J Davis Cattle – Business Plan

Introduction:

Welcome to our farm and thank you for taking time to learn about J Davis Cattle. Before I begin telling you about our farm, I want to acknowledge that it all belongs to God and I am humble and grateful that He has given us the privilege, the blessing, and the responsibility to live here and care for His resources for this time. I am very humbled by the fact that God has brought the right people into our lives at the right time or we would not be where we are today. We know we must always continuously learn. We read lots of material and attend as many training sessions as we can. We strive to constantly improve. We keep a long term focus.

We share all this information and all the data we collect on our operation for several reasons. We want our customers to know as much about the cattle as we do if they choose to take the time to read all this and study the data. We want to produce high value replacement heifers as best we know how. However, they are still cattle and there will always be some cattle that are not productive. We will know we have done the very best we can and our objective is that our customers will know it also. Sure, we will make mistakes and errors but we will own up to them and do our best to make things right. And for sure, we strive to not make that mistake again. By customers knowing what we do, they can have a better understanding of how to manage the cattle they buy. When things turn out good or when they do not, we and everyone else will know what we did. With that knowledge we, and with the advice and help we get from others, can have a higher assurance of repeating the success and avoid making the mistakes again.

Our faith in God also motivates us to do our best. We want to live knowing we lived a life of integrity - Proverbs 10:9 (NIV) The man of integrity walks securely, but he who takes crooked paths will be found out. Also, we consider this operation a Sacred Trust and want to hear this one day- Matthew 25:21 (MSG) His master commended him: 'Good work! You did your job well. From now on be my partner.'

History:

The home farm was purchased by Joe's grandfather in about 1920. Five Davis generations have lived here.

Until about 1950 this was a cotton farm. From1950 to 1965 some grain and a few cattle were here. From 1965 till about 2000 there were only a few cattle. In 2001 we began leasing of Joe's home place owned by his brother. In 2002 we cleared some land on this farm. In 2003 we purchased two other farms not connected to this farm. Some of that land had been in Mandy's family (my wife) since before the Civil War. In 2008 we purchased the farm connected to this farm and cleared and put it in pasture.

Joe worked on his Dad's farm from the age of 10. Mandy did the same on her Dad's farm. Joe's Dad was a school administrator and farmed on the side. Mandy's Dad was an Agriculture Teacher and farmed on the side. Both had cattle. Joe finished Clemson in Chemical Engineering and worked for Duke Energy for 30 years mostly in a nuclear power plant. Mandy finished Winthrop College and earned a Masters in Elementary Education from Clemson University. She was a certified elementary education teacher and taught for a few years. However, she cared for our elderly parents and our children and was not employed outside the home after the two boys were born. During all these years both of us worked as much as time allowed on the farms of our parents with the cattle.

In 2001 when Joe retired from Duke and with the retirement of our parents from the beef cattle businesses, we decide to become full time beef cattle farmers. We embarked on an exciting learning experience about the beef cattle business.

I want to acknowledge some of the team members and advisors in order by the date they got involved. First is my family and Mike Hall and the support they give and the work they do. Individuals who have worked with us in the past are Matt Owens and Mike Thrasher. Without the work and commitment to constantly learn and improve from all of these we would not be where we are today.

Some of the key advisors are Heather Ramsey, Dr. John Spitzer, Dr. John Andre, Kevin and Lydia Yon, Dr. Doug Ensley, Morris Warner, Dr. Matthew Burns, Dr. Walt Prevett, Jim Garrish.

Farm status as of May 2015:

Currently we graze about 470 acres total in 6 different locations within a 2 mile radius. We began with 15 cows in 2001. This past fall we AI bred 120 cows and 47 heifers after 120 calves were born. We have added land and converted pasture for the past 12 years. We have only kept females that produce a profitable calf EVERY YEAR. Cows producing a marginally profitable calf one year are given a second chance. We believe the farms can carry about 200 females, grow out 90 stockers to about 900 lbs. each spring and summer, and grow out about 90 heifers to breeding size each spring and fall. The stockers go to the feedlot in retained ownership. The heifers will be used as our replacements and for sell to the public.

