STUDENT EXEMPLARY WORKS

Texas A&M University
College of Agriculture and Life Sciences

Volume III - 2008
STUDENT EXEMPLARY WORKS

SPRING TERM
2008

EDITED BY

DR. FRED BOADU
PROFESSOR AND ASSISTANT DEPARTMENT HEAD
AGRICULTURAL ECONOMICS

DR. VICTORIA SALIN
ASSOCIATE PROFESSOR
AGRICULTURAL ECONOMICS

AND

AUSTIN HAWKINS
SENIOR AGROBIZINESS MAJOR
AGRICULTURAL ECONOMICS
A WORD FROM THE EDITOR

With each academic year, the classrooms of Texas A&M are graced with a new batch of fresh students. As educators, it is always an exciting prospect to watch as innovative ideas emerge from engaging class discussions, a student’s quiet contemplation, or even in the critical challenging of the current educational canon. Sometimes these wonderful intellectual insights find their way into writing assignments. When this happens, these papers are not only educational, but inspirational, and deserve special recognition. It is in this spirit of esteem that we present to you these examples of student writing, from the College of Agriculture and Life Sciences, which reflect the high academic standard that we at Texas A&M strive to exemplify.
Thanks to all College of Agriculture and Life Sciences Faculty who participated in the Student Exemplary Writing Publication Program

- Ted Friend
- Gary W. Williams
- Fred Boadu
- Victoria Salin
- Diana Burton
- Chris Townsend
- Marvin Harris

Thank you to the Student Writers

- Carly Jones
- Richard Taylor
- Jonathan Glueck
- Melissa Appel
- Mykka Jurek
- Kristi Destouet
- Melanie Schroedter
- Nicholas Gerner
- Kayla Luensmann

Special Thank You for Support

Special thanks to Dr. Ann Kenimer, Interim Executive Associate Dean and Associate Dean for Academic Operations, and to Dr. John Nichols, Head of the Agricultural Economics Department for their generous financial support and encouragement to make this publication possible. We also wish to thank Professor Perret Starr, Agricultural Journalism Department for editorial assistance and Kacey VanDeaver for cover design.
TABLE OF CONTENTS

Letter from the Editor............................................................iv

Carly Jones
The Rural Farm Sector: A Latent Market for Psychologists .................................9

Richard Taylor
McDonald’s Case.....................................................................29

Jonathan E. Glueck
Corporate Leadership in a Public President: George H.W. Bush..........................36

Kayla Luensmann
Friona Case...........................................................................61

Melissa Appel
The effect of Seasonal Temperature changes on Whitetail Does...........................66

Zane Schwarzlose
Grupo Bimbo...........................................................................91

Mykka Jurek
Lying behavior of pigs at various Temperatures.............................................97
Melanie Schroedter
Whole Foods Market, Inc..........................111

Kristi Destouet
Healthy Hate: Cry of the Organic Farmer........119

Nicholas Gerner
Friona.........................................................137
I. Introduction

Technological changes, increasing competition, and changing customer needs have put considerable stress on professional job markets. The market for psychologists is no exception. A 2005 survey by the American Psychological Association (APA) found that, “about 60% of the new doctorates were employed full time, 8% were employed part time, 25.6% were working on post doctorates, and 5.6% were unemployed—just over half of whom were seeking employment. Over the past two decades the proportion working full time has declined steadily (from 80% in 1985 and 70% in 1995 to 2005’s low of 60.5%), while the proportion working part time has remained fairly stable” (Kohout and Wicherski, 2005, para. 1). The survey also found that most full time positions were in human services, academia, government, and hospitals.

Despite the broad distribution of professionals in varied employment settings, it is important for the
Psychology profession to actively explore opportunities with the aid of modern technology. A profession could expand through vertical or horizontal growth. Vertical growth may be described as growth that entails movement within the profession but to a higher or different level. For example, some define e-psychology as “the science of understanding how consumers shop on-line” (Ray, n.d., para. 2). Horizontal growth on the other hand entails opening new markets, “horizontal growth brings new clients from new markets needing products suited to your capabilities.” (“SGIA”, 2005, para. 3). Jordanova (2005) used the term e-psychology in a vertical sense but with strong implications for the development of horizontal markets. The author defined e-psychology broadly as “the utilization of information and communication technology for online counseling and therapy” (Jordanova, 2005, p.19).

This paper analyzes the opportunities for horizontal expansion of the psychology profession. Specifically, the paper explores alternative policies and strategies to extend the services of psychologists to farmers. To do this, the paper will explore approaches to expanding psychiatric care to rural communities through the use of information technology. The agricultural industry, especially production agriculture, constitutes a good market given such stresses as international competition and falling prices that farmers experience on a regular basis. The paper utilizes the farm crisis of the 1980s as a specific episode to describe how psychologists could use modern technology to expand their services. While some may question the relevance of a single past episode in discussing a potential market, it is important to note that it is the type of episode that could occur again. Furthermore, given the inadequacy of psychiatric facilities in rural areas, the episode and the potential role of professional psychologists are useful in discussing other roles that psychologists could play.
II. The Psychological Impact of the Farm Crisis

What is known as the “farm crisis” of the 1980s brought considerable misery and despair to many rural households in the United States. Thomas Hady’s (1987) succinct description of the conditions of the farm sector is worth quoting:

“measured in constant dollars, net cash income of the farm sector rose 17 percent from 1970 to 1978 but fell 23 percent by 1984. Nominal prices of farm land peaked in 1982 at a U.S. average of more than four times their 1970 level; by 1986, they had fallen 28 percent. Given that land makes up about three-fourths of the average farmer’s assets, it is not surprising that total assets of the farm sector also peaked, in 1981, at slightly more than $1 trillion, but had fallen by nearly $215 billion by 1986. By January 1985, estimates indicated that one in five of the 600,000 family-sized farms in the United States (farms with sales of $40,000 to $500,000 annually) were in financial stress. That is, they had negative cash flow and debts exceeding 40 percent of their assets.” (Hady, 1987, p. 409).

The psychology literature and farm trade journals are replete with stories about the stress placed on rural and farm households as a result of the farm crisis. Farming is considered one of the ten most stressful occupations (Miller and Molgaard, 1996). There are several sources of stress in farming. These include, sizeable debt loads, the existence of government regulations, high interest rates, and not having control over the weather conditions (Hernandez-Peck, 2004).
The farm crisis introduced a new dimension to the stress environment for farmers. According to a study cited by Jurich and Russell (1987), “three of the most stressful crises which people experience are death, divorce, and the loss of a job” (p. 364). The loss of a farm means the loss of a job and in the case of the farmer, such a loss may even lead to geographic displacement since they may have to leave the farm and move to an urban area for a job (Jurich and Russell, 1987).

There is considerable empirical evidence of severe psychological impacts of the farm crisis on rural households and farmers. For example, in their study on working with farm families during the farm crisis, Jurich and Russell (1987) found that “although all of these families expressed difficulties with the farm crisis, the most frequent symptom presented by these rural families requesting marriage and family therapy service at the Center was marital conflict (60% of the families). Couples reported being depressed and withdrawn, feeling confused, minimizing communication, and reporting mood swings of unusual intensity. This was disruptive of typical marital patterns and prevented the couple from coordinating their adaptations to the farm stress” (Jurich and Russell, 1987, p. 365). A study by the Colorado State University Extension (2004) service that examined impacts of tough times such as the farm crisis on families concluded that, “....farm and ranch families will experience increased intergenerational conflict. There may be increases in depression, divorce, and domestic violence.

Farm and ranch children may have an increased risk for mental disorders and antisocial behavior. Some rural youth may rise to the occasion with more responsible behavior as they try to help their families. Depression and stress during tough times often result in conflicts with spouses and poor parenting practices that
may cause problems for adolescents in school achievement, peer relations, antisocial behavior, self-confidence, depression, and substance abuse” (as cited in Fetsch, 2004, para. 7).

Due to the large number of farms located in Iowa, evidence of emotional stress is quite noticeable in several small farming towns. For example, in a central Iowa county named Tama, the suicide rate rose to 23.6 per 100,000 residents, more than twice the national average of 11 per 100,000. In 1983 the six Iowa counties with the highest suicide rate were all rural (Malcolm, 1983). Counselors at a Nebraska farm support group found that two issues were constantly brought up by farmers. The first issue most rural community members called in about related to financial matters, while other major issues brought up were of an emotional nature dealing with difficulties in the relationships with family life and personal hardships (“Farm”, n.d.). An Iowa agricultural helpline report of August 2000, reported that most phone calls received (167 occurrences) were directly related to emotional stress. Of these calls most only indicated moderate stress levels, with others bordering on the line of being severe to suicidal. Another 170 calls were concerning farm finances. Some callers that were in strong need of extra attention were referred to a mental health counselor for more detailed therapy (“Iowa State”, 2000). A spokesperson for The Samaritans, which handles many calls from stressed farmers, stated, “there is the fortress farming mentality – work is home and home is work. There is nowhere to get away from it all – nowhere to escape from the same mindset” (Brass, 2002, para. 5).
III. The Farm Sector as a Latent Market for Psychologists

i. The Latent Market Concept

In 1988, Richard Susskind introduced the concept of “latent market” to the legal profession (Susskind, 2000). The latent market has been defined as, “a group of people who have been identified as potential consumers of a product that does not yet exist” (BNET, n.d. para. 1). Susskind (2000) applied economics and marketing principles to argue that there are several potential consumers of legal services who for several reasons are currently not consuming the service. The author then made the case that technology could be used to expand the legal market to those who are currently not using the service. In Susskind’s (2000) framework, the exploitation of the latent market is economically justifiable because the use of technology would:

- Lower their overhead, thus enabling them to lower their fees (Lawson, 2001).

- Make themselves more attractive to clients in a number of other ways, including making themselves more convenient to deal with (Lawson, 2001).

- Unbundle some or all of their services, thus again lowering their fees and making them more attractive to some potential clients (Lawson, 2001).
• Expand their income by reaching more clients, including many who presently do not hire lawyers (Lawson, 2001).

ii. The latent market of the rural farm sector

In 1999, the American Psychological Association finalized the formation of the Committee on Rural Health (CRH) and the Rural Health Initiative (RHI), a process that began in 1992. From its very beginning, there were indications that the initiative would be technology-driven. A 1999 report on the work of the CRH and RHI stated, “the accomplishments included developing innovative models of practice, an interdisciplinary training curriculum for the delivery of behavioral health care to rural areas, opening of federal rural programs to psychology, and the use of telehealth technology by psychologists to deliver psychological care to their rural patients” (emphasis mine). The APA recognized the latent market for psychologists when it reported that according to The Center for Mental Health Services, “fifty five percent of U.S. counties are not served by a psychologist, psychiatrist, or social worker and all of these counties are rural/frontier” (APA, 1999). Also, among 1,253 smaller rural counties with populations of 2,500 to 20,000, nearly three-fourths of these rural counties lack a psychiatrist, and 95 percent lack a child psychiatrist (Gamm, Stone, & Pittman, 2003).

