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Legacy of Agricultural Property Tax in New Mexico



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Contents

Index of Figures	1
Index of Tables	1
Abstract.....	2
Introduction.....	2
Property Tax in America: A brief overview.....	3
Property Taxation in the United States Today	9
Special-Use Value Assessment for Tax Purposes.....	9
Does Special-Use Valuation of Agricultural Property Work?	13
Fair Market Value	15
Ranch Property Taxation in New Mexico.....	19
Impact of Taxation on Profit Potential.....	20
Taxation Example on a Representative New Mexico Ranch.....	25
Projected Tax Changes for 2011	25
Federal and State Taxation	26
Summary	28
Bibliography	29

Index of Figures

Figure 1: Pasture Value by State, 2010.....	19
Figure 2: Total Cost-Total Revenue Curve	21
Figure 3: Total Value Product and Marginal Value Product Curves in Typical Factor Product Production Function.....	22
Figure 4: Marginal Cost Curve	23
Figure 5: Net Returns Per Acre for New Mexico Rangeland.....	24

Index of Tables

Table 1: Estimated Carrying Capacity of Pasture Land by State.....	18
Table 2: Inverse Productivity Ratio and Ratio of Pasture Value of neighboring States to NM.....	19
Table 3: Taxes Paid by New Mexico Livestock Producers, 2006, With Mortgage	27
Table 4: Taxes Paid by New Mexico Livestock Producers, 2006, Without Mortgage	27

Abstract

In the United States, and especially in New Mexico, the quality of the natural environment and changing social pressure to prevent the loss of agricultural land, with the consequential reduction in the food supply, have led state governments to preserve agricultural land through a special-use valuation method based on the income produced from the land rather than the speculative market value. This paper examines agricultural property taxes and their impact on long-term sustainability. Taxation of agricultural land on a special-use value basis is consistent with the overall goals of ranches in New Mexico; a drastic increase or revaluation of taxes on agricultural property would cause irreparable harm to the agricultural communities and the well-being of the people of New Mexico as a whole.

Long before it became a state, ranching played a substantial economic role in New Mexico. Despite external economic shocks from land and cattle price issues through the years, cattle ranching has survived as a mainstay of the New Mexican economy.

Ranchers understand the adversities of nature and the absolute need for conservative stocking rates for drought survival. Low taxes promote the adoption of conservative practices, enhancing the opportunity for ranch survival and increasing ranchers' ability to pay their taxes, resulting in minimal tax delinquency.

Introduction

Taxation without representation was a fundamental issue in the creation of the United States. Taxes—or the lack thereof—were viewed as an enticement or an enabler for certain activities to continue. President John F. Kennedy stated clearly his position on imposing taxes on Americans when he said, “Any dollar released from taxation that is spent or invested will help create a new job.”

The rich agronomic culture of the U.S. was facilitated by sympathetic lawmakers who desired the continuation of the Agri-sector and its associated way of life. This “Agri-sector” produced vast, stable food supplies that have become the standard for all developed countries.

There has been a steadily growing realization that grazing lands are an important component of the Agri-sector as a direct source of income and a means by which permanently productive systems of agriculture are achieved (Sprague, 1952). By its very nature, a ranch business that uses grazing land requires a large investment in real estate property. Historically, owning

property has been one of the chief criteria of taxpaying ability. Property taxes make up a large share of the fixed costs on a ranch/farm operation. Of the five types of fixed costs (DIRTI¹), property taxes are the predominant fixed expense on an extensive land-based operation such as ranching. Ranching requires extensive holdings of land, permanent buildings, and expensive water, fencing, and other improvements. Livestock are taxed separately in New Mexico as personal property, and returns to investment are relatively low. The combination of low returns and large real estate investments creates a heavy tax burden. The price cycle² associated with the range livestock industry has the potential, when combined with rapidly increasing production factor costs, to create a cost/price squeeze³ (Stocker, 1955).