Our forage base in novel fescue, MaxQ, Texoma, and BarOptima. We will convert 80 acres of KY31 fescue pasture to one of these in 2015 and the final 70 acres in 2016. Then all our pasture will be novel fescue. Our detailed comparison over the past 10 years of calves grazing novel and KY31 fescue has shown converting to novel fescue is a very sound business decision.

Business Plan:

We did not start with a plan in 2001 because we did not know what we were doing. The business plan has evolved as we made mistakes and learned from them, and our successes, and have gotten advice from a lot of people. We have our business plan divided into four interacting plans. These plans provide actions we take and when we are to take them. They are used to schedule our day to day activities. These plans tell us **what to do**, **what to do it to**, and **when to do it.** When we have success, make mistakes, have unexpected results, or learn of new technologies, products, equipment, or processes, we use these plans to evaluate what changes we need to make. Because the plans are based on the calendar, we can look across all the plans during a month to see if we have the skills, resources, and time to do something new and assess how it could impact other things in the plans. The plans are:

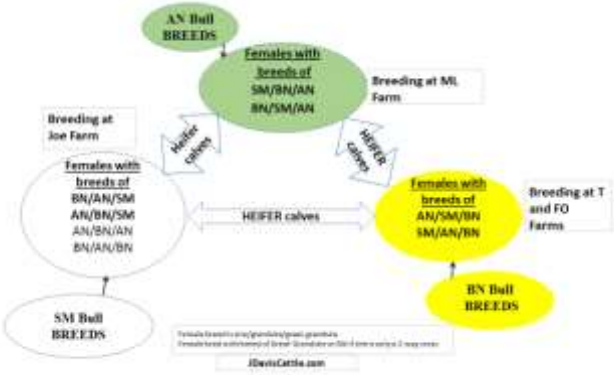
1. Industry Segment & Marketing Plan
2. Genetic Plan
3. Forage, Feed, and Facilities Plan
4. Cattle Production Cycle Plan

Some key points of each of these interacting plans are as follows:

1. Industry Segment and Marketing Plan:

-The industry segments we operate in are cow-calf, stocker, and replacement heifer development. We retain ownership of the calves to harvest and rely on our feedlot partner to properly feed and market the calves.
- In March sell all open heifers that were in breeding program over the winter. In 2015 we kept 5 of these and will grow them to harvest size to sell for freezer beef.
- In May at weaning we sell all open cows and any cows that do not wean a quality calf and their calf.
- From May to October we stocker all productive calves.
- In October we ship steer calves to a feedlot in retained ownership agreement. Harvest occurs around April 1 of the next year
- In June to September we will sale replacement heifers not needed. The complete history of every heifer's mother will be provided prior to the sale and is available on our web site "JDavisCattle.com". This information is available for all cattle.
- In September October and early November during calving we sell any female that loses their calf.
- Only heifers being bred and cows nursing a calf are carried through the winter.

2. Genetic Plan:



- Use a three breed rotation to capture as much heterosis a possible. Angus (English breed) Simmental (Continental breed) and Brangus (partly Zebu breed).
- The sire, grandsire, and great grandsire of every calf is documented at calving based on breeding records.
- The female is bred (AI and natural service) to the breed of her great grandsire (the breed that she is least related to).

- Only one breed of bull is used at each farm
- All females on the home farm are bred with Semimetal bulls.

- At two farms (Fair Oak and Treadaway-Sam Brown Road) we breed with Brangus.
- At the farm on Cedar Lane Road we breed with Angus.