While the APA initiative affects the rural sector in general, the specific situation of farmers presents unique challenges, and an opportunity for horizontal integration of efforts to expand markets for psychologists. There is something unique about farming; the farm home and the farm family are
extremely isolated social units (Taylor, 1933). The isolation and stress that farmer experience make farmers more prone to farm accidents, where these would usually not occur if the proper health action was taken (Miller and Molgaard, 2002). Table 1 shows that farmers suffer from a variety of disorders that could be addressed by psychologists. The table also shows that the reasons offered by farmers for not seeking treatment support the view in this paper that there is indeed a rural latent market for psychologists.

Psychologists have been involved in delivering services to rural areas over the years. For example, some individual psychologists provide clinical services one or two days a week in many rural facilities. These consultants travel back and forth by way of airplane or automobile, but they could now make themselves more efficient by using the Internet or telephone advice (Childs and Melton, 1983). Also, several information

Table 1.

Frequent symptoms that rural societies face and explanations for the lack of care

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Reason for lack of treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicidal</td>
<td>Lack of transportation</td>
</tr>
<tr>
<td>Depression</td>
<td>Inadequate health insurance</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Long distances</td>
</tr>
<tr>
<td>High stress</td>
<td>Lack of mental health outreach services</td>
</tr>
</tbody>
</table>

Source: Gamm, Stone, & Pittman (2003)
technology-driven approaches are being used to address problems facing rural communities. One such technology is therapy over the phone. Basically counselors can speak with the rural patients without either party having to leave their premises. This telephone therapy technology has been in operation since the 1980s and has been a great way for farmers and their families to stay in touch with psychologists and be able to get mental health care from their rural areas. Although there are several of these help lines available across the United States, there is room and need for more. In the 21st century the Internet and availability of computer technology, could also be used to maximize the interaction between psychologists and rural communities.

Despite the initiatives towards reaching out to the rural community, one could argue that there is still need for more credible ‘horizontal’ interaction between psychologists and experts from the agriculture profession to better serve the rural community. One idea worthy of further examination is the extent to which stronger collaboration between the Agricultural Extension services of the major land grant institutions and psychologists could be fostered in delivering counseling services to farmers in rural areas. A serious effort in such collaboration could be a joint committee of agricultural extension agents and psychologists to discuss ways of collaborating to achieve a common goal. Other such horizontal arrangements to capture benefits from the latent market could involve collaboration with rural sociologists, financial and legal experts.

V. Conclusion
Increasing pressures on the market for psychologists suggest the need to search for innovative ways to make the profession profitable. One way is for psychologists to find ways of exploiting the latent market
for psychologists’ services. In this paper it has been argued that a latent market for the services of psychologists exists and could be exploited using modern information and communication technology. To be successful, psychologists need to seek horizontal alliances with other professions, for example, agricultural extension institutions that provide complementary services in the markets in which psychologists operate. The farm crises of the 1980s offer a useful example of how horizontal alliances between psychologists and agricultural extension agents could have played an important role in reaching farmers who were under severe psychological strain.

References


Richard Taylor

McDonald’s Case

McDonald’s has established itself as a leader in the highly competitive food service industry. Many methods can be used to prove this point, including reviewing their financial health. McDonald’s had a very healthy current ratio of 1.21, down 20% from 1.51 in 2005. Although there was a significant decline in the current ratio, the industry average was only 0.97, proving that McDonald’s still has the liquidity to invest in long term projects. Another instance in which McDonald’s leads the industry is their profit margin. In 2006, McDonald’s margin rose 25% to a strong 16.42% from 13.12% in the previous year, while the industry average hovered around 7.29%. A final strength for McDonald’s is their market valuation. The price to earnings ratio fell to 18.28, down 12.9% from 20.98 in 2005. The industry averaged a price to earnings ratio of 29.34 over the same period, suggesting that McDonald’s is selling at discount not only to the industry, but to their fair value as well. Despite these strengths, McDonald’s also faces some weaknesses. For instance, their total asset turnover rose 12.5% to .744 from .661 in 2005, while the industry averaged total asset turnover of 1.21. Although McDonald’s is in a positive trend, they still
have room for improvement in asset management. In addition, McDonald’s debt to equity ratio is a weakness. In 2006 the ratio was .878, down 10.5% from .980 in 2005, while the industry average was .80. This suggests that while McDonald’s is improving their debt to equity ratio, the company is still slightly more leveraged than the industry, and therefore slightly more risky. Fortunately, both of McDonald’s weaknesses look to be improving and therefore the overall financial health of the company looks to be spectacular in the near term.

In response to their goal of a sustainable supply chain and it’s ramifications on a prolonged competitive advantage, there are several solutions. In prioritizing their goals, food safety needs to be their initial concern, followed by a social responsibility directive (of which sustainability should be a subset), and then cost minimization. Above all else, McDonald’s customers want a safe dining experience. Customers worrying about whether they will get sick from McDonald’s food would not be concerned with the sustainability of the food chain, or the extent to which McDonald’s is a socially responsible company. The social responsibility directive should be an improvement upon McDonald’s Global Supply Chain Vision by incorporating sustainability, community involvement, civic duty, and the existing vision elements of environmental and animal welfare issues. The sustainability segment should emphasize using fryer oil with a low environmental impact, as well as working with the suppliers to find alternative fuel sources to use in their shipping. McDonald’s “freedom within a framework” concept would make implementing this directive quite seamless. By letting the Area of the World leaders tailor the directive to the issues important to their respective area, the AOW’s could maximize efficiency by allocating resources to the more important issues in their area. For example, the important issues in China may not be the same issues important to customers in Brazil. By
adopting a socially responsible paradigm and distancing the company from a specific issue, McDonald's has the flexibility to adapt to whatever issue is important in each corner of its far reaching empire. The AOW’s would also continue building the relationships with suppliers and making them stakeholders in the solution, by relying on their local, specialized knowledge to find solutions to the alternative fuel objective and not simply issuing a mandate that would be counterproductive to all parties involved.

This plan to put a social responsibility directive above cost minimization could have severe financial ramifications. However, in order to enact this commitment to social responsibility, short term consequences must be accepted in order to achieve the long term goal. The first strength that would see a negative impact would be the profit margin. Due to the cost of fryer oil that is higher in quality and lower in its impact on the ecosystem, the costs of inputs will undoubtedly go up. As the costs of the inputs go up, the worse it will hurt the profit margin. Fortunately, McDonald’s profit margin stands at a healthy 16.42% and could decrease up to 55% before it even reaches the industry average. The current ratio would also suffer as more current assets are diverted towards social responsibility efforts, but at 1.21 could weather a 20% decrease before it reaches the industry average. The asset turnover ratio will likely increase as socially conscious customers looking to eat at socially conscious restaurants will spur sales. This would turn one of McDonald’s weaknesses into one of its strengths. The effect on the price to earnings ratio would be positive, as the market would be bullish on the prospects of an even more socially responsible McDonald’s and drive the price up on a stock that is selling at a discount. This increase in price would drive the price to earnings ratio up and get it closer to the industry average of 29.34. Due to McDonald’s heavily liquid status, they would likely not
have to take out significant amounts of debt. Therefore, the effect on the debt to equity ratio, assuming a positive reaction in the market, would be a decrease and a more healthily levered company. In adopting this social responsibility directive, the company would have to use its strengths to weather some short term cost ramifications, which would ultimately lead to increased brand trust, revenues, and market share in the intermediate to long term.
This paper will provide an examination of President George H.W. Bush’s foreign policy decisions and their long lasting effects on the global society. Specifically, President Bush’s leadership style is examined. His style is then reviewed to see the role it played in international crises. Each case study is reviewed based on leadership fundamentals. In addition, the “Bush leadership philosophy” is identified. The purpose of this research paper is to outline the importance of personal leadership styles and their role in presidential policy making.

Power, purpose, potential. These three words embody a modern president in that; the President of the United States holds a position of power, gives the country purpose and vision, and each term holds great
potential. Yet, these ideals are shadows of the overarching house of Presidential leadership. By looking at the presidency of George H.W. Bush, the foundation of leadership is evaluated along with the resulting pillars that enable a society to become personally vested in the government. This is done by first evaluating the leadership styles of presidents, how their style influenced President George H.W. Bush’s decisions in the time of international turmoil, and how former President H.W. Bush’s leadership style created a new leadership theory.

Leadership Overview

The study of leadership has a diverse past with each leadership professor having their own view of traditional styles. Some break leadership into three styles, others five, and still others six. For this academic overview, Goleman’s six style overview will be defined and used as well as ideas from Rensis Likert’s four styles, Kurt Lewin’s three style overview, and Jim Collin’s “Good to Great” definition. Goleman clearly lays out six categories: Visionary, Coaching, Democratic, Affiliative, Pacesetting, and Commanding, within which both Likert’s and Lewin’s theories fall. Each category has its own unique attributes and all three fall within the participative leadership model. Participative leadership includes a spectrum of styles from completely autocratic to one who delegates all.

Goleman’s Leadership Philosophy:

Visionary leadership inspires the populace and explains how and why people’s effort contributes to the “dream”. This style moves people toward a shared vision by telling them where to go, but not how to get there. The Coaching style listens and then helps others identify
their own strengths and weaknesses. This style can also be compared to a counselor because they connect to organizational goals while commonly holding conversations beyond the workplace. When done badly, this can be seen as micromanaging. Affiliative Leadership promotes harmony and boosts moral. This is commonly used to solve conflicts or motivate during stressful times. The democratic leadership style appreciates people’s input, but ultimately is best used when trying to garner buy-in on a topic. Commonly used when the leader is uncertain. The Pace-setting leader builds challenges and goals for people while expecting excellence. This leadership style is not beyond rescuing situations and commonly is low on guidance. Finally, the commanding leader soothes fear and gives direction by their powerful stance on issues. Consensus is not necessary and this is best used in times of crisis due to the high requirement of emotional self-control (Straker). While this basic overview gives one a comprehensive view of leadership, one still must move into a more in depth description to truly find George H.W. Bush’s base leadership style and critique future decision making times.

