

THOMPSON AGRICULTURE ALTERNATIVES 2009 REPORT

Farming Systems and the Viability of Rural Communities

Dick and Sharon Thompson

Shared Visions: Farming for Better Communities aims to support the social and economic vitality of rural communities by working to encourage an atmosphere where systems of farming that are profitable and environmentally-sound can be investigated and used.

"Integrated farming systems" is the term used by the Kellogg Foundation for such systems of farming. Others simply call such systems "sustainable agriculture." Regardless of the name, understanding how such systems support the social and economic vitality of rural communities is important.

Data from 1988 through 1996 on our farm helps provide this understanding. We keep careful financial records for each of our experiments so that they can be evaluated economically as well as agronomically.

Economics are evaluated by figuring labor and management return per acre for the different systems. Labor and management return per acre refers to profits after all out-of-pocket costs have been paid. Custom machinery rates are used for field operations so that the results of the economic evaluations can be compared to other farms.

Farming Practices	
Boone County C-SB	Integrated Farm Systems C-SB-C-O-H
Mulch Tillage	Ridge-till, chisel with sweeps, moldboard plow
Broadcast Herbicides (Pre and Post)	No herbicides
Broadcast Fertilizers (Purchased)	Manure
Shell corn, elevator dry	Ear corn, dry naturally
Crop insurance	Cover crops

Figure 9-1

Labor & Management Return \$/A.

Boone County C-SB vs. Thompson C-SB-C-O-H System

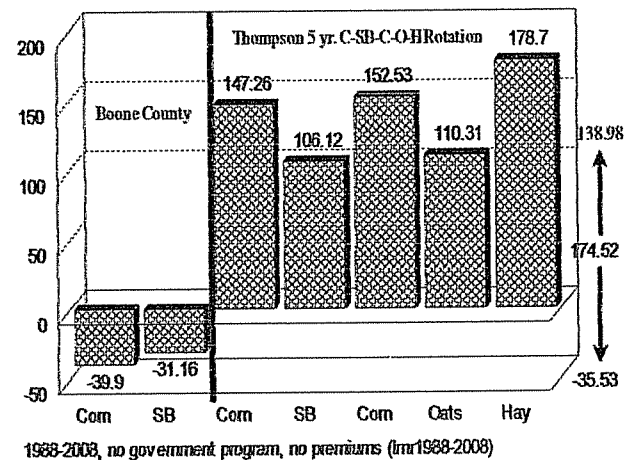


Figure 9-2

From 1988 through 2008 we compared several farming systems. Two of these systems are described in Figure 9-1. The "Boone County" system is a corn-soybean rotation with pre-plant mulch tillage, broadcast applications of purchased fertilizers, and pre and post plant herbicide applications. The "Integrated Farm System" is a five-year corn-soybean-corn-oats-hay rotation that uses ridge tillage, no herbicides, and applications of broadcast manure.

Figure 9-2 gives the average labor and management returns per acre for the two systems from 1988 through 2008. The Integrated Farm System or Alternative System out-performed the Boone County (conventional) system by \$174.52 per acre (Table 7-6). (We did not include government subsidies in these calculations because we feel these subsidies are not sustainable. We wanted to compare cropping systems against each other, not comparing governmental policy issues). The average net profit for the five year rotation was \$138.98 per acre per year over this 21 year period. The Boone County conventional rotation lost \$35.53 per acre per year for the period of time.

Farmers can increase the number of acres they operate, but more acres that are losing money is not a good alternative. Boone county or the state of Iowa cannot increase its acres. Using gambling

revenue to make up for agricultural revenue is not sustainable.

The management return per acre numbers were calculated based on selling the crops for cash. However, we have a farrow to finish hog operation and a beef cow calf enterprise to utilize what we raise. The hog and cattle operations are necessary for the alternative, integrated crop system to work but the positive or negative margins of the livestock have not been figured in at this time.

