438-0422

GABRIELE'S TRAVELS TO ITALY offers traditional home cooking. For information write: Gabriele's Travels to Italy, 1610 14th Street NW, Rochester, MN 59001, phone (507) 287-8733, or log on: www.travelingtoitaly.com

GOURMET RETREATS AT CASA LAMA offers daily to five-day classes at a bed and breakfast inn. For information write: Gourmet Retreats at Casa Lama, 1316 South Oak Street, Calistoga, CA 94515, phone (877) 968-2665, or log on: www.gourmetretreats.com

GREAT NEWS DISCOUNT COOKING SCHOOL offers Italian, Asian and seafood classes. For information write: Great News Discount Cooking School, 1788 Garnet, San Diego, CA 92109, phone (888) 478-2433, or log on: www.great-news.com

HEALTHY GOURMET INDIAN COOKING: Specializes in Indian, Thai and Middle Eastern cuisine. Emphasis is on tasty home-style Indian food that is healthy and nutritious, both vegetarian and non-vegetarian. For information write: Healthy Gourmet Indian Cooking, 1334 Creekside Dr., Oakville, ON L6H 4Y2 Canada, phone (905) 842-3215 or log on: www.hgic.ca

HEAT AND SPICE COOKING SCHOOLS offers Thai, Mexican and Indian grilling and stir frying, along with flat bread baking. Plus how to use tropical herbs, chiles and spices in cooking. For information write: Heat and Spice Cooking School, 925 West Cullom Avenue, Chicago, IL 60613 or phone (773) 404-2229.

HOME CHEESE MAKING 101 has hand-on classes making crème fraiche, ricotta, mozzarella, farmhouse cheddar and other cheeses. For information write: Home Cheese Making 101, P.O. Box 85, Ashfield, MA 01330, phone (413) 628-3808, or log on: www.cheesemaking.com

INNOVATIONS IN TRAVEL: This is a culinary tour of Turkey with visits from regional cuisine in homes to elegant gourmet restaurants. You will meet famous chefs, food historians and cookbook authors, along with sightseeing in Istanbul. There are two departures a year, spring and fall. For information write: Innovations in Travel, 211 South Beverly Drive., Suite 101, Beverly Hills, CA 90212-3828, phone (800) 2-TURKEY, or log on: www.innovationstravel.com

JEAN BUTEL'S SOUTHWESTERN COOKING VACATIONS offers Southwestern cuisine. For information write: Jean Butel's Southwestern Cooking Vacations, La Posada de Albuquerque, Albuquerque, NM 87102, phone (800) 472-8229, or log on: www.jeanbutel.com

The JEAN BRADY COOKING SCHOOL has private classes with health food and cooking tours to France and India. For information write: The Jean Brady Cooking School, 680 Brooktree Road, Santa Monica, CA 90402, or phone (310) 454-4220

J'OLE DAYLE COOKING SCHOOL OF THE OLSON ACADEMY: Do you want to learn French cooking? Than you will want to check out this school in the depths of the Hoosier National Forest. The director is Joan Y. Olson and she offers classes in some of the following recipes: quiche lorraine, potage parisienne, filet de poisson en papillote, tarte de pommes lutece, mousse au chocolat and filet mignon poivre vert to highlight a few. Also on hand is Dr. Allen Dale Olson where he gives classes in wine lessons. For information write: The Olson Academy, 10902 North County Road 800 West, Norman, IN 47264 or phone (812) 497-3568

KITCHEN CREATIONS offers demonstration classes. For information write: Kitchen Creations, 15032 West 144th Terrance, Olathe, KS 66062, phone (913) 764-8790, or log on: www.geocities.com/kitchencreation

LAS CASAS COOKING SCHOOL offers classes in ethnic cuisine. For information write: Las Casas Cooking School, 181 Paseo Do Peralta de Vergas Center, Santa Fe, NM 87501, phone (505) 988-3394, or log on> www.lascasacooking.com

LE PETIT GOURMET COOKING SCHOOL offers all levels of French cooking including wild game and desserts. For information write: Le Petit Gourmet Cooking School, 19 Charena Road, Wayland, MA 01778, or phone (508) 358-4219.

The LEARNING STUDIO offers a variety of hands-on and demonstration cooking classes covering almost every type of recipe from appetizers to desserts. Classes are taught by famous chefs from Philadelphia , along with visiting chefs from other cities and countries. International cuisine classes features Cuban, Indian, Japanese, French, Italian and others. There's a cooking clinic where you can learn culinary skills, plus an introduction to wine appreciation. Both day and night classes are available. There's also "Kids in the Kitchen" classes for 8 to 11 year olds. For information write: The Learning Studio, 412 East King Strett, Malvern, PA 19355, (610) 578-0600, or log on: www.learningstudio.net

LES LIAISONS DELICIEUSES offers cooking tours in France. For information write: Les Liaisons Delicieuses, 4710 30th Street NW, Washington, DC 20008 or phone (877) 966-1810

LES PETITES GOURMETTES CHILDREN'S COOKING SCHOOL covers basic techniques. For information write: Les Petites Gourmettes Children's Cooking School, 12007 N. 62nd Place, Scottsdale, AZ 85254 or phone (602) 991-7648.