Additional Leadership Philosophies:

The study of leadership goes past these six categories. Many experts then categorize former Presidents into additional categories which all play off of Goleman’s six titles. Michael Genovese, author of Memo to the New President, proceeds to do just that by describing the leadership styles as clerk, leader, and transformer. Clerks merely manage the presidency and keep the office in check, leaders gives the populace hope and a new vision, and transformers truly make the world better (Gernovese 45). Similarly, studies have been performed to identify common traits among presidents. In another book entitled, Personality, Character, and
Leadership in the White House, this is done by a psychologist and not a leadership expert; it reveals several interesting correlations between character traits and success. For example, those who are statistically less neurotic, extremely extraverted, and agreeable, are more likely to serve as a leader in a higher level. Yet, this still does not get at the heart of the research which is, “how does one’s leadership style effect his/her term as President”.

When picking the top ten Presidents of the United States, one would probably choose a majority of the older President’s due to their history and aura. This overview will reference the actions of these Presidents, but ultimately will examine George H.W. Bush due to his explicit decisions, recent term, and surprising loss in the second election.

International Crisis Case Studies

The leadership of George H.W. Bush is seen from his actions on four important international items; the collapse of the Berlin Wall, the actions of the Panamanian government, the actions of the People’s Republic of China against student dissidents, and finally the first Persian Gulf War. Each item will be examined holistically with an overview of the actions and then the subsequent response of George H.W. Bush. Following these four case studies, a justification of George H.W. Bush’s leadership style is made.

Fall of the Berlin Wall

George H.W. Bush was no novice to foreign relations. His history had him serving as the U.S. liaison to China, Director of the CIA, and Vice President for the
previous administration. The experience he gained allowed him to put together a team of individuals who would prove extremely valuable in the decision making process. His team consisted of people such as James Baker as Secretary of State, Dick Cheney as Secretary of Defense, and Brent Snowcroft as National Security Advisor. The combined knowledge of Bush and his team would immediately pave the way for the first challenge, the ending of the Cold War. The previous administration had created a “détente with Mikhail Gorbachev” which President Bush thought had been pushed through to quite an extent. George H.W. Bush, true to his thoughtful demeanor, refused to be rushed into a continued dialogue with the Soviets. Instead of taking a hard-line against the Soviets, however, Bush proceeded to implement a “policy review” in which the Soviet-American relationship should be examined. This came out of the counsel of his advisors.

Bush then began an effort of soft politics to break down barriers with the Soviet government. In May 1989, Bush delivered a commencement address at Texas A&M University in which he put forth an “Open Skies” plan giving both governments the right to fly over each other’s territory (Greene xxiii). This was Bush’s first attempt at reopening communication. After a lengthy overview by Bush and his staff, the U.S. government began to then move quickly to establish a strong relationship. At a NATO meeting at the end of May, Bush proposed conventional force cutbacks. He then established a personal relationship and tried desperately to cater to the governments of these Soviet countries to ensure stability and prevent unnecessary conflict. However, the waves of change were well underway. As nationalism rose in the western stretches of the Soviet Union, the Berlin Wall gave way and a united Germany once again stood. Despite pressure to do so, President H.W. Bush did not gloat about the apparent victory over
Gorbachev and communism. This inaction brought more criticism but would pay off in the end by having earned the support and respect of the Soviet government. This case shows Bush’s use of a team. He depended heavily on the advice of his counsel yet did not employ the use of public relations to have buy-in from the populous. In addition, Bush’s ability to respect fellow leaders leads to an ultimate positive return, but is met with an immediate media downfall. Bush showcases the ability to mask certain moves in order to reevaluate the situation and not move in a rash manner. These methods are all indicative of a more democratic and somewhat of a command leadership style. While he seeks advice, Bush’s innate knowledge compensates and allows him to make decisions in an informed manner.

**Tiananmen Square Massacre**

The next international decision that is a case study for the leadership of President George H.W. Bush is the Tiananmen Square Massacre. This took place during the straining relationship with the Soviets and it proves to be a critical decision for H.W. Bush. Following a visit by Mikhail Gorbachev, thousands of student protesters were massacred by Chinese troops. As many as 3,000 were killed and an additional 10,000 were wounded. In private, it was noted that Bush was personally revolted at the act, but could not bring himself to destroy a blossoming relationship with the People’s Republic of China and, by default, the Soviet Union (Greene xxiii). Basing his decision on his time as an ambassador to China and the opinions of his staff, Bush offered no strong public protest. In addition, on May 24, 1990, China’s most favored nation status was extended (Stuckey 306). This reaction brought much criticism from the American public. Bush’s leadership style here is visionary because he knows the end, which is a united world, but he does not explicitly tell this was
the basis for his actions. In fact, Bush’s public statements in regards to this action are short and concise. They refer to a two decade relationship and a hope that China will “return to a path of political and economic reform and conditions of stability so that this relationship... can continue its growth” (Greene 187). This is another reminder of the lack of explicit and clear communication that plagues H.W. Bush throughout his presidency. In order to save a relationship, he marginalizes his perceived leadership ability.

Panamanian Invasion

Following the soft responses to both the tearing down of the Berlin Wall and the massacre in Tiananmen Square, Bush then responds hastily in the event of the Panamanian invasion. Manuel Noreiga was a leader whom Bush reportedly strongly disliked. Following an ordered public beating of the opposition leader, Bush ordered Admiral William Crowe, Chairman of the Joint Chiefs of Staff, to put a plan that would oust the dictator. Instead of implementing the created plan, the government was asked to support a coup that would be planned by a group within the Panamanian army. However, this coup ended horribly due to a lack of leadership. Bush saw what half-hearted support could bring and reportedly said to his staff, “amateur hour is over” (Greene xxv). Following multiple attacks upon U.S. citizens, Bush ordered the plan to be put into effect. Three weeks after the initial landing, Noriega was in custody. This is a clear representation of Bush’s commanding leadership style and speaks of how Bush learns to not intervene unless fully committed to a situation. Again, the communication of the attack was still poor back to the public of the United States, but the decision to act came from Bush’s morals, values, and upon the judgment of his team.
The First Persian Gulf War

Finally, the most memorable foreign decision made during George H.W. Bush’s presidency was the decision to protect Kuwait and invade Iraq. Leading up to the event, Iraq and Iran had been in a lengthy war which had crippled Iraq economically. Due to their dependency on oil and continual pressure to expand their military, Saddam Hussein, the then dictator, asked the surrounding countries to reduce oil production so that Iraq could gain more from the resulting trade. Kuwait did not reduce their oil trafficking and after a military build up on the Iraq-Kuwait border, Iraq invaded on July 31, 1990.

Bush acted quickly, informing Snowcroft to consult with Baker before calling a meeting with the National Security Council. Bush also “directed American Ambassador to the UN Thomas Pickering to request an emergency meeting of the Security Council and push for a resolution condemning Iraq’s invasion” (Pauly 47). This showcases Bush’s understanding for UN support but also let people know that the United States was taking a strong leadership role in the matter. Bush continued his pragmatic problem solving approach by freezing all Iraqi and Kuwaiti assets in the United States to ensure no one would benefit financially before sanctions were passes. When making public comments, Bush answered deftly but secretly. He commented that the administration was exploring options of American intervention but no decision was to be made. This continually leads to his democratic style of leadership. Following two meetings with the NSC, a meeting with Margaret Thatcher, and multiple meetings with his advising staff, Bush released his statement that, “this will not stand, this aggression against Kuwait” (Pauly 41). This was two days after the invasion. Following the
statement, Bush and company started to develop a coalition to counter Iraq's aggression. Essentially he had started building the coalition from day one, but after repeated telephone calls, trips by his advisors and other means of communication Bush began to garner worldwide support both emotionally and monetarily. Following repeated trips among traditional allies and former world enemies, the United States successfully engaged the entire globe in one main goal, to remove Iraq from Kuwait. Once the coalition was set, action was taken and the product that resulted was one of success.

The entire project was one that showcases the variability of the leadership styles of George H.W. Bush's Presidency. Bush consistently listened to his “gang of eight” advisors on policy decisions. While some see this as a limited discussion, Bush's team was experienced and varied. Bush had a tendency to act rashly, as seen in some of his press statements, but also considered other's opinions on matters that involved a large global scope. This clearly represents a both democratic and commanding leadership style, each with a considerable flaw of outward communication.

**President George H.W. Bush's Leadership Philosophy**

By evaluating the case studies on George H.W. Bush’s leadership style, it is evident that President H.W. Bush does not have one style. He is able to pull from many different perspectives and create a new style of situational leadership. The situational leadership theory stems from a graph developed in the early 1960’s by Paul Hersey and made famous by Ken Blanchard in his book, “One minute manager” (chimaera). Situational leadership was designed for the adaptive leader in a corporate environment. In the below model, there are four sectors.
Each sector represents a different approach to leadership. The delegating sector is for those who has a highly involved team and utilizes them for decision making. Similarly, the directing sector is for those leaders who must define all roles and tasks and announce decisions. Competent leaders are able to move around the grid easily using the development level of the followers as the basis for leadership. However, this is not always the easiest theory to follow outside of the corporate involvement because of the complexity of the problems and the time constraints.

In order to put together a Bush Leadership Philosophy, one must first reevaluate the decisions and situations.
that arose during his presidency. From Goleman, Bush exercised the visionary, democratic, and command styles, each effectively and useful in their own way. With this knowledge, the new Bush Situational Leadership model can be seen below:

The George H.W. Bush Leadership Philosophy is based on an axis that is dependent on the level of experience needed for the situation and the amount of direction needed in the process. The personal directive sector requires little extra knowledge and little direction. This coordinate is reflective of Bush’s decision to invade Panama. The command style is useful here, as well as the visionary style. Directly above the coordinate is the small team decision sector. This was used when George H.W. Bush needed the opinions or experience of his well informed team in order to achieve his direction. An example of this is the situation with the Berlin Wall when H.W. Bush decided to follow a soft politics method of handling the situation based on the suggestions of his advisory council. The coalition building sector is reflective of an area where President H.W. Bush would

<table>
<thead>
<tr>
<th>Experience</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Team Decision</td>
<td>Coalition Decision</td>
</tr>
<tr>
<td>Personal Directive</td>
<td>Popular Decision / Polling</td>
</tr>
</tbody>
</table>
need more information as well as a clear and concise direction/perspective on the topic. The first Persian Gulf War is a direct representation of this sector. Finally, the popular decision/polling sector is an area where all politicians must live. This is the region where the president listens to the United States population in order to achieve true change domestically.