Figure 9-3 talks about the problems that has caused the collapse of rural communities. Rural decline comes from poor farm economics. Poor farm economics is from over production which produces low prices. The demand for food is inelastic which means prices are high when food is scarce and very low when there is an abundance. With these conditions, a 20% change in production will give an opposite 60% change in price. Every farm family should have this chart **Figure 9-4** as a table placemat so they would be reminded of this concept three times a day. In order to have an adequate price, supply has to be controlled at a tight position in order to receive that price. Corn prices moved from two to four dollars in 1996 and soybeans move from five to eight dollars with a tight supply. Farmers can't agree on how to control supply. Elected officials in government will never be

RURAL COMMUNITIES	
Problems:	
Overproduction, cheap food policy, 1951 USDA PA191	
Inelastic demand for farm products.	
Farmers can't agree on supply control	
High production brings narrow margins, Industrial Ag.	
Specialization and expansion has ruined rural America	
Government will never bring an adequate price for farmers.	
No restraints left in Ag. to limit farm expansion	
Rural decline comes from poor farm economics	
Solutions:	
Cheap, cheap in-put policy	Rotations
Diversity brings less risk	Balance
Make more with less	Value added
Go opposite of the flow	

Figure 9-3

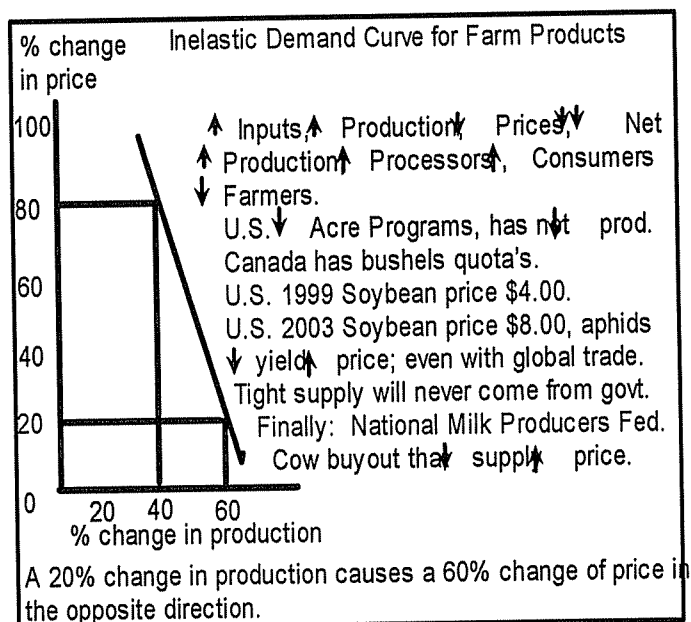


Figure 9-4

able to secure a tight enough supply to obtain adequate price and get reelected to office.

Most farmers try the produce more which just lowers the price, so the circle goes round and round. Produce more and get less. Higher production brings narrow margins which is called the industrial model. Stop trying to feed the world. Stop trying to beat your neighbor by one bushel per acre. Specialization and expansion has ruined rural America. Mechanization has removed all the restraints in farm expansion.

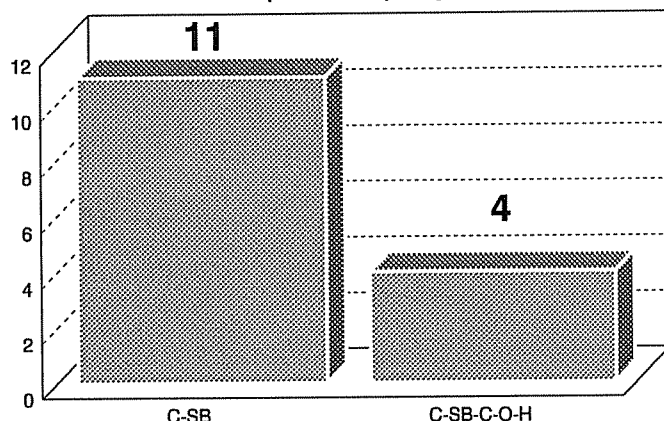
Solutions to the rural community problem are not easy. Some suggestions would be to lower input costs as much as possible. Diversify practices and operations to the extent of management abilities to reduce risks. Rotate crops, practices, tillage and any thing else you can think of. This should bring more balance to your farming operation. Try producing less and making more with added value of the produce. Stay out of the crowded enterprises.

