

The year was 6500 B.C.: born in a cave — what you saw was all you needed to know from birth to death. The ratio of new information to known information was 1/100,000. By the year 1950 we knew what our parents knew. The ratio had advanced to 1/100. Recall and memorization were adequate methods for learning new information. In the year 1965, the popular saying of young people was, "Don't trust anyone over 30," and the ratio of new information to known information broke even at 1/1. By the year 2000 the ratio of new information to known information will be 100/1. At this point the human brain can no longer process the new information as fast as it receives it. We are drowning in knowledge.

We can no longer teach effectively using the same methods we did in the 1950s and '60s. The schools that have effectively prepared us or our parents will no longer effectively prepare our children to be "productive, contributing members of society."

Agricultural technology is certainly not exempt; it will advance more rapidly in the next five years than it did in the previous 50 years. Competencies necessary for job performance will change at an equally rapid pace. The rate at which agricultural technology is changing is such that by the time a student is trained for a skill-specific occupation, there is a good likelihood the skill or the occupation will be obsolete. Research shows that a person will change jobs at a rate of once every five to seven years. Keeping all these factors in mind, we realize that if we continue using the skill specific only approach, every five to seven years the average worker may have to go through a retraining process.

Research also shows that by the year 2000, an estimated 15,000,000 manufacturing jobs will require more advanced technical skills, and an equal number of service jobs will become obsolete. Fifty percent of developing jobs will require skills greater than those provided by existing educational programs. Sixty percent of today's students will work in jobs that don't currently exist.

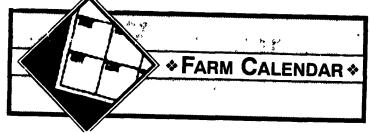
To address these challenges, education/vocational education will need to design educational programs which will produce thinkers and problem solvers rather than assembly line robots. Common sense should tell us that students who can function in a variety of job situations won't require extensive retraining.

As we design programs, it will be important that we understand these challenges. To address these challenges, we will need to design secondary, post-secondary and adult programs that offer flexibility for training in multiple occupational areas offering a broad-minded spectrum of opportunity. We will need to incorporate, in a deliberate and organized way, adult educational opportunities into the overall educational picture. Adult educational programs should provide: advanced level job placement; job maintenance; updating.

Agricultural education is also faced with a challenge of dwindling personnel, resources and commitment as is true with much of the agriculture industry. To effectively address this challenge, we need to get serious about developing collaborative efforts for pooling resources from any or all educational and agricultural entities. A collaborative effort of networking as partners can provide dynamic opportunities for training the agricultural work force of the 21st century.

History teaches us, "To know the past is to forge the future." Understand the present, envision the future and move on.

-Timothy A. Weller, Agriculture Education Advisor, Pennsylvania Department of Education.





## To Look At Corn Contest Results

When you look at the data from the National Corn Growers Association yield contest, many things may be learned from the results and the information provided by the growers.

In 1994 a total of 3,172 corn growers from 24 states participated. Here are a few questions people are asking about corn production and answers from contest results:

• Is there one best corn variety to plant? In 1994 a total of 448 different hybrids were entered in the contest. The 417 winners planted 140 different varieties. This supports the idea that there are many good hybrids available to growers. Growers who select the best hybrids from those available in their area have a good chance of producing an excellent yield.

• Do farmers practice crop rotation? Growing the same crop year after year is not good management. In the 1994 program, 53 percent of the entries were planted following soybeans and only 25 percent were planted following corn.

## To Look At Corn Fertilization

Looking at results from the National Corn Growers Association yield contest, we can look at two questions regarding nitrogen fertilization:

1. Do farmers overfertilize corn? Most research has shown that corn needs between 1.1 and 1.5 pounds of nitrogen to produce a bushel of corn. In 1994, the average yield of all farmers entered in the contest was 192 bushels. They applied an average of 180 pounds of nitrogen or about 0.94 pounds of nitrogen per bushel of corn. The winners in the program had an average yield of 203 bushels per acre with an average application of 198 pounds of nitrogen per acre or about 0.98 pounds per bushel. This information would support the conclusion that farmers do not overfertilize, not even to win contests!

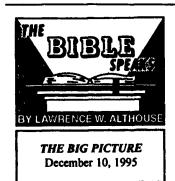
some fertilizer before planting and 67 percent applied at least part of their nitrogen at sidedress time, the most environmentally beneficial time to apply nitrogen. Fifty-eight percent of the growers had a soil test taken before planting the crop.

## To Properly Handle Livestock

Understanding cattle psychology and providing well-designed facilities will cut stress for producers and their cattle, according to Dr. Temple Grandin, Colorado State University.

Cattle have long memories. Animals that have been handled roughly will be more stressed and difficult to handle in the future.

However, animals handled gently and accustomed to the handling procedures will have very little stress when handled. Because of their long memories, cattle remember painful restraint methods such as nose tongs. Hand-



THE BIG PICTURE December 10, 1995 Background Scripture: Isaiah 51:1-8 Devotional Reading: Acts 27:14-26.