President George H.W. Bush’s philosophy of situational leadership is clearly displayed in his past decisions. His deftness in moving in and out of the varying sectors speaks wonders to his leadership confidence and capability. Exclusive to his term is the clarity in which this model is apparent making George H.W. Bush a leadership fixture.

Conclusion

President George H.W. Bush’s leadership overview comes to a conclusion in the election of 1992. This was an interesting election. The incumbent had record high supporting percentages following the Iraq invasion. However, after this affair, Bush returned to the domestic arena to find an economy that was slumping. Many blamed the recessing economy, the third party candidate, and other issues as an excuse to why George H.W. Bush was not reelected. However, the basis of his overarching style is not indicative to reelection in a public arena. The title of the article is, “Corporate Leadership in a Public President”, harkening to the attitude of the leadership represented by George H.W. Bush. In Jim Collin’s book, Good to Great, the level 5 leader is discussed. “Level 5 leaders channel their ego needs away from themselves and into the larger goal of building a great company...their ambition is first and foremost for the institution, not themselves”(Collins 21). Bush worked his way up through the political system, gaining needed knowledge and experience. He
possessed incredible humility and will power, much like Abraham Lincoln. His lack of public statements following his international victories and recognition of his advisors clearly defines him as a level 5 leader. The painful fact is that, while level 5 leaders are the most successful leaders, they are not perceived as the most competent due to their conscious lack of self-serving media. This is what lost Bush America, before the recession and before the third party candidate. Bush was too competent and humble for the media influenced election.

Bush is known for exercising a democratic and commanding leadership style. While he is sometimes prone to taking the opportunity to answer questions on his own, he appreciates consensus and is a good listener. More importantly, he understands the importance of the democratic leadership style. It was President George H.W. Bush’s competence at working in between various leadership styles and basing his decision making on the specific situation that led to the international successes of his term. The Bush leadership philosophy is one that reflects the nature of the political environment and the difficulty of leading those who entrusted their lives to a leadership position.
REFERENCES


Gernovese, Michael A. *Memo to a New President: The Art and Science of Presidential Leadership.*


Friona Industries currently operates four state of the art commercial cattle feeding facilities located between Amarillo and Lubbock. These four lots have a total one time capacity of 275,000 head. For Friona to be even more successful and continue to grow, the company must expand the number of feedlots that it operates. My plan consists of opening a fifth feeding facilities in Plainview, Texas. The feedlot will have a capacity of 70,000 head. This project will help Friona become more competitive with its five facility rival AzTx Cattle Company. Throughout the remainder of the year, we will focus on purchasing the land and equipment necessary to operate the fifth feedlot. The initial cost is expected to be around $25 million. Friona will finance the new feedlot with low interest, short-term loans.

Beginning on January 1, 2009, we will stock our facility with 35,000 head and fresh feed. The cattle are bought when they are around 700 pounds, for $0.90/lbs. It cost $0.75/lbs. to feed the cattle, totaling $375 per animal. After several months, the cattle will gain 500 pounds, and will then be resold to a packing plant for
$0.90/lbs. This cycle is expected to occur twice each year. Throughout the whole year, we are planning on feeding and selling 70,000 head of cattle. With each one bringing in $1,080, Friona will make additional revenue of $75.6 million from the fifth feedlot each year. The project will be very successful on its own and will also benefit the company in the long run by increasing Friona’s total net income each year.

To determine if this project will be profitable, I calculated a NPV model for ten years. Using an interest rate of 7%, the NPV is expected to be $4,125,327. This large, positive NPV is a very good sign and an indicator that we should proceed on with the project. Even though developing a fifth feedlot should not be a risky project, it is still necessary to conduct a risk analysis. I chose to use a scenario analysis where I determined what effect a worst case and a best case scenario would have on the expected NPV. I developed two models where sales, feed prices, and interest rates drastically changed. I predict that there is a 70% chance of the project going as planned, a 20% chance of delivering very positive results, and only a 10% chance of performing poorly. After using each case’s NPV, I concluded that the expected NVP from the scenario analysis is $8.77 million.

The new feedlot will help improve Friona’s profit margin. Their net income and sales will continue to grow from this investment. There is projected to be a 2% growth in sales after the fourth year and a 3% growth rate in year 9. At the beginning of the project, the profit margin of this additional feedlot is 4.5%. Over the course of ten years, the profit margin increases to 7.43%. This is a phenomenal 64.5% increase.

Contrary to the positive increase in profitability of the new project, debt management and liquidity will slightly decline. The debt ratio will increase due to the short-term loan that Friona had to obtain in order to fund the new feedlot. The ratio will decrease over the
years as the company grows stronger and pays off its liabilities. The company's current ratio also turns unfavorable as Friona acquires the new loan. Since their current liabilities increase, the initial current ratio decreases, but only temporarily. The liquidity should also improve over the later years of the project as the debt is decreased.

Since Friona is a privately owned company, they do not trade stock on the NYSE. Therefore, the company does not have any stock valuation ratios to analyze. The last area of financial performance to evaluate is asset management and efficiency. Friona’s inventory turnover will not change because the cattle are still coming in and going out at the same rate.

This project will be profitable for the company, and I highly recommend investing in the development of a fifth feedlot in Plainview, TX. Having another facility will financially help Friona overcome the challenges they face against their competitors. The new plan will increase sales by feeding out even more cattle and ultimately increase Friona’s net income and profitability in the long run.
The white-tailed deer (*Odocoileus virginianus*) was first described in the United States by Thomas Hariot in 1584 while visiting Virginia (Heffelfinger, 2006). Since that time, its population has been noted as living throughout the continental United States and has been further observed and characterized. Today, the white-tailed deer, along with mule deer, populate the southwest United States.

White-tailed deer can be found in thick populations throughout the state of Texas, although their population densities vary with the ecological regions of the state. As part of the Post Oak Savannah, Brazos County is third in white-tailed deer density behind Gulf Prairies and Marshes (along the coast near Galveston) and Edwards Plateau (Halls, 1984). In these three regions as well as the rest of the state, learning and understanding the behavior of these mammals is critical to our successful cohabitation. Understanding the behavior of animals can also help people predict the locations of major populations (Garroway, 2005).
The objective of this study was to determine how the behavior of white-tailed deer was altered or affected by changes in the local weather. In order to observe changes in behavior, a small set of does at the Texas A&M Wildlife and Exotic Animal Center (WEAC) was chosen for this study. The group consisted of seven white-tailed does of varying ages and levels of tameness. The group had been together for a few months at WEAC, and the deer were adapted to each other. They were also accustomed to the frequent appearance of humans within close proximity. The workers at WEAC knew each doe, its name, and its usual behaviors. This information was used as a reference point for certain results in the study; however, this prior knowledge did not bias the actual results.

The seven observed does were Heidi, Wildwoman, Rita, Monica, Debbie, Sandy, and Gavi. Heidi and Wildwoman were the least tame of the group, with Heidi being described as half-tame by the WEAC workers. At seven months of age, Monica was the youngest in the group and considered completely tame; Rita was also considered completely tame. The remaining three—Debbie, Sandy, and Gavi—were triplets and were known to stay close together. They were originally wild but had become tame under the supervision of the WEAC.

Previous studies have found that temperature and seasonal changes in the natural environment affect the movement and activity of white-tailed deer. Although this group of does were kept in confinement under human supervision and control, their instincts and natural behaviors still allowed for the observation of behavioral changes due to variation in temperature.

**Procedure**

The goal of this experiment was to observe how a group of seven white-tailed does (*Odocoileus virginianus*) at the TAMU Wildlife and Exotic Animal
Center responded to weather changes. The does were observed on various days with different weather conditions, and their location was noted on a floor plan of the pen. The animals were observed in their usual habitat, and the observer did not alter the surroundings of the does, or attempt to interact with them.

A template was created by drawing the floor plan of the pen, including natural features such as trees and ditches, and manmade objects such as fences, sheds, sidewalks, and feed barns. Also, a small amount of the two pens directly on either side of Pen B (which housed the test subjects) was included in the template. All objects included in the drawing were shown from an overhead view. The same template was used for every plot.

Each doe’s location and body position was plotted on the template by use of a standard symbol that showed the body and head of the animal. Words next to each doe noted whether she was lying down or standing. Shading on the plots represented shade created by the position of the sun. The date, time of day, temperature, wind velocity and direction, weather condition, and humidity were also recorded on each plot.

While plotting positions, I watched the does for a period ranging from twenty minutes to two hours. Movements, responses to other animals, and approximate time periods spent performing each activity were recorded on the back of each plot.

All information was observed and recorded from a concrete slab on the east side of the pen. I sat next to the feed barns, where the does would not be expected to approach, in an effort to minimize any effect that my presence might have on the does. I collected data at the WEAC on Monday and Friday afternoons for five weeks. Thirteen plots were drawn over the course of nine observation periods. On five afternoons, one plot was drawn and the does were observed for less than thirty minutes. The other four afternoons, one initial plot was
drawn, followed by behavioral observations being recorded for up to two hours and then a second plot was created.

The purpose of the plots was to provide quantitative information regarding position of the does, and their preferred areas for grazing, socializing, ruminating, and resting. The purpose of the recorded behavioral observations was to allow for qualitative information that could not be adequately described through the plots. This included approximate time spent eating or resting, interactions with the other animals, movement patterns, and the effect of the movement of one doe on the actions of the others.

**Results**

The thirteen plots were combined into four plots according to their respective weather conditions of sunny, cold, humid, or overcast.

**Sunny Weather**

Two of the nine days had cloudless skies, moderate temperatures of about 70°F and low wind. On both of those days, the does were either grazing or resting. The does grazed in the shade along the boardwalk and rested in the shade by the west fence (Figure 1). All seven stayed relatively close (within 5-10 feet) of each other; however, there were a few subgroups noticeable in which the does kept a closer distance of 2-3 feet, especially the triplets.
Cold Weather

As is often the case with South Texas weather in February and March, the warm and sunny days were contrasted with significant cold snaps. Three of these cooler days occurred during this experiment. Temperatures were 40-50°F and the wind ranged from 10-20 mph winds. On February 22, the does grazed by the boardwalk at 11:45 am, and then moved to lie down along the west fence in groups of two or three (Figure 2). One doe, however, continued to pace the fence closest to the parking lot. Although this doe attempted to excite other does on four occasions, no additional test subjects participated in pacing the fence. Her attempts continued for 3-4 minutes. Then on March 3 (the coldest day
during the experiment), five of the does were grazing and moving about in a set of chutes attached to their pen that was not normally open. The other two does however, remained quietly lying in the taller grass along the alley fence. And on March 7, four of the does were actively grazing, while the other three does were spread out lying along separate fences in the shaded grass.