Figure 9-5 compares the soil loss for the two systems using information from Robert Dayton of the Soil Conservation Service. It shows the Integrated Farm System to be superior in terms of protecting the environment by conserving soil resources.

That integrated systems provide higher per acre returns than less diversified systems has also

Soil Loss

Tons per acre per year



Robert Dayton, Soil Conservation Service

Figure 9-5

been shown by Mike Duffy, ISU Extension economist. In a Winter 1992 (Vol. 4, No. 4) *Leopold Letter* article titled "The Role of Animal Production in Sustainability," Duffy examined the impact of a swine enterprise on the returns to farming. Data from this article, show that 400 acres with a 120-sow swine enterprise produces far larger returns than 1,000 acres without livestock (**Figure 9-6**). Duffy's remarks are as follows, "The addition of an animal enterprise helps the sustainability of a farm in many ways. The manure feeds the crops, which lessens the need for fertilizer and lowers costs of production. Feeding the crops to the animals adds value and increases profitability. The addition of an animal enterprise also helps spread the labor more evenly and increases diversification."

There is little doubt that the structure of farming systems impact rural community viability. It takes people to make communities, not commodities. ISU Extension agricultural engineer Stewart Melvin put it another way on page 7 of a Winter 1993 *Leopold Letter* (Vol. 5, No. 4) article titled "Team Lends Framework to Animal Ag Debate." In this article Melvin noted, "There is simply not enough income from a corn/soybean agriculture for a community to survive."

The information in these tables, figures, and *Leopold Letter* articles provide an understanding of how the PFI directors see integrated farming sys-

Table 4. Return to operator for up to 3,000 hours of labor

(Note: Cash-grain operations do not include extra labor. Operations with swine have over 3,000 hours, and the difference is charged at \$6.50 per hour. Values in parentheses are for the hours of operator labor; scenario 1 = 1,200 and others = 3,000.

	Low Yield	Medium Yield	High Yield
400 acres corn/soybeans	\$832 (\$.69)	\$9,159 (\$7.63)	\$14,292 (\$11.91)
1000 acres corn/soybeans	\$4,710 (\$1.57)	\$22,897 (\$7.63)	\$35,729 (\$11.91)
400 acres continuous corn with 120 sows	\$38,710 (\$12.90)	\$46,207 (\$15.40)	\$50,560 (\$16.85)
400 acres corn/soybeans with 120 sows	\$44,902 (\$14.97)	\$54,939 (\$18.31)	\$60,287 (\$20.10)

Figure 9-6

tems helping support farm families and rural communities while protecting the environment.

Summary

Including the cow in the farm operation keeps the farm and communities in balance. When the cow leaves the farm, the oats and hay crops leave also and the decline of rural communities has begun. The remainder is all row crop corn and soybeans. Fertilizers have to be purchased now since the livestock are gone. Weed pressure in-

The Importance of the Cow

When the cow leaves, the rotation changes to all row crops, no need for oats or hay, less ground cover, soil erosion increases, no chores for kids, input costs increase, income decreases, off farm work, more acres, less farmers, weakens family, community downgrades.

COMMUNITY

Strong families make strong communities

FAMILY

Working together makes strong families.

CHORES

Chores develop good work habits. Many years ago Henry A. Wallace was concerned about lack of chores.

The Cow

Livestock brings balance to a farm, keeps part of the soil covered, keeps everybody busy, increases income.

GRASS

Nature keeps the soil covered with grass and trees. Mankind has uncovered the soil.

SOIL

Figure 9-6a

creases with the all row crop rotation and herbicides are needed for weed control. As a result, farms can get larger and the rural communities decline (**Figure 9-6a**).

Rural communities have gone down hill because agriculture has lost its disciplines. There are no restrictions on the size of farms or livestock operations. Mankind has lost its' disciplines and is controlled by a spirit of ease and greed.