3. Forage, Feed, and Facilities Plan:
- Graze year round. Feed little or no hay.
- 470 acres divided into 40 pastures, 155 paddocks with 33 water tanks. Most boundary fence and most pasture fences are high tensile electric. Poly wire is used in all paddocks and even some pasture fences.
- Females at each farm are grouped in herds based on their nutritional need (breeding heifers, bred heifers, and first calf cows in one group and mature cows in another group)
- The stockers and replacement heifers provide a way to vary the stocking rate on the farm. If we lack rain fall we ship steers early to the feedlot and sell extra heifers earlier leaving forage for the rest of the herd.
- Supplement developing heifers from weaning in May through breeding (November) and for 30-60 days after (February 10).
- Supplement pregnant heifers and cows having their second calf from 30 days prior to calving (August 1) till 30-60 days after breeding (March 1).
- All other cows get forage only and must produce a quality calf every year. No exceptions.
- All owned land is novel endophyte fescue (MaxQ, BarOptima, and Texoma MaxQII) (remaining 10 acres will be converted in summer – fall 2015). Leased land is KY31 fescue but is being converted to novel fescue in 2015 and 2016.
- In August each year on novel endophyte fescue litter is applied at a rate of about 2 Tons/A or urea. We vary this rate based on rain fall and forage inventory
- In late January put litter (about 1 Ton/A) on novel endophyte fescue or commercial nitrogen in mid-February based on forage needs.
- In August, leased land with KY31 is fertilized with litter. In the spring and summer mowing or Cimarron herbicide is used to prevent cattle from getting seed heads to reduce the impact of fescue toxicosis.
- Weather predictions are monitored closely to conduct litter and commercial nitrogen applications. Web sites user are National Weather Service "Local 7 day forecast" and "Climate Prediction Center":
http://forecast.weather.gov/MapClick.php?lat=34.637942573592&lon=-83.1064999402193&site=all&smap=1#.VOB3eLl0xwF
http://www.cpc.ncep.noaa.gov/
- Our objective is to graze selected novel endophyte fescue paddocks with stockers and replacement heifers to keep forage quality at required levels. Mowing will be used where needed.
- Other novel endophyte fescue will accumulate and be grazed by dry (non-lactating) cows.
-All handling facilities are designed using Temple Grandin designs along with a Bud box (Bud Williams design).
-Use poly wire to collect cattle as well as sort cattle within the pens
-All moving and sorting uses low stress handling techniques learn from reading, videos and experience.

Forage Plan calendar May-August

REV 1-22-14	Supplement	MAX Q FESCUE	KY 31 FESCUE
May	Supplement stockers & replacement hfs	**Plan grazing for stockers/RH so that the right number of paddocks are grazed often enought to keep forage quality up. WEEED MANAGAMENT:** Be on look up for summer weeds like bitter weed and horsenettle. **PLANNING: You should see what your grazing needs are by now.** If you feel you are going to be running low on forage, or if the long range forecast is calling for less precipitation now is the time for your drought plan to be reviewed.	**MAY 1 - Mow off seed heads to reduce endophite effect** **WEEED MANAGAMENT**: Be on look up for summer weeds like bitter weed. **PLANNING**: You should see what your grazing needs are by now. If you feel you are going to be running low on forage, or if the long range forecast is calling for less precipitation now is the time for your drought plan to be reviewed.
June	Supplement stockers & replacement hfs	Spray boundry fences with Roundrup as needed. Get **soil samples** on pastures that need to be sampled. Samples need to be obtained once there is a good soaking rain. Do not delay getting these samples as soon as you can after a rain. If it turns off dry it will be impossible to get samples later. This information will be needed for fertilization.	
July	Supplement stockers & replacement hfs	**PLANNING:** Begin to plan for fall and winter grazing. Based on forecasted weather conditions and how much forage required decided how many units of nitrogen will be needed. (80 units is the max for fall) and other elements. Then determine the best fertilizer to meet these results. Keep in mind the stockpiled fescue will work better if it is not grazed for 75 days. **PLAN HERD MOVES FOR CALVING TO BE READY FOR BREEDING**	
1-Aug	Pregnant heifers have to get supplement to be a BCS 6 at calving. Begin supplementing as needed.	**GRAZING MANAGEMENT:** Graze fescue pastures that will be stockpiled so there is 4 to 5 inches of forage remaining. This will ensure good growth response to the nitrogen. **DECISION:** Make the decision now if there is going to enough time to graze the fescue down to 4 to 5 inches or do you need to mow.	