Figure 2. Compilation of grazing and lying behavior during cold weather, Feb. 22, March 3, and March 7.

**Humid Days**

Another weather condition occurring during the experiment was the characteristic College Station
humidity. On two days of the test dates, March 17 and 28, the humidity climbed higher than 65%.
On both March 17 and March 28, the does remained lying down throughout the duration of the observation period (Figure 3). On March 17 all of the does were lying up against the North fence of the alley with their backs to the strong wind, while on March 28, five of the does were lying near, but not directly up against, the north fence of the alley; separation between these ranged from 2-5 feet. The other two does were lying along the west fence of the pen with about 10 feet of separation dividing them.

Figure 3. Compilation of grazing and lying behavior during days with humidity greater than 65%, March 17 and March 28.

Cloudy/Overcast Days
Although no rain occurred during the observations, there were two observations periods that took place just prior to major rainfall during which the weather was overcast. On February 25, the does did not stay in any position or location for more than 10-15 minutes (Figure 4). During the February 29 observation period, one doe remained at the front fence and gate where she paced and chewed on a plastic portion of the fence. She moved away only when the young male deer in Lot E approached the fence. Two of the does were lying in different areas of the pen and did not move around like the other five.

Figure 4. Compilation of grazing and lying behavior during days with humidity, February 25 and February 29.

*Additional Observations*
The purpose of the experiment was to observe behavior in relation to weather; however, the observational periods also provided opportunities to learn about family groups and doe interaction. Over the course of the observations, it was clear that certain does regularly remained close to each other. As shown in nearly every plot, there was a small group of three does that would consistently lie next to each other or graze within a few feet of each other (Figure 5). These three were the triplets, Debbie, Sandy, and Gavi. Even when the other does were lying 5-10 feet apart, these three would usually be 2-3 feet apart. The three does also stood up in close synchrony; if one doe stood up and began to graze, the other two also got up within 1-2 minutes of each other.
Figure 5. The triplets--Debbie, Sandy, and Gavi—usually laid down within 1-2 feet of each other. If one stood up to eat, they usually returned to lie near the others within 2-3 minutes.

It was also evident in the majority of the plots that Heidi and Wildwoman consistently stayed away from the group (Figure 6). Workers at WEAC described both of these does as ones who stayed by themselves. Even when the other does were lying close to each other, these two does were away from the group, although, not lying near each other. On March 3, when the other five does were moving about in the chute, these two does were lying on the opposite side of the pen about five feet apart. On February 22, one of these two does (unidentified because of distance) continued pacing the fence while the other does were lying down. Figure 6. Heidi and Wildwoman were 5-10 feet away from each other and from the rest of the does. This photo was taken on March 28, one of the humid days.

The does observed during this project rarely showed aggression to each other. On February 22, a doe that was pacing, separately approached four others and hit them on their sides with her hoof. Each struck doe then stood up and walked around, while the instigating doe moved away. On February 18, Debbie paced up and down the alley fence while one of the does from Pen 3 also paced. This activity continued for about 5 minutes and is shown in Figure 1.

During my observations, the does did not show interest in the young male in Lot E. On February 25, for example, the male approached the fence where one of the does was grazing. The doe moved away from the fence, putting about 20 feet of distance between herself and the male.
Discussion

Overall, I did not find the drastic differences in the positioning and behavior of the does that I had expected would come with weather changes. This is supported by Garroway (2005), who found that temperature had the least affect on the body condition of white-tailed deer; if the does were not in any physical discomfort or harm, they would not change their habits significantly.

There were some patterns observed during the four weather conditions which were reported in other animal behavior studies. It was especially evident on the sunny and pleasant days that the does had a routine for grazing and ruminating. The does were observed grazing around noon and then again around 4:00 in the afternoon. Between these times, the does tended to lay together in groups, although I did not observe any of the does sleeping. Ozoga (1988) noted that white-tailed deer would bed down for a two-hour maximum. Also, the deer would sleep very minimally, in fact only a couple of minutes, during this time.

Additionally, on cold days, the deer were more active than I would have expected. As observed on March 3, they spent considerable time grazing, with five of the seven does remaining in the chute and not lying down for the entire 30 minutes. Beier (1991) determined that white-tailed deer were most active during temperatures of 5-15 °C (41-59 °F) and were considerably less active during much higher temperatures. This was evident on March 17 and March 28, when 80°F temperatures kept the does stationary.

Activity was negatively impacted by the level of humidity. On both March 17 and 28, humidity was over 65%, and the does did not move from their resting positions during observations. Tibbs (1967) found that white-tailed deer were most active at low humidities.
However, on days just prior to major rainfall (evident by overcast skies), the does were quite active. On February 25 and 29, the does were restless and did not stay still in one position for more than 20-30 minutes. Semeyn (1963) reported that white-tailed deer often increased activity before harsh weather and decreased activity during harsh weather.

![Affect of Weather on the Level of Activity of White-Tailed Does]

Figure 7. Percentage of time the does were active during the four different weather conditions. Data were based on 190 minutes of sunny days, 110 minutes of cold days, 70 minutes of humid days, and 140 minutes of overcast days.
Throughout the range of weather conditions, the seven does showed a set pattern of eating and resting. The does grazed most by the trees next to the boardwalk and spent most of their time resting near the ditch and trees on the west side of the pen. The concept of an established area where animals perform their normal and natural activities is called their “home range” (Halls, 1984). Also within these home ranges, the deer used different parts of their ranges at different times of the day. Even though the does were greatly restricted in their options for movement for grazing and ruminating purposes, they still established a pattern of natural behaviors. White-tailed deer may leave their home range for food or water, but the trip is quick and the deer return to their home territory (Halls, 1984). This was seen on February 22, when four does went south past the alley, but returned to their pen after only a few minutes.

In addition to the weather-related behavior, there was also evidence supporting prior observations that white-tailed deer form social structures of matriarchal groups usually consisting of a mother and generations of her daughters and granddaughters (Ozoga, 1988). Although none of the does in the study group were mother and daughter, the three triplets continually stayed close by each other, as would be the case in the wild. They formed their own small maternal group that was close-knit.

Two dominance issues arose in this experiment: once when Debbie and a deer from Pen 3 were pacing opposite each other and once when one doe struck other does with her hoof. On February 18, Debbie (along with the opposing deer) showed the “head-low” threat that characterizes aggressive threats in female groups of white-tailed deer (Ozoga, 1988). Most aggressive threats in female groups are non-contact, which explains why neither of the does attempted to charge the fence.

The seven does in Lot B did not show mutual grooming, which is common in female groups. However,
the does also did not attempt to fight. This lack of fighting indicates that the does had previously set up a dominance structure that did not need to be settled each time they competed for something. This dominance was probably set up according to age and experience (Ozoga, 1988).

The second act of dominance was on February 22, when one doe struck four others with her hoof. This type of striking is usually followed by chasing and is also characterized as a “head-high” threat (Halls, 1984). The doe in this case did not proceed to chase the other does; she walked away after they rose to their feet. The does that stood up did so very quickly and without a second hit, likely signifying their submission. Subordinate does often try to avoid the dominant does in a family group (Halls, 1984).

The five weeks during which these observations were made had a variety of weather conditions; however, it was not possible to adequately record all behavior relating to these temperature changes. The results and conclusions of this report are limited in their validity because they are based on a very restricted compilation of data. In order to have more confidence in the results of this study, more plots need to be recorded on days similar to the ones in this report. Information should also be collected during more extremes in weather variation and during more times each day. Additional groups of white-tailed deer should also be observed, including groups in their natural environments. However, the data collected in this report is still useful.

**Conclusions**

This report shows that white-tailed deer have set patterns of grazing and resting. They prefer to graze around noon and evening and rest during the afternoon. They are more active during cooler temperatures and less active during high humidity. White-tailed deer also have set patterns of social and geographic preferences.
They live in matriarchal units and reside in set home ranges that can be disrupted by human interference.

**Literature Cited**


Heffelfinger, Jim. 2006. Deer of the Southwest: a complete guide to the natural history, biology, and management of southwestern mule deer and white-tailed deer. Texas A&M University Press, College Station, TX.


Tibbs, A. 1967. Summer Behavior of white-tailed deer and the effects of weather. M.S. Thesis. Pennsylvania State University, University Park, PA
Grupo Bimbo (GB) is in many ways a company poised for greatness. Given the firm’s historical success in Mexico and Latin America as well as GB’s alacrity for pursuing more foreign markets (i.e. China,) the next few years of the firm’s life will prove or disprove the company’s ability to capture and maintain new market shares as successfully as in its home nation’s market. However, a few factors may interfere with GB’s dreams of a global presence. For example, rising input costs (i.e. fuel and thus commodities) have lead to increasing costs of producing and selling for the company. Even though these increasing costs have only minutely impaired the firm’s profitability, the risk associated with these market fluctuations could significant hamstring GB in its goals. Therefore, I propose that Grupo Bimbo invest 500 million pesos in agriculture and energy based mutual funds by using funds from its cash accounts. Investing in these funds would substantially hedge the company’s risk of doing business.

**Historical Financial Performance of Grupo Bimbo**

The recent historical performance of the firm is either strongly positive or negligibly negative in all respects. For example, the company’s liquidity figure, or current
ratio, has decreased only five percent from 2004 to 2005 (1.5 to 1.4.) This figure describes that the firm is marginally less likely to be able to pay its debts as they come due. The profitability of the company also decreased in terms of return on equity by five percent (.15 in 2004 to .15 in 2005.) However, this is to be expected while the company is attempting to gain market share in Asia. The debt to equity ratio of GB significantly fell by ten percent over the one year period (.96 to .87.) This encouraging figure is explained by the fact that the company used some of its free cash flow to pay down a significant portion of its long term debt.

The asset management of the firm fell in terms of inventory turnover from 42 times a year to 40 times a year (a five percent decrease.) Again, this figure is not surprising given the fact that the company's inventories on China are not being turned over as quickly as their more established markets. Finally, the market value of the market has risen significantly by 24 % (from 12.4 in 2004 to 15.4 in 2005.) This is the most positive indicator because it shows that investors are reacting positively to the company's decisions and are thus about three dollars more willing (in aggregate) to enjoy the company's expected earnings.