Communities are effected by the separation of mankind into thinkers and workers which widens the financial distance between the haves and the have nots. When the financial distance becomes too great, the have nots raise up and riots plague our communities. One way to narrow this gap is to have thinking workers and working thinkers. Who is right? Large corporations with few thinkers and many workers who are striking, **or** individuals having some part of ownership and the resulting motivation to succeed.

In Gods Word, IKings 4:25 talks about dwelling safely, every man under his vine and under his fig tree and Micah 4:3&4 talks about turning swords into plowshares and they shall sit every man under his vine and under his fig tree and none shall make them afraid.

Work for most people has lost its' purpose and sense of fulfillment. Work has become a necessary evil ... people work because they **have to** in order to pay the bills the idea that work is needed to benefit mankind has been lost the **desire to** work has been lost.

Mankind came from the earth and will return to earth. When pigs and people are removed from the soil, placed on cement or asphalt, crowded into small areas; tail biting becomes a problem with both pigs and people.

The following are some farm practices that promote people and rural community:

1. Mechanical and cultural weed control that restrict farm size.
2. Dry bedding waste disposal does restrict livestock expansion.
3. Livestock operations that match the farm to the family labor resources will keep out hog factories.
4. Livestock wastes, bio-solids from the city and green manures as the principal source of fertilizer for the crops will restrict farm size.

Community Service Project

We live on a very busy paved road which serves as a link between Boone and Ames. Most of our fields, the manure bunker, and the other farmstead are accessed only by this busy road. We see lots of commuters from the tractor cab.

Certain times of the day the traffic is especially heavy, such as before and after the business working hours. People are anxious to get to work on time in the morning and even more eager to get home later in the day. The drivers are pre-occupied with their own thoughts and/or problems, not always safety for themselves or others. Because of this way too many drivers do not heed the standard slow moving yellow flashers and turn signal combination. When the left turn signal is pulled down, all the flashing yellow lights remain flashing except the right one which stops flashing but remains yellow. The drivers do not get the message, and have even passed on a hill at an intersection all of which is a violation of safety rules. We have had too many close calls, resulting in tire marks on the road and

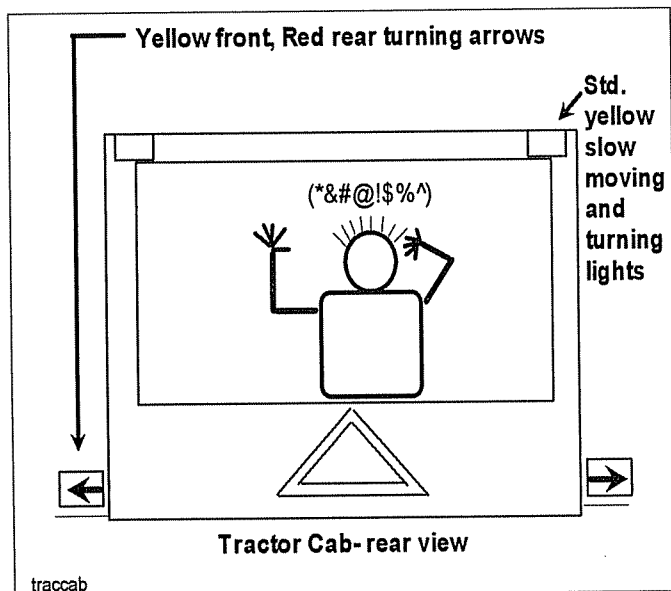


Figure 9-7

perhaps wet pants or more for drivers. The good rear view mirrors on the tractors have saved many accidents and maybe a life. We have had better response from drivers by turning off all the standard equipment yellow slow moving flashers and then pulling down the turning signal lever for a left turn across the traffic.

In an attempt to improve safety for all involved we have mounted separate red turning arrows on top of tractor cab. We turn off the yellow slow moving flashers and turn on only the left red turning arrow, but still have drivers who do not heed the red turning arrow. The next experiment is to lower the red turning arrow from top of the cab to the tractor wheel fenders (**Figure 9-7**). The separate system of red turning arrows should be placed on the back of trailing equipment and at car drivers eye level.