5. **Cattle Production Cycle Plan**:
   - September 1for 45 days heifers calve and September 15 for 65 days cows calve.
   - All males are knife castrated at birth. All calves are tagged with a visual tag and EID at birth.
   - The breed of each calf is recorded at birth (Sire, Grand Sire, Great Grand Sire) (Example: An/BN/SM)
   - The breed of the sire to be used on a heifer calf when she reaches breeding age and for the rest of her life is established at birth, The ear tag color corresponds to the sire. (Green- Breed with Angus, Yellow- Breed with Brangus, White- Breed with Simmental)
   - November 15 Synchronize and AI replacement heifer calves.
   - December 1 Synchronize and AI all cows
   - Bulls put with females 10 days after AI. Bulls stay with heifers for 35 days and with cows for 55 days.
   - Vaccines are modified live virus where available.
   - In January calves vaccinated at 3 months old. Steers implanted.
   - May 1 Calves are vaccinated and weaned at average age of about 7 months.
   - Steers stockered to about 900 lbs in October as forage availability allows and shipped to the feedlot.
   - Heifer calves developed for breeding.
   - We collect data through every phase of this cycle. We use the Cow Sense and Cow Com Pro computer applications produced by Midwest MicroSystems to collect, store and organize all the data.
   - Every year in April we organize the data by cow and spend the better part of a day analyzing it selecting which heifers will make replacements, which steers to send to the feedlot, which calves to send to the sale barn, and which cows to cull. Also, we evaluate the performance of each sire that sired calves. We use the reports from Cow Sense and the application Excel to perform the analysis.
   -At every stage of data collection (birth, weaning, yearling, harvest), the data is submitted to the American Simmental Association (ASA). From this data submission, ASA prepares/updates EPDs for each animal in the herd under the ASA commercial cattleman's program for this type data.

Data collected:

We use the Beef Improvement Federation Guidelines (http://beefimprovement.org/content/uploads/2015/04/REVISED-Master-Edition-BIF-Guidelines-Final-4-2015.pdf) for all data except feet score. For feet score we use the 2015 released scoring system from the American Angus Association (http://www.api-virtuallibrary.com/35keys/pdf/0215-sgs-Foot-Scoring.pdf)
April – Cow pregnancy status by tail bleeding for blood and sent to the lab, feet score, body condition score, weight, disposition. We measure hip height if she is 4 years old or younger. We collect a fecal sample on the required number of cows and bulls to maintain our Level 6 (highest level) Johne's Free Herd classification by

Clemson Livestock-Poultry Health(http://www.clemson.edu/public/lph/ and http://www.johnesdisease.org/). Carcass data from the harvest of the calves in the feedlot is received and imported to the Cow Sense data base.
May – calf weaning weight and hip height
June to September – stockers and replacement heifers – about every 4-6 weeks collect weight and Average daily gain since last weighting, Weight per day of age. Stockers and replacement not performing are sent to the sale barn
September-October – Calving- Calf weight, sex, color, Sire, Dam, EID, Visual Tag, Calving Ease, Breed (3 generations) of Calf, Breed of Sire to be used if heifer calf . Cow udder score and teat score
October - Prebreeding Vaccination- Cow Body Condition score and weight, Breeding Bulls- weight, hip height if 4 YO or younger, breeding soundness exam data.

November-December – For every female bred -AI sire, AI date, Natural sire, bull in date, bull out date is recorded and used at calving to determine the sire of the calf.