Do you ever feel like going back to bed and pulling the covers over your head after you've read the morning paper? Disasters, violence, corruption, and prejudice are what the editors of our local newspaper put on the front page. If anyone anywhere is doing anything that is worthwhile, it is likely to be buried somewhere near the obituaries. Or is your newspaper different from mine?

If you don't read the newspaper, perhaps you watch the news on television or one of those talk shows where everyone washes their dirty laundry in public. Maybe you were one of those who for the better part of a year were glued to the O.J. Simpson trial. Regardless of which category fits you the result may be pretty much the same: a sense of helplessness, frustration and fear.

There are different ways we can choose to regard all the daily bad news. Alternative one is to reason that none of the bad news has anything to do with you and ignore it. The second option is at the other end of the scale: to feel you personally ought to be doing something about each and every problem the world is facing. "BIG" OF US

The third choice is to be concerned and respond where and when you can, but leave the outcome in God's hands — which is mighty "big" of us considering that it always has been in His hands. That is one of the enduring values of the Bible — it presents us with the big picture against which all our little pictures have to be viewed. When we begin to despair about a situation in our lives or world, we need to look back, as Isaiah says, and "Hearken to me, you who pursue deliverance, you who seek the Lord; look to the rock from which you were hewn, and to the quarry from which you were digged" (51:1). The stories our Bible tells are reminders to us that, in the long run, God's will and purpose prevail even though it seems a long

ling will become easier if you use a halter to hold the head and keep electric prod usage to an absolute minimum. If you use tail twisting to move a cow up the chute, let go of the tail when she moves to reward her.

Cattle will learn quickly to move when their tails are touched. The basic principle is to prevent cattle from becoming excited. They may become excited in just a few seconds, but it will take 20 to 30 minutes for the heart rate to return to normal in severely agitated cattle.

According to Grandin, the level of cattle stress depends on several things: the amount of contact with people, quality of handling, and genetics. Grandin recommends culling the few individuals with a bad temperament.

Feather Prof.'s Footnote: "Reward success, respect individuality and recognize problems as opportunities."

time coming. "Look to Abraham, your father," Isaiah says, "and to Sarah who bore you, for when he was but one I called him and I blessed him and made him many" (v.2).

The story of Abraham is the saga of God's faithful providence and Abraham's trust in God, even when the fulfillment of the promise seemed a vain hope.

I pray daily for peace in the former Yugoslavia, in Ireland, in Sri Lanka and elsewhere because I am truly concerned. If and when I get a personal opportunity to do something positive to back up my prayers, I do so. For the rest, I leave it in God's hand and trust that His will and purpose will prevail. I do the same with the problems of our own nation: racial divisiveness, political turmoil, unemployment, social security, medicare, rampant materialism, and so forth. When I have prayed and worked the best I can, the rest is in God's hands.

## IN GOD'S HANDS

It is good to be reminded of the big picture: "for the heavens will vanish like smoke, the earth will wear out like a garment, and they who dwell in it will die like gnats..." Why? Because God assures me: "but my salvation will be forever, and my deliverance will never be ended" (51:6). That promise is the one thing that I can trust, the one assurance by which I can live.

I won't say that what others say or do doesn't ever disturb me. But I am learning to live a life that is not anchored to the approval and encouragement of others. I can understand Isaiah's admonition: "fear not the reproach of men, and be not dismayed at their revilings. For the moth will eat them up like a garment, and the worm will eat them like wool; but my deliverance will be forever, and my salvation to all generations" (51:7,

Saturday, December 9 Maryland Pleasure Horse Seminar, South Carroll High School, Winfield, Md., 8 a.m. Frederick County Ag Society stockholders meeting, Frederick Fairgrounds, 10 a.m. Sunday, December 10

Monday, December 11

Luesday, December 12 ADADC District 21 meeting, Timberwolf Restaurant, Darren, N.Y., noon. Wednesday, December 13 Farm Employee Management Seminar, Carlisle Holiday Inn, also Dec. 20. Berks/Lehigh Valley Milking

Schools, Berks Ag Center, 9:45 a.m.-3 p.m., also Dec. 20. Shade Tree Association meeting of southeastern Pennsylvania, Morris Arboretum, U. of Pa., 7 p.m. (Turn to Page A31) 2. Do growers sidedress nitrogen? Only 9 percent of the winning growers applied nitrogen in the fall. Fifty-nine percent applied

Farm Financial Management Workshop, Centre County Extension, Bellefonte, 10 a.m.-3 p.m.

Hursday, December 14 Farm Employee Management Seminar, Williamsport Sheraton Inn, also Dec. 21. Winter Meeting of the Pa. Seedsmen's Association, Eden Resort Inn, Lancaster, 10 a.m.

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Tomorrow morning when I read my newspaper, you may be sure that, regardless of what the headlines scream, I will keep my mind focused on the big picture.

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