All these changes may not eliminate all risks, but we should do all that is humanly possible and believe for Divine protection as well.

We wish to thank the following for their contribution to this project.

The Van Wall Group, John Deere Dealer at Perry, for donating the labor and materials to install the turning lights. The idea of outside arrow belongs to the mechanic who installed the lights.

Tom Colvin ARS/USDA, ISU/NSTL for the idea of placing the red turning lights as far away as possible from the yellow slow moving flashers.

Doug Alert for suggesting turning off the yellow flashers before turning on the red turning lights.

Also many others who contributed their thought and ideas.

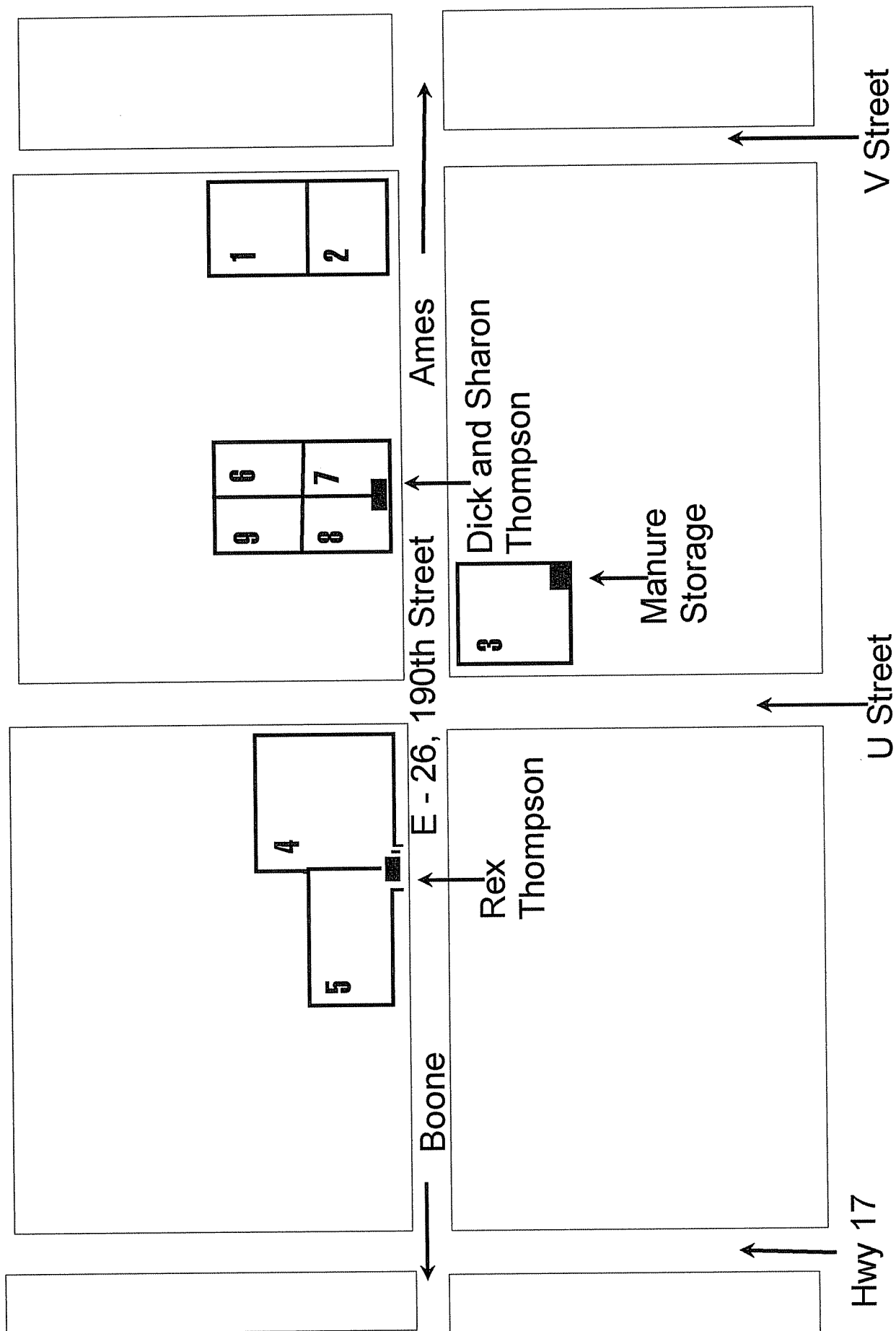
ing this shop was one of the better things we have done.