DATA ANALYSIS PROCESS

From the collection of data a number of analysis are performed. In 2015 we developed a process to identify any cow that is not within what we believe is an acceptable range on any one or more of a set of measures we believe are the most economically significant. This then allows us to make a more objective value based assessment of cows and those heifers that we would select for development. The measures we have identified for this process are:

Red flags for low value calf	Frame Score- Flag >6	Udder Score Suspension Best 7-9 Flag 1-3	Teat Score Best 7-9 Flag< 5	Foot Angle Best 5 Flag 1,2 or 7,9	Claw Set Best 5 Flag 1,2 or 7,9	API ($) flag <50	TI ($) Flag <40	Avg Ratio WW Flag <85	EPD YW Flag< 40	EPD REA Flag < - 0.5

If the value on a cow in a measure is outside the acceptable range, then the cow gets a "red flag" on that measure. In the case of "Low value calf" the cow gets a flag for every calf that does not meet the following requirements: must produce a return in the feedlot or must be selected for the heifer development program. Calves that do not grow well enough to go to these two programs are not considered "value calves".

Only females that get pregnant make it to this assessment. However we look at the performance/measures of the dams of all current calves to assess whether the calf should be sent to one of the two programs or just sold at the sale barn.

We then add up the total "red flags" a cow has gotten. This helps us identify the cows that should be closely evaluated as well as those that are meeting all performance requirements.

Cow ID	TOTAL Number of Red Flags
2229	5
4055	5
4078	4
5020	4
S681	4
T053	4

Using this process and the individual performance of each calf in the stocker and heifer development process, we select which calves to send to the feedlot and which heifer calves to put into the breeding program.

Cattle Production Cycle Plan Calendar- first 3 months

	A	B	C	D	E	F	G
1	REv3-18-14	**Data Managemnet activities**	**Breeding/Pregnant Heifers**	**All Cows**	**Replacement Heifer CALVES**	**Feedlot Steers & Heifers**	**Breeding Bulls**
2	**13-Jan**		**BREEDING: BULLS OUT.** Breeding ends January 13 (48 days after AI) **Began Feeding 4% P Minerals**		**3-4 months old Vaccinations:** Vaccinate. BI's **Alpha 7**, and **"Pyramid 5 + Presponse SQ"**	**3-4 months old Vaccinations:** Vaccinate **Alpha 7** and **"Pyramid 5 + Presponse SQ"** Implant steers with Raigro	Bulls out from heifers.
3	**17-Feb**	**Determine**: Number of vaccines required and order.	**PREG CHECK:** Pull blood. 2/17 is 35 days after 1/13	**BULLS OUT** Breeding ends February 14 (65 days since AI) **Began Feeding 4% P Minerals**			**Feed 4% P Minerals** Move bulls to SF or Pops
4	**1-Mar**		**Feed 4%P mineral WITH IGR** **Separate and sale open heifers**	**Feed 4%P mineral WITH IGR**			**Feed 4%P mineral WITH IGR**
5	**March 24 PreWeaning Cow Preg Check**	Use cow history to evaluate which calves go to replacment heifers, to feedlot and to Sale Barn. Update "Calf Outcome" with heifer pregnancy results.	**Weigh and BCS, hoof score, disposition score and Frame score**	**PREG CHECK- Pull blood for Pregnancy check. (3/21/14 is 35 days after Bulls out) Weigh and BCS, udder score, hoof score, and disposition score. Plus Frame score if =<4YO.**	**PREWEANING: Collect "preliminary weaning" weight and Frame Score** Vaccinate with **Pyramid 5** and **Caliber 7**. Deworm with **INJECTABLE Cydectin(ADJUST. Begin some bunk feeding to train calves.**	**PREWEANING: Collect "preliminary weaning weight" and Frame Score** Vaccinate with **Pyramid 5** and **Caliber 7**. Deworm with **INJECTABLE Cydectin.**	
6							