**Future Financial Performance**

After the proposed plan, many of GB's financial ratios would be affected. For example, the current ratio of the company would be decreased in the short run from taking funds from the cash accounts. However, the investment would give the firm an increased future cash flow if the energy of agriculture markets found a sudden upswing. The return on equity for the next year would also decrease since the net income would be diminished by the one-time investment expense. In years after, the expected gains from the investment would increase the
company’s bottom line. The debt to equity ratio of the company would slightly increase in the future since the diminished net income would lead to a smaller addition to retained earnings. However, in years after the initial cost, retained earnings would be bolstered and the debt to equity ratio would decrease. GB’s inventory turnover would not be greatly affected by the plan. Finally, the price to earnings ratio would not be significantly affected by the plan in the short run since the investment would impair earnings in the short run, but investors would probably positively accept the market news and bid the stock price up.

**Technical Analysis of Future Performance**

According to the cash flows from Figure 2, a 500 million peso investment yielding a conservative (in terms of energy and agriculture mutual funds) 18% rate of return coupled with a 40% tax rate, 8% hurdle rate, and 1% inflation rate would yield the firm almost 27 million pesos assuming that the firm cashes out the fund after 10 years. Even though that number may seem small, the company also gains a decrease in their risk of doing business since an upswing in energy or agriculture prices would give the firm more capital gain to combat the then rising costs of their inputs. In short, Grupo Bimbo should hedge their risks and invest in energy and agriculture based mutual funds to hedge their risk and let them focus on their global expansion strategy.
**Figure 1**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2004</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liquidity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Ratio</td>
<td>1.444</td>
<td>1.514</td>
<td>-5%</td>
</tr>
<tr>
<td><strong>Profitability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return On Equity</td>
<td>0.146</td>
<td>0.154</td>
<td>-5%</td>
</tr>
<tr>
<td><strong>Debt Management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt to Equity</td>
<td>0.865</td>
<td>0.962</td>
<td>-10%</td>
</tr>
<tr>
<td><strong>Asset Management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory Turnover (Yearly)</td>
<td>40.04</td>
<td>42.09</td>
<td>-5%</td>
</tr>
<tr>
<td><strong>Market Value</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P/E</td>
<td>15,369</td>
<td>12,405</td>
<td>24%</td>
</tr>
</tbody>
</table>
INTRODUCTION

Pigs react to different temperatures, especially high temperatures, because they lack the ability to sweat (Huynh et al., 2005). A variety of research using a variety of techniques has been done to determine how temperature changes the behavior of pigs. For example, one study used a respiration chamber and humidifier to determine the pigs’ response to high and low temperatures and humidity (Huynh, 2004). As temperatures increase, pigs will change positions from lying on their stomachs to lying on their sides, and they will move away from the other pigs when they lie down so they are not touching each other (Shi et al., 2006). Another study used a floor cooling system made from pipes that carried cool water under the pigs sleeping area to keep their body temperature down (Shi et al., 2006). When given an option to control their own temperature, pigs choose warmer day time temperatures averaging 80°F and cooler temperatures at night around 61°F (Kilgour and Dalton, 1984). Pigs will also react to cold temperatures, just not as drastically as hot temperatures,
because pigs have a layer of fat to help keep them warm during cool periods. During cooler temperatures, pigs tend to huddle and lie close together to prevent the loss of heat (McInnes and Blackshaw, 1984). Also, temperature influences the amount of space pigs require because it alters lying positions and their interactions with other pigs (Ekkel et al., 2002).

The purpose of this experiment was to determine how changes in temperature influenced lying positions and grouping of pigs. I hypothesized that when it becomes cold, the pigs will lie in the sternal position with their feet curled beneath them, and that they will huddle in groups. Also, when it gets hot, I believe pigs will tend to lie laterally, on their side, with their feet stretched out in front of their bodies. During these hot periods, I expected the pigs to avoid touching other pigs, if it is possible.

PROCEDURE

Fifty-three pigs in twenty-five different pens at the swine facility behind the Texas A&M Vet School were used in this project. Some pigs were group housed and others were individually penned. The facility consisted of concrete floors, wire pens with a solid wall on the North side, and a roof. I observed the pigs on five different days and the temperature was recorded each time. I used extremes in environmental temperature because I could not control the area since it was not fully enclosed. I observed the pigs from thirty minutes to an hour and thirty minutes. During this time I recorded the various positions they laid in, and if they were lying down in groups or on their own. The sternal position was when the pig was lying with three to four legs curled under them, as seen in Figure 1. The half-lateral position was when a pig had two feet under their body and the other two feet are not supporting their body.
The lateral position, in which the pig was on their side with all four feet stretched out in front of their body, is shown in Figure 2. Sitting was when the front part of their body was held up off the ground or floor by their front legs. Huddling was when two or more pigs lie together and were contacting each other (50% of one side was touching another pig). The last position I recorded was when the pigs were lying head to tail in a line with their face at the other pigs tail.

RESULTS

38°F:

This day was cold and raining, and the pigs tended to huddle if there was more than one pig in the pen. At that temperature, I observed a total of nine of the fifty-three pigs lying down. The pigs that did lie down appeared restless. For example, a single-housed pig that was less sheltered from the weather laid down in the
sternal position for about two minutes at a time, after which it got up and walked around about four minutes. That pig repeated this cycle for a total of twenty minutes. There was also a group of three pigs lying in a pen on the right side of the facility which had little protection from the weather. Although the pigs were up against each other, the pig closest to the alley got up and walked around for about five minutes at a time before lying back down.

**65°F:**

Eight of the fifty-three pigs I observed were lying down, and some of those were huddling, but not as closely as at 38°F. Five of the eight pigs lying down were group housed, and the other three were in individual pens. The three pigs in individual pens were boars and were lying in the sternal position. Two of the five pigs were in the same pen and were huddling while in the sternal position. The other three pigs were lying in the sternal position by themselves in group pens.

**71°F:**

When I arrived the pigs had just been feed and were eating for forty-five minutes. Once they finished eating some began to lie down. Eventually seven of the fifty-three pigs lie down when I observed them.

**75°F:**

This day had high humidity and twenty-seven of the fifty-three pigs were lying down. Ten of the pigs lying down were in individual pens; eight of these were in the sternal position, and the other two were in the lateral position. In one pen with seven pigs, all seven were lying down. Three of these were huddling but not as close as the pigs at 38°F, and the remaining four in this pen were lined up head to tail around the perimeter of the pen. Two pigs in a group pen were lying head to tail and were in the sternal position. Four pigs in anther
group pen were lined up head to tail and were in the sternal position. Five additional pigs were sitting in different pens.

84 F:
There were eighteen pigs lying down when I observed them. Ten of the eighteen were lying in the lateral position. Seven of these ten were in group housed pens; the other three were in individual pens. Three of the other eight pigs were lying down in the sternal position, and the other five were in the half-lateral position. Two of these eight pigs were in group pens, while the other six were in individual pens. Three pigs were in the sitting position and were in different group pens. At this temperature, the pigs displayed all three positions that are shown in Table 2.

Overall, the pigs showed more interest in sitting when the temperatures were in the 70’s (Table 1). Also, as the temperature increased more pigs were lying laterally, on their side with no leg support, as well as half laterally (Table 2). Half laterally was when the pig supported its body with one or two legs (Huynh et al., 2005). At all temperatures, sternal lying, the pig resting its body on three to four legs (Huynh et al., 2005), was observed in some form.

As the temperature increased, the total number of pigs lying down increased (Figure 3). Also, as temperature increased more pigs were observed in the sitting position, the lateral position, and the half-lateral position, while fewer pigs lay in the sternal position (Figure 4 and Table 2). As temperature increased, the pigs tended to lie head to tail along the edge of their pen, as opposed to huddling, which is done in cooler temperatures (Figure 5).
Lying down | 38 F | 65 F | 71 F | 75 F | 84 F
---|---|---|---|---|---
16.98% | 15.09% | 13.21% | 50.94% | 33.96%

Sitting | 0% | 0% | 13.21% | 9.43% | 5.66%

Standing | 83.02% | 84.91% | 73.58% | 39.62% | 60.38%

Table 1. Percentage of pigs lying, sitting or standing as the temperature increased.

| | 38 F | 65 F | 71 F | 75 F | 84 F |
---|---|---|---|---|---|
Lateral lying | 0% | 0% | 0% | 3.77% | 18.87%
Sternal lying | 16.98% | 15.09% | 11.32% | 47.17% | 5.66%
Half lateral lying | 0% | 0% | 1.89% | 0% | 9.43%

Table 2. Percentage of pigs performing lateral, sternal or half-lateral lying in relation to increasing ambient temperature.

Figure 3: Percentage of pigs lying down at five different ambient temperatures.
This experiment found that pigs changed their lying behavior at different temperatures. My results were:

**Percentage of Pigs Lying in Sternal Position**

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>100%</td>
</tr>
<tr>
<td>65</td>
<td>100%</td>
</tr>
<tr>
<td>71</td>
<td>92.60%</td>
</tr>
<tr>
<td>75</td>
<td>85.70%</td>
</tr>
<tr>
<td>84</td>
<td>16.60%</td>
</tr>
</tbody>
</table>

**Percentage of Pigs Huddling**

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>77.85%</td>
</tr>
<tr>
<td>65</td>
<td>25%</td>
</tr>
<tr>
<td>71</td>
<td>18.51%</td>
</tr>
<tr>
<td>75</td>
<td>22.20%</td>
</tr>
<tr>
<td>84</td>
<td></td>
</tr>
</tbody>
</table>
supported by Shi et al. (2006), who found that pigs try to increase heat loss by moving to cooler areas and by changing positions from their stomach to their side. My observations found that the pigs tended to spread out and lie on their sides as temperatures increased to maximize contact with the cool floor. I did observe that at higher temperatures some pigs still huddled, but I think it was because there was not enough room in their lying area to spread out. Huynh et al. (2004) also found that during hotter days, pigs change their position from sternal to lateral and avoided contact with other pigs. Also, I found that as the temperature increased more pigs lay down as shown in Figure 3 and Table 1.

When the temperature decreased, the pigs in this study tended to huddle. McInnes and Blackshaw (1984) observed that as temperatures fell, pigs will lay closer together. My results indicated that lower temperatures also cause pigs to shift to the sternal position instead of lateral (Table 2). The sternal position is probably useful because it minimizes contact that their body has with the cold floor.