The LORETTA PAGANINI SCHOOL OF COOKING offers Italian children's classes. For information write: The Loretta Paganini School of Cooking, 8613 Mayfield Road, Chesterland, OH 44026, phone (440) 729-1110 or log on: www.lpscinc.com

MARGE COHEN COOKING CLASSES emphasis on Chinese and low-fat easy cooking. For information write: Marge Cohn, P.O. Box 53, Needham Heights, MA 02494 or phone (781) 449-2688.

MASTER BBQ COOKING SCHOOL offers cooking techniques for grilling and smoke-cooking of pork, poultry, beef, fish, and game. For information write: Master BBQ Cooking School, Culinary Institute of Smoke-Cooking, Denver, CO 80206, phone (303) 321-7424, or log on: www.bbqcookingschool.com

The NEW SCHOOL OF COOKING has classes on French, Italian, Asian, and Mexican cooking. There's also a summer cooking camp for kids and teens. For information write: The New School of Cooking, 8690 Washington Blvd., Culver City, CA 90232, phone (310) 842-9702, or log on: www.newschoolcooking.com

PACIFIC INSTITUTE OF CULINARY ARTS: The Institute offers accredited career training in culinary arts, and baking and pastry arts. Culinary arts classes are available as six months full time or twelve months part time. The baking and pastry arts classes are available as a full time six months. Also available: bread making, a la carte desserts, wedding and special occasion cake decorating, and custom casual gourmet classes. Of interest to high school students is their scholarship program. For information write: Pacific Institute of Culinary Arts, 1505 West 2nd Avenue, Vancouver, BC V6H 3Y4 Canada, phone (800) 416-4040 or log on the web: www.picularts.bc.ca.

PRIARIE KITCHENS COOKING SCHOOL offers hands-on cooking for the home chef in both ethnic and regional American recipes. For information write: Priarie Kitchens Cooking School, P.O. Box 372, Morton Grove, IL 60053 or phone (847) 966-7574.

REDELL'S JOIE DEVIVRE CAJUN COOKING SCHOOL; Learn directly from Mama Redell on how to cook authentic Cajun dishes including gumbo, etouffee, jambalaya and bread pudding. For information write: Redell's Joie de Vivre Cajun Cooking School, 112 West Brentwood Blvd., Lafayette, LA, phone (337) 981-5353 or log on: www.redellsjoiedevivre.com

The SCHOOL OF CULINARY ARTS offers hands-on cooking, baking and basis culinary classes. For information write: The School of Culinary Arts, 100 Embassy Row, Atlanta, GA 30328, or phone (800) 275-4242.

The SEAFOOD SCHOOL: Learn how to cook all kinds of seafood, such as seafood stews, sauteed calamari, teriyaki sturgeon, steamed mussel, baked rockfish and poached salmon. For groups under 12 it is hands-on classes complete with an elegant sit down dinner featuring dishes you prepared. There are cooking demonstrations for larger groups with seafood cooking techniques, and you get to taste the recipes. For information write: The Seafood School, 2021 Marine Drive, Astoria, OR 97103, phone (503) 338-6523 or log on: www.seafoodschoolorg

SARCHIELLI COOKING SCHOOL OF TUSCANY offers healthy and ancient peasant cooking classes in Italy. For information write: Sarchielli Cooking School of Tuscany, 1626 Derby Street, Berkeley, CA 94703, phone (510) 704-0305, or log on: www.sarchielliassociates.com.

The SAVOUR OF FRANCE offers basic techniques of French and Italian cuisine. For information write: The Savour of France, 2450 Iroquois Avenue, Detroit, MI 48214, phone (800) 827-4635, or log on: www.savourfrance.com

SELECT ITALY – CULINARY ADVENTURES offers both hand-on and demonstration cooking of Italian cuisine. For information write: Select Italy – Culinary Adventures, 328 Linden Avenue, Wilmette, IL 60091, phone (847) 853-1661, or log on: www.selectitaly.com

SUR LA TABLE: This kitchenware store not only has hard to find cookware and tools, but most of the stores also have hands-on demonstration classes for both adults and children. The stores offer a variety of themes including Asian, Italian, Indian, Mexican, South American, Southwestern, canning, BBQ, desserts, holiday and much more. Classes are taught by visiting and local chefs, cookbook authors, and Sur La Table staff members.

Some of the stores offer Cooking Camps for the Junior Chef, run two to five days, ages eight to eighteen. Some stores also have shopping and/or cooking tours. For information write: Sur La Table, 1765 6th Avenue, South, Seattle, WA 98134-1608, phone (800) 243-0852 or log on: www.surlatable.com

SWEET BASIL COOKING SCHOOL offers demonstration and hands-on classes in regional and ethnic foods. For information write: Sweet Basil Cooking School, 10749 North Scottsdale Road, Suite 101, Scottsdale, AZ 85260, phone (480) 596-5628, or log on: www.sweetbasicgourmet.com

TAMARA'S COOKING CLASSES offers classes for all ages from salads to fondue. For information write: Tamara's Cooking Classes, 1015 Oak Lane, Grand Haven, MI 49417, phone (616) 847-0312

The TASTE OF HOME COOKING SCHOOL: Visiting more than 260 cities each year, the cooking school offers a 2-hour demonstration of easy-to-prepare, timely recipes. You can add pizzazz to your mealtimes by adding mouth-watering recipes to your collection. At the same time learn new cooking techniques, time-saving kitchen tips, menu ideas and table decorations to transform your ho-hum meals into sumptuous celebrations.