Many policies and farm bills have been passed that are designed to enable producers to derive a profitable existence while concurrently promising consumers the safest and most affordable food supply in the world. Beginning in 1956, the Maryland state legislature adopted special-use valuation (SUV) property tax programs for various land uses to answer these concerns. Often called “Greenbelt” law, this archetype is used today in one form or another in all 48 contiguous states.

Greenbelt⁴ assessments encourage land adjacent to cities to remain in productive agriculture (Chervin, 2009). Open space, natural filtering crops, orchards, and forests contribute to a healthy, attractive environment around urban areas. Greenbelt assessment of agricultural properties allows farming and ranching to continue in areas that might otherwise be forced into a higher income strata because of higher appraised and assessed values. If the property owner can document the ranch/farm income, then the value of the property--regardless of location--is capped at a fixed ceiling and taxed accordingly. This tax status reduces annual operating costs and allows the producer to stay in business despite the rapidly accelerated cost of production.

Property Tax in America: A brief overview

During the extensive debate that eventually created the Constitution of the United States, delegates were actively searching for ways to solve the revenue issues that the new democracy

¹ DIRTI - Depreciation, Interest, Rents (flat rate), Taxes, and Insurance

² A sequence of economic activity is typically characterized by recession, fiscal recovery, growth, and fiscal decline.

³ Pressure of increasing costs at a time when competitions (or other pressures) make it difficult to boost prices and cover escalating costs.

⁴ Greenbelt assessment allows qualifying agricultural property to be assessed and taxed based upon its productive capability instead of the prevailing market value. This unique method of assessment is vital to agricultural land that lies in proximity to expanding urban areas, where taxing agricultural property at market value could make farming operations economically prohibitive.

faced. The ability of a nation to have a means of financing its goals and purposes was, and is, an indispensable element of a sound democracy. Though the need for a revenue-generating instrument was universally accepted, the means to accomplish the ends were hotly contested. History reveals that, even at this early date, a philosophical chasm was opening between the north and the south that would arguably end in the worst manmade catastrophe this country has ever seen: the Civil War.

The problem began when the northern states' delegation, who favored industrialism, pushed for a property tax. Industry required relatively small amounts of land compared to output, so this approach seemed logical and more cost-effective for the largely industrial northern interests. In the southern states, however, the majority of citizens held vast amounts of agricultural land, and vehemently opposed a tax on property and the financial burden it could potentially impose. They believed that revenue should be raised locally because it better suited a democracy. Because of this impasse, the country divided into two factions, one spearheaded by Alexander Hamilton that favored a larger central government, and one led by Thomas Jefferson that believed that a democracy was best suited to smaller, local government control.

The Hamiltonians pushed for industrial development, while the Jeffersonians believed that a more agrarian society would foster independence and democracy, two opposing views that would eventually lead to widespread discontent over property tax assessment. Beginning in the late 1700s, excessive property taxes led to open conflict with the fledgling government (Ely, 1997).

In 1786, Daniel Shays stormed a courthouse and demanded lower property taxes and protections for farmers⁵ against foreclosure. Most of Shays' followers were angry, poor farmers crushed by debt and taxes. Individuals who did not repay debts were often imprisoned in debtor's prisons or had their property seized by the government. Seeking debt relief through the issuance of paper currency and lower taxes, Shays and his followers attempted to prevent the courts from seizing property from indebted farmers by forcing the closure of courts in western Massachusetts (Foner, 2006).

From the time of the first Congress in 1789 to the outbreak of the Civil War, there was dissension between the northern and southern states over the matter of protective tariffs, or

⁵ The term "farmers" is understood to be both the work of growing crops as well as raising livestock; thus, the terms farmers/farming are inclusive of ranchers/ranching throughout this document.

import duties on manufactured goods (Kaplan, 1994). The Tariff Act of 1789 imposed the first national source of revenue for the newly formed United States. The new Constitution allowed only the federal government to levy tariffs, so the old system of state rates disappeared. The new law taxed all imports at rates from 5 to 15 percent. These rates were primarily designed to generate revenue to pay the national debt and annual expenses of the federal government (Carlson, 2004).