Having a welder, cutting torch, some tools and metal on hand make farming much easier. Dick's father did not have a welder because a close neighbor had a shop and fixed and made all kinds of things. Dick would go along with his dad to Bill's (the neighbor fixer) and watch him weld, heat metal for straightening and do all sorts of things. Bill was a graduate of Iowa State College in Engineering and farmed 80 acres. He could build and fix most anything. He would make or fix before he went to town to buy what he needed. Dick picked up this habit and gets great satisfaction in fixing and not buying up town.

The Shop & Sustainable Agriculture

The shop is an important part of this farm and keeping this farm in existence. Not being able to fix equipment is about like losing a hand or arm. Machinery breakdowns usually happen on Friday evening at 5:30 after repair shops have closed for the week end. We built a shop when our three boys were in their teens and all three have good mechanical skills. One is a professional mechanic. Build-

The Thompson Farm (Thommap)



Finding Your Destiny

Comments by Dick Thompson after receiving the Leopold/Spencer \$1000.00 Sustainable Agriculture Award at the Iowa State Fair on August 14, 2004. The award was presented in the livestock pavilion before 2000 people prior to the Governor's Charity Steer Show.

It is very nice being the winner here today. Not everything that I have done has been a winner. I want to share some things, especially to the younger generation, that I have learned and am still learning about finding our destiny.

We are born with a plan or destiny. Failures or "bumps in the road" help us find where we fit and to find our destiny.

Competition helps us do our best in school, sports, and the show ring. Working hard and giving your best to every situation in life is a good goal, just "getting by" will not produce many successes in life.

However, aggressive competition or winning regardless of the cost is destructive. There was time in my life that I wanted to do away with competition because of what I saw going on with the coaches in high school sports during the 70's. Now being older and maybe a little wiser, competition has a place in building good character and success.

Success is needed for self worth. If we feel worthless, we are no good to our self, and no help to others. I was a skinny kid with zits that was picked on. If you are being picked on, I want you to remember this, the bully has less self worth and more problems than you do.

Living on easy street all the time does not build good character traits. Some hardships are good for the soul. Problems in life are needed to help us "grow up" on the inside. I'm 72 and still growing up. There are days I don't like growing up, but now I realize problems have a purpose and this "bump in the road" is going some place positive. No problems, no growth inside.

Problems and failures are opportunities for change. We have a choice to be bitter or let these bumps in the road make us a better person. We think these problems are outward, but really the biggest problem is inward. It's attitude or how we look at things. The mountain that is ahead of us may be only a gopher mound. Successes of the past help change the mountain into a gopher mound. When problems arise, we should ask, what is the lesson here? I have to talk to myself everyday about this one. Should I try this, or try something else, if nothing works, I call it a corner situation and it is time to look up to find your destiny.

Competitive winning in early life brings confidence for more success. If there are winners, there are also losers. Success brings responsibility to help others find their destiny. The competitive life style should change to a complementary life style. Being at the right place at the right time saying or doing the right thing is a bingo, a home run. Helping others succeed is more rewarding than succeeding yourself. In this case everybody wins and there are no losers.

We can't give up, stay in the game, try something different. Change!!!! Get along, but don't go along, be your own destiny. Be a good listener, especially to those close to you. Be a good observer, slow to speak, engage our brains before opening our mouths.

We wish you well in finding your destiny. Hopefully these comments will be helpful to someone in this audience today. Thank You Very Much.