The staff of professional home economists will introduce you to such entrees as Tomato Basil Pork Chops, Shrimp and Vegetable Stir-fry or Chicken and Artichoke Pizza. Satisfy your sweet tooth with Peanut Butter-Chocolate Brownie Pie or Merry Cherry Holiday Dessert.

The show is associated with America's favorite cooking magazine, Taste of Home, a Reiman Publication. Due to the size of the audience, hands-on preparation is not a feature of this event. However, demonstration assistants are selected for each show. And, there's plenty of vocal interaction regarding the food and recipes.

The evening school focuses on family-pleasing recipes in conjunction with a lively and entertaining presentation. Most of the programs have an exhibit area with new food products and kitchen equipment. Plus, you'll take home a gift bag that includes the Taste of Home Recipe Collection, product samples, recipe brochures and money-saving coupons. There's an opportunity to win one of the many prizes that are drawn during the evening.

The cooking school is made possible through the national support of food sponsors such as Campbell's Soup, Nestle Baking Products and Tyson Chicken. A local media and area retailers assist in bringing the event to the local communities.

To find a Taste of Home Cooking School near your home town, log on to: www.tasteofhomeschools.com <<http://www.tasteofhomeschools.com>> or inquire by writing to: Taste of Home Cooking Schools, 5400 South 60th Street, Greendale, WI 53126.

TERENCE JANERICCO COOKING CLASSES has five week courses in vegetarian, Italian, French provincial and Asian cookery, plus baking, desserts, breads, casseroles, pasta, chocolate and hors d'oeuvre classes. For information write: Terence Janericco Cooking Classes, P.O. Box 226, Herrick Bay, Brooklin, ME 04616, phone (207) 359-2068 or (617) 426-7458, or log on: www.terencejanericcocookingclasses.com

TINA WASSERMAN'S COOKING AND MORE offers international cuisine with Jewish/Muslim dietary laws. For information write: Tina Wasserman's Cooking and More, 7153 Lavendale, Dallas, TX 75230, or phone (214) 369-6269

TOSCANA SAPORITA TUSCAN COOKING SCHOOL: The school is in a 15th century villa and the hands-on classes are taught with never more than 12 students. There are three programs: *Spring Festival* with wild leeks, new potatoes, spring onions, wild asparagus, shellfish, lamb and new cheeses. *Summer Abundance* is built around tomatoes, basil, white eggplant, various color peppers, grilled meats, apricots, peaches and melons. The third, *Autumn Harvest* emphasizes mushrooms, chestnuts, truffles, polenta, roasted meats and freshly-pressed olive oil. For information write: Toscana Saporita Cooking School, P.O. Box 686, Prince Street Station, New York, NY 10012, phone (212) 219-8791, or log on: www.toscanasaporita.com

TUSCANY COOKING SCHOOL: Want to learn Italian cooking, then the Tuscany Cooking School is for you. Located in Ripoli de Lari, a small town about an hour from Florence, Italy. The school is

located in Villa Delia and consists of ten days, with seven of them with hand-on cooking classes. In the afternoons, you will explore different Chinati regions, which include wine and olive oil tastings, pasta factories and cultural markets. For information write: Umberto Management, 1376 Hornby Street, Vancouver, BC V6Z 1W5 Canada, phone (604) 669-3732, or log on: www.umberto.com

WEIR COOKING. Here's a change for you to join Napa Valley cooking classes and Italian culinary excursions with Joanne Weir. She offers hands-on classes featuring dishes rich with flavors of the local cuisine. Joanne will take you to her favorite restaurants, introduce you to some of her closest friends, explore off-the-beaten-track culinary locations, and indulge you in some of the most wonderful places on earth. Joanne is the host of the PBS TV series "Weir Cooking in the Wine Country." For information write: Now Weir Cooking, 2107 Pine Street, San Francisco, CA 94115, phone (719) 471-7688, or log on: www.weircooking.com

WISCONSIN SCHOOL OF COOKERY: The school offers a series of 2 1/2 to 3 hours, one on one (you and a friend) classes (length depends upon on much fun you're having) in appetizers, salads, entrees, desserts and breakfast. Of special interest is a classic German meal from rouladen to kirschwasser torte. The programs are geared toward home-hobby cooks and not those who wish to become a certified chef. The classes are open to all ages. Students as young as four years of age have successfully completed the hands-on classes. For information write: Wisconsin School of Cookery, W6248 Lake Ellen Drive, Cascade, WI 53011-1322 or phone (920) 528-8015.