The main issue of concern to farmers was one of “fairness.” Northern industries wanted high tariffs in order to protect their factories and laborers from cheaper European products, whereas the economies of the agricultural southern states were based on the export of raw materials and the importation of manufactured goods. Because there were few factories in the south, southerners had to pay higher prices for goods (Ekelund, 2004). In later years, an influential article in a well-known agriculture periodical honed the issue of fairness to a fine point:

The whole thing is simple. If the products that the Farmers sell are to be admitted duty free, then the things the Farmers buy must also be admitted duty free. If the products that the manufacturer makes for Farmers and others are to be protected, then the products that the manufacturer and his workers buy off the farmer, either in the raw or finished state, must also be protected.... The tariff must apply to one and all alike. It can't be one system for one half the people and another system for the other half. If tariff reform is to be undertaken, it must be on the principle that all are to be treated alike. (The American Agriculturist, 1912)

Debate on the tariff bill was heated, and Congressmen used patriotic rhetoric to support their positions. Mississippi's Senator McClaurin stated the following on the floor of the Senate in 1909:

The farming people of this country do not ask that you give them any protection, when 'protection' is used in the sense of an opportunity or power to rob the masses of the people, or to take the money that belongs to others and put it into their own pockets. However, they do ask an opportunity to devote the fruit of their labor to their own interest, their own protection, their own comfort, and their own welfare. They ask that you take off of them the heavy hand of what you call 'protection,' but what really, in fact, is an opportunity for extortion ... The Farmers of this country produce the provisions upon which all of us live. They produce the clothing that clothes us... (McLaurin, 1909)

Ties to agriculture are evident in the following speech by Representative Hamlin of Missouri. He understood the important role that agriculture, farming, and ranching play in the economy of the

United States, and that agriculture needed and deserved protection from unfair taxation and tariffs:

... I undertake to say that no man with a proper regard for the truth will deny that no class of people has been as persistently discriminated against in tariff legislation, as has the farmer. I am his friend, and I am proud of it. I was born and reared on the farm. I have plowed, I have planted, I have sown, I have reaped, and I know that the farmer literally earns his bread in the sweat of his face. I have never ceased to be thankful that I was born and reared on the farm. Therefore I believe that I know what the farmer wants, at least I know something of his condition and his relation to national legislation, and so long as I shall remain a Member of Congress I shall do what I can to see that he receives fair and equal treatment. (Hamlin, 1909)

In 1797, John Adams was sure that a war with France was imminent. The 2 million dollars required to pay a force sufficient to resist the French was raised by apportioning a national property tax according to population. The tax was assessed according to the number and size of the windows of each house and building, and the number of slaves one held. This, in addition to a property tax, burdened the state of Pennsylvania alone with a tax liability of \$237,000, the equivalent of \$2,951,537 in current dollars.

Since there were very few slaves in the state of Pennsylvania, the brunt of the tax fell on dwelling houses and property. This tax became known as the “Window Tax” since measuring the size of the windows and counting the window panes was a part of the assessment. It was also known as the “Hot-Water Tax” because housewives poured hot water on the assessors from their second story windows to discourage them while they were counting and measuring, such was their contempt for the unfair tax treatment they were receiving. It was also known as the “Milford Tax”⁶ since that is where the main opposition seems to have been centered. Finally, it became known as “John Fries’ Rebellion” after the ringleader of an armed opposition. These various appellations and reactions underline the distaste that Americans had for disproportionate property taxes then, as well as today (Newman, 2004). Despite open opposition, the reliance on property taxes continued unabated for the most part throughout the country.