For this experiment, the major limitation I faced was that I needed a larger variety of temperatures for my observation, but I had to work with the temperature conditions that existed. I tried to get observations at the same time each day so that my results were as consistent as possible. If I could do this experiment over, it would be nice to have a place where I can control the temperature. If I could control how long the pigs were at each temperature and the temperature itself, the results would be more reliable.
References


MEMORANDUM

To: CEO of Whole Foods Market, Inc., John Mackey
From: Melanie Schroedter
Date: February 14, 2008

As a leader in the organic foods retailing industry, Whole Foods Market, Inc. has come a long way from its humble beginnings. However, with the acquisition of Wild Oats in 2007, Whole Foods’s financials have taken a blow that can be expected after purchasing a major competitor. In order to detract from this vulnerability and to take advantage of the monopolistic market structure that the company now finds itself a part of, Whole Foods should consider slightly raising its prices in order to combat the rising costs and payments to producers of organic foods. The company has already proven its differentiated products and commitment to its customers and can, therefore, charge a premium price to its customers. In order to
maintain loyal customers, Whole Foods should also offer a Whole Rewards program to those customers who frequent their stores. The combination of increased prices and a customer rewards program will allow Whole Foods to eventually gain back the acquisition expenses and rebuild its financials.

According to Business Week Online's November 2007 article, Whole Foods: Wait Until 2009, Whole Foods does not expect to produce operating leverage for the 2008 fiscal year due to costs associated with new and acquired stores even though the company projects an increase in sales of 25 to 30 percent. Assuming that its projections are accurate, by raising merchandise prices to increase sales by five percent and by expecting a sales discount of two percent, sales can be projected to grow by at least 28 percent and costs to increase by 25 percent. Analysis shows that an additional $513 million will be needed to implement this plan and can be financed externally through 20 percent short-term debt and 80 percent long-term debt at a 6.25 percent prime interest rate.

Whole Foods will see a dramatic improvement in its profitability quotient should the company apply this approach. Analysis of the profit margin indicates that Whole Food’s revenue will contribute about 3.9 cents to its bottom line with the new strategy, a 40 percent increase from fiscal year 2007. Considering the 24 percent decrease between 2006 and 2007 when the profit margin dropped from 3.6 percent to 2.8 percent, higher prices and a rewards program will allow the company to gain strength in its bottom line gains as a company.

With the implementation of this strategy, Whole Foods will be able to almost double its earnings. However, with the currently decreasing stock price of WFMI stock, the price to earnings ratio will be lowered to 17.9 times, a 52 percent decrease since September 2007. This decrease is a continuance of an almost 6
percent decline from 2006 to 2007 with ratios going from 39.7 times to 37.3 times. The drop in these ratios indicate investor wariness in the company’s prospective growth but also represent Whole Food’s alignment with other retail grocery stores like Kroger at 16.6 times and Wal-Mart at 14.9 times (Forbes.com).

Analysis of firm liquidity shows a 30 percent decrease in the current ratio from 1.2 times in 2006 to 0.85 times in 2007, making the firm less liquid and unable to fully cover current debts with current liabilities. Even with the implementation of higher retailing prices and a rewards program, Whole Foods will still see a slight decrease of 8.6 percent to the 0.78 level. The use of the company’s most liquid assets of cash and short-term investments to acquire Wild Oats has weakened the company and effects are still apparent even after the implementation of this strategy. Again, when compared to other retail grocery stores such as Kroger and Wal-Mart who both have current ratios of 0.8 times (Forbes), Whole Foods is not in too bad of shape.

Debt management analysis shows a huge increase of 74 percent in its debt-to-asset ratio when going from a 31 percent ratio in 2006 to a 55 percent ratio in 2007. The increase of this ratio comes from the long-term debt that was financed and assets that were used to acquire Wild Oats. This ratio’s approach to 50 percent is cause for concern and unfortunately, will only be increased by 13 percent to 62 percent with the implementation of higher prices and a rewards program. Investors may interpret Whole Food’s higher debt ratio as an indicator of a high risk company. Again, this issue is an after-effect of the Wild Oats acquisition.

Asset management, as measured by the retail industry’s main indicator of inventory turnover, decreased 16.7 percent from almost 18 times in 2006 to about 15 times in 2007. With the implementation of higher prices and a customer rewards program, the
company will see its inventory turnover shrink a bit more to 14.6 times, a 2 percent decline. Even though this ratio is decreasing, it is still strong compared to the inventory turnovers of Wal-Mart and Kroger, which are 8.1 and 11.6 times, respectively (Forbes).

In conclusion, by applying a strategy of raising merchandise prices and implementing a customer rewards program, Whole Foods Market, Inc. will find that it can offset some of the negative impacts of the Wild Oats acquisition. This proposition is just the beginning of the means by which Whole Foods can overcome the punishment that the market is issuing to the company because of its competition acquirement. Should this proposal be implemented, Whole Foods will find itself headed in the right direction and better able to rebuild its financial status.
Works Cited

"KROGER CO (NYSE: KR) | Ratios and Returns."


"WAL MART STORES INC (NYSE: WMT) | Ratios and Returns."


"Whole Foods: Wait Until 2009." Business Week Online
Keyword: Whole Food Market Inc.
Diets of American citizens encompass a perplexing amount of unpronounceable chemical residues from conventional farming practices from the overuse of pesticides and fertilizers. The rise of organic farming however has increased awareness of the fact that maybe the food we ingest could cause more problems in the future to our bodies. The small organic farmer attempts to make its food products the healthiest way possible such as using natural sources of feed instead of a heavy dose of chemicals. Organic farming provides proof that when society wants healthy, “real” food, they have a reliable food source; when they ask for meat, they feast on actual, properly raised beef contrary to a product raised in a stress filled environment and pumped with growth supplements. But despite the evidence advocating a healthier lifestyle, conventional farming still takes precedence over the organic farmer.

**The Problem:**
The main problem: Organic farmers lose potential customers and a sufficient role in the agriculture market due to the lack of awareness, more expensive products and decreased convenience. With a massive feedlot driven economy and the strict laws for organic farmers that make it so tedious to get organic
certification and stay certified within the business, organic farmers certainly have a struggle to reach their full potential in the market. Large industries have no incentive to swap practices either. When numerous stipulations exist for organic foods, why would any billion dollar corporation switch to a more challenging and struggling agriculture industry? And the most frustrating part of the situation is that it rests in society’s hands. The general public lacks the financial ability or knowledge to support organic farming and reap the benefits of a healthier and safer food source. A vast majority of society, especially blue collar individuals, find the convenience of fast food restaurants a relief, both on their time and on their wallets. Why pay seven dollars on organic meat when one can purchase six sausage biscuits for the same price without the hassle of cooking?

**The Objectives:**
Now comes the time to wake society up, to pinch, pull and prick until they open their eyes to their diets and become more aware of what they place in their mouths. Utilizing the following objectives would hopefully lead American stomachs down the path of healthy eating which would ideally boost the organic farming industry to a point where it can substantially compete against dominant feedlot, conventional corporations: increasing the awareness about organic and non-organic food products, implementation of organic practices on conventional farms, and the equalization of prices for the competing products. This paper will discuss the obstacles facing the prominent rise of organic farming and plan to counter these objections to instill organic practices as a mainstay of the American culture.

**Legislative Review:**
Though many sources illustrate that the purchasing of organic foods has risen over the past two years, it still only comprises maybe 40% of the
agriculture market compared to non-organic farmers. Organic farming barely seems worth competing against non-organic farming as well as fellow organic farmers especially if, as this source supports, you have a penchant for meat. The following graph proves the expansion of organic farming since the year 1997 of course this main chart does say that anything besides fruits and vegetables barely holds a slit of data in this graph.

![Graph showing organic food sales 1997-2007](image)

**Fruits and vegetables remain the largest category of sales, accounting for 42 percent of organic food sales in 2003**

Total sales: $ million

One journal discusses the opposing legal forces against organic farming such as the particular regulations that comprise what they say is a constant

---

hassle against the organic farmer.\textsuperscript{2} It claims that there are “too many loopholes for conventional farming” and that just because the industry is increasing in popularity, it doesn’t mean that they find it easy to please their consumers and compete with “government supported industries.”\textsuperscript{3} Many sources follow the same view, stating that organic farming has such great potential but is greatly hindered by an economy that lives and breathes off of the feedlot production. The government readily subsidizes these farms and has created laws that have decreased the amount of organic quality necessary to be considered an organic product while organic farmers still face the strict limitations.\textsuperscript{4}

Other resources seem to contradict this perspective and place organic farming on a high pedestal claiming that the time is now for organic farming\textsuperscript{5}, and that the stipulations add an “air of authenticity”\textsuperscript{6} to the organic farming business. Without the extensive regulations, how would there exist any trust for the organic market without knowing that the statute under division three titled Inspection and Testing, Reporting

\textsuperscript{4} Sauls, Julian W. Producing Texas fruits and nuts organically. College Station, Tex. : Texas Agricultural Extension Service, Texas A&M University System, [1991]
\textsuperscript{5} Texas Department of Agriculture. What organic means to you. [Austin, TX] : The Dept., [1988?]
\textsuperscript{6} Texas Department of Agriculture. What organic means to you. [Austin, TX] : The Dept., [1988?]
and Exclusion from Sale\textsuperscript{7} existed and ensured the quality of organic foods? These statutes increase the level of safety, health, and bring about a vast amount of benefits as compared to a non-organic farming industry.\textsuperscript{8}

Whether high regulations over practices and products are embraced by the farmers and the general public or protested against, the value of organic farming still outweighs the burdens of detail and legal process. Organic farming displays an astounding level of respect towards animals, the environment and the human population. Animals grow in a stress free environment, eating all organic and natural products, not crammed in large quantities on small plots of land. They are not sweltering in their own sea of manure and methane gases, able to roam on a reasonable amount of acreage. The fact that crop rotation and only natural products are used to grow crops shows the consideration organic farming has for the earth and who lives on it. How can anything negative be true about the organic lifestyle when all it wants is to better people and the world?

\textsuperscript{7} Texas. Organic food standards and certification: \texttt{Texas administrative code}, title 4, part I, chapter 18, adopted May 26, 1988. Austin, Tex.: Texas Dept. of \textit{Agriculture}, [1988].

As the table displays, these are the positive values that Title 4 enforces and promises its customers and even recognizes that the price is high and not a necessarily bad thing when it can provide aid to the environment and ensure not only a healthy you but a healthy world.

Let's get a specific and unbiased opinion on this matter. A less one sided resource by Jean Marc provided an analysis of gas prevalence and use considering conventional and organic farming. His results presented the strongest scientifically backed evidence showing that organic ways does have its benefits in the reduction of nitrogen and carbon sources but focuses the real problem on the consumption of meat. In his article “How Much Greenhouse Gases are in Your Plate?”, Marc

<table>
<thead>
<tr>
<th>Organic</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed Preparation:</td>
<td>Typically treated with colds or micrococcal. Possible QM.</td>
</tr>
<tr>
<td>Soil Preparation:</td>
<td>Healthy soil through crop rotation. Retains moisture in soil from increased organic matter.</td>
</tr>
<tr>
<td>Weed control:</td>
<td>Healthy soil creates natural balance. Beneficial insects and trap crops used.</td>
</tr>
<tr>
<td>Harvesting:</td>
<td>Natural fertilization from feeding temperatures and the use of water management.</td>
</tr>
<tr>
<td>Production:</td>
<td>Warp fibers stabilized using double plying or monofilament.</td>
</tr>
<tr>
<td>Whitening:</td>
<td>Soft peroxide is used.</td>
</tr>
<tr>
<td>Finishing:</td>
<td>Soft scour in warm water with soda ash for a pH of 7.5-8.</td>
</tr>
<tr>
<td>Softening:</td>
<td>Natural soybean softening.</td>
</tr>
<tr>
<td>Dyeing:</td>
<td>Low-impact fiber reactive or natural dyes with low metal and sulfur content.</td>
</tr>
<tr>
<td>Printing:</td>
<td>Low-impact or natural pigments without heavy metals.</td>
</tr>
<tr>
<td>Marketing:</td>
<td>Positive story can be told to differentiate you from your competitors.</td>
</tr>
<tr>
<td>Price:</td>
<td>Initial cost more expensive. Long term advantage savings.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As the table displays, these are the positive values that Title 4 enforces and promises its customers and even recognizes that the price is high and not a necessarily bad thing when it can provide aid to the environment and ensure not only a healthy you but a healthy world.

Let’s get a specific and unbiased opinion on this matter. A less one sided resource by Jean Marc provided an analysis of gas prevalence and use considering conventional and organic farming. His results presented the strongest scientifically backed evidence showing that organic ways does have its benefits in the reduction of nitrogen and carbon sources but focuses the real problem on the consumption of meat. In his article “How Much Greenhouse Gases are in Your Plate?”, Marc
scrutinizes the possible costs and uses of gas sources that go into both types of farming and measures how much climate change we as Americans consume in a meal.

Looking at the following graphs from his article, readers can observe the more prevalent amounts of gases found in foods from conventional farming. However, carbon contents are still quite high and extraordinarily higher for the organic farmer. This is due to the strict rules mandating the organic process which prohibits the feedlot staple of hundreds of cattle crammed into tight spaces. Organic meat has a tough time considering animals need a plentiful amount of acreage to themselves to remain truly organic. “Going organic for 100% of agriculture while keeping the same animal production would need much more arable land than we have at present” 9 Though this leads into an entirely different argument concerning whether or not the high consumption of meat provides more costs than benefits, what we can take from this article and the following graphs is that organic farming does aid society and the environment in many ways and makes them deserving of subsidies and a stronger hand in the farming market.

Reviewing the variety of sources concerning organic farming leads to an interesting analysis on whether or not organic farming should have their regulations rethought to give them a heads up in the
farming market and a chance to beat conventional farming. Organic farming provides an overall benefit to both humans and the environment and reduces the amounts of toxins in our diet as well as the amount of contaminants seeping into our groundwater and accumulating in the animals we eat. It cuts down on the amount of threatening gas used for our farming practices and, since crop rotation is necessary as stipulated in Title 4, this particular farming will not wear out the limited arable land available to farmers.

But are all of these positive aspects kept certified by the long list of rules and regulations or could the organic farming industry stand a few shortcuts in their governmental inspection? Rules are a necessary part of our society and it is doubtful that we need to cut back on these stipulations. What the public does need to endorse is some of these practices in conventional farming that would make it more beneficial to everyone. If voters and voices pushed, we could have conventional farmers having to test the levels of certain GMOs and chemical diets that are in the meat. If they had a ceiling amount, perhaps the organic and conventional farmers would be on the same level. So don’t change Title 4, look at how we can change the amounts of pesticides and toxins used in today’s conventional type of agriculture.

Though these changes might produce a greater expense on the economy or might limit conventional farmers in such a way that their output per acre diminishes greatly, the benefits outweigh the costs in the sense that America’s unhealthy eating habits would get healthier without necessarily changing the way we eat. There are plenty of ways to make conventional farming better without making them completely organic if that is the way they want to maintain their business. Putting limits on chemical intake in animals diets, restricting the amount of animals per acre on a farm, enforcing crop rotation and allowing limited crop dusting and pesticide use would only give conventional farmers maybe half of
the laws regulating organic farmers and they could probably still come out dominant in the food industry.

For any of this to work however, vast amount of awareness would have to be imposed upon society through various forms of media. Populations love to jump on the bandwagon and why should they avoid this ride? In an age of dieting and living life to its fullest and ensuring a complete life to the ages of ninety, society should embrace the power of healthy eating and lower their intake of conventional farming products. This would need explosive amounts of advertising and perhaps a restructuring of label laws to ensure that just as organic farmers are being completely honest about what goes in their foods, so do the conventional farmers. But on a sensible level, advocates could start in organic restaurants, supporting them and helping them grow which would lead into hopefully grocery stores supporting their organic section through discounts and buyer deals that incorporate heavy organic use. Farmers market located in College Station already has times when it reaches out to the public and takes products straight to the people to expose them to organically grown vegetables and fruits. All in all, our food suppliers should think about the direction of their coupons and advertisements and how dominant the organic section exists in their stores.

Perhaps the largest set back for those wanting to turn to organic foods is the price. The convenience of cheap food entices consumers much more than what provides healthier, more beneficial options. Those living on five dollars and fifty cents an hour can only observe organic food from afar while their paycheck drives them to ridiculously cheap meats, breads and vegetables (most likely in a can). Everyone wants to hear they have saved after a trip to the grocery store and organic foods would guarantee a larger bill with not necessarily a “more for your money” deal. As the following graph illustrates, organic prices consume consumer’s paychecks and fill up
a sensible grocery budget. Despite the graph showing fluctuating numbers over the period of time studied, the percentages are high and remain high.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>35</td>
<td>43</td>
<td>73</td>
<td>88</td>
<td>88</td>
<td>89</td>
<td>59</td>
</tr>
<tr>
<td>Soybean</td>
<td>114</td>
<td>85</td>
<td>141</td>
<td>202</td>
<td>217</td>
<td>175</td>
<td>177</td>
</tr>
<tr>
<td>Wheat</td>
<td>54</td>
<td>59</td>
<td>73</td>
<td>8</td>
<td>87</td>
<td>103</td>
<td>94</td>
</tr>
<tr>
<td>Cuts</td>
<td>35</td>
<td>59</td>
<td>73</td>
<td>83</td>
<td>77</td>
<td>71</td>
<td>41</td>
</tr>
</tbody>
</table>

*Numbers in the table indicate percent price rise of organic over non-organic products, 1995-2001.*


**The Conclusion:**

What readers should take from this paper is the value of organic farming and to recognize how it is swallowed by the conventional farmer when it only wishes to supply the healthiest options for their customers. Still organic farming needs huge amounts of support from the media, the local and also conglomerate stores they supply and the government to enable the lowering of prices and the expansion of the organic farming industry.
Nicholas Gerner

Friona

Health is becoming more and more important to the American public. People are increasingly trying to balance their diet with organic food that contains fewer chemicals and pesticides. As a result of this move to organic foods, Friona Industries should enter the growing organic beef market. Friona will need to dedicate one of its existing feedlots to the sole production of organic beef. By entering this market, Friona will gain access to a totally new group of customers who are willing and able to pay more for their higher-quality, organic beef.

Friona can use its knowledge of the beef industry to find ranchers that will be able to supply them with organically-raised cattle, as well as packers and retailers that will be interested in its cattle coming off of its feedlots. This expansion to the organic beef market will help differentiate Friona’s product, which will allow
them to charge a premium for their beef. Entering the
organic market will keep Friona ahead of the curve and
its competitors in the feedlot industry.

The creation of the organic feedlot will come
with some significant costs to the company. Friona will
need to invest in R&D before they even step foot in the
organic industry. The company needs to find an organic
supply chain that they can fit into and have success in.
This organic supply chain must include reliable organic
farmers that will supply them with high-quality beef, as
well as packers and retailers that are dedicated to
organic beef. Because Friona will be converting one of
its existing feedlots to an organic one, the company will
not need to purchase additional land or build a new
facility. In addition, the company will not need to hire
any additional workers so there will not be any increased
labor costs associated with the organic feedlot. Friona
may, however, need to upgrade that existing facility in
order to better accommodate the organic cattle. This will
force the feedlot to shutdown during the renovations
and, as a result, there will be a loss of revenue during
this short time.

Friona will also need to start buying organic feed
for their cattle, which will raise variable costs for the
company. The debt incurred with the conversion to the
organic feedlot will be funded by both current liabilities
and long-term debt. This will increase the Debt-Asset
ratio, which will increase stockholders leverage but may
make it harder for the company to obtain credit in the
future. The increase in current liabilities will also reduce
the current ratio and weakening the company’s liquidity
position in the short run.

Since very few additional funds are needed for
the project, the debt-asset ratio and the current ratio
should be minimally affected. In the long run, the profitability of the company will enhance due to the additional income generated from the organic beef. This will satisfy investors because it will increase the returns they receive on their investment. Asset-Management should also boost with the project, showing that the company will continue to be able to generate sales on its assets. Because there are such few costs associated with the organic feedlot, the NPV of the project looks very promising.

The net present value of the organic feedlot is $39.2 million. The renovations to the existing facility will cost $400,000, and $1 million will be spent on research and development prior to the start of the project. The project will last 10 years and will involve 50,000 head of cattle. The total cost of the cattle to the feedlot, including organic food, will be $.89/lb, and the cattle will sell for $1.08/lb. The average weight of each head leaving the feedlot will be 750 lbs. The new equipment purchased for the renovation of the existing feedlot will have a useful life of 10 years. The equipment will straight-line depreciate 5% over the next ten years and there will be no salvage value.

Friona Industries will benefit greatly from the expansion into the organic feedlot industry. This project will help Friona take advantage of the growing organic foods industry in United States. The organic beef will bring in a higher price at the market, which will increase revenues for the company. The expansion to the organic feedlot will also help Friona diversify their company. With an NPV of $39.2 million, the addition of an organic feedlot will benefit Friona, its customers, and its stockholders for years to come.
\[ f(x + h) \]