Nineteenth century America raised most of its revenue on the state and local level using property taxes. The Deep South, however, still used a combination of poll and property taxes as a means of raising revenue. Interestingly, the sheriff was the primary financial officer charged with

⁶ Milford, Pennsylvania

collecting property tax; this role did not change in the West until the late 1800s (Rabushka, 2008). This brings to mind the stereotypical “Sheriff of Nottingham” persona whose relentless pursuit of tax revenue led to the creation of “Robin Hood,” who provided relief to the masses from unfair taxation in English lore (Knight, 2003). While a literal Robin Hood was the stuff of legend, many of our country’s most important leaders were greatly concerned over the equal assessment of property taxes.

Even though he is probably best known for his stance against slavery, Abraham Lincoln was famous for his landmark cases involving property taxes. Lincoln argued that the assessment of property taxes had jurisdictional limitations, and that a project’s value should be assessed based on its level of completion, not on the finished product.

In a landmark case, the Illinois Central Railroad was under construction when the project was taxed at its finished value; Lincoln argued that an evaluation should have reflected the project at the half-finished stage, rather than the full investment. Because of the national influence that Lincoln held, this case set the stage for the continued quest for equitable assessment of property taxes in the years to come (Duff, 1960).

As the country grew, it was clear that the tax system could not equitably tax the complicated economy. By the late 1900s, a national shift to sales and excise tax reduced the reliance on property taxes. The intent was to reduce the burden taxes placed on homeowners and their intangible assets. Continual campaigning by three U.S. Presidents⁷ led to the adoption of the 16th Amendment, which allowed direct tax without apportionment and income taxes.

During the Great Depression, personal incomes dropped to levels never seen before. This catastrophic decline resulted in fiscal reform throughout the country. Because of the severity of the economic situation at the time, many states cut both sales and property taxes in an effort to stimulate the local economy. Further legislation by Congress, however, significantly curtailed revenue flow into the coffers, hurting rather than helping the movement away from property tax assessment as a revenue stream.

⁷Cleveland, McKinley, and T. Roosevelt.

The Volstead Act⁸ along with the 18th Amendment⁹ resulted in a cataclysmic drop in revenue from the loss of the alcohol tax. The amount of tax collected changed from substantial to nothing with the stroke of a pen. Cities, counties, and states that relied on this revenue found themselves in a quandry as to the best way to keep the “doors” of government open. Now that personal incomes were rising, the prevailing thought was that property taxes at the current rate would not be overly burdensome, so a movement to increase them began once again.

In 1933, prohibition ended the drought in libations and tax revenue. In 1932, the government collected no alcohol tax; in 1934, \$259 million were collected, and by 1939, the government enjoyed \$624 million¹⁰ in increased revenue from this single source (Moore & Gerstein, 1981).

However, even with the increased tax revenue from alcohol tax, property taxes remained essentially unchanged. In 1934, there was a dramatic increase in the number of taxpayer groups that wanted real tax reform. Among other demands, they wanted to narrowly define personal property taxes, eliminate taxation of intangible personal property, and introduce “circuit breakers,”¹¹ which would limit the percentage of one’s income that went toward property taxes.

After World War II, the growth of the economy with respect to personal income and property tax was on the rise; however, property taxes declined as a percentage of total revenue. The states that had not implemented property tax limits by the 1970s came under increasing pressure to do so. The pressure to have a fair tax system has always existed. However, it is not simply enough to have a fair tax system; the taxpayers need to understand that they are paying their fair share, and no more (Carlson, 2004; Clouser, 2005).

⁸ The **Volstead Act**, formally **National Prohibition Act**, reinforced the prohibition of alcohol in the United States. It was named for Andrew Volstead, Chairman of the House Judiciary Committee, which oversaw its passage. However, Volstead served as the legislation's sponsor and facilitator rather than its author. The Anti-Saloon League's Wayne Wheeler conceived and drafted the bill.

⁹ The **18th Amendment** of the United States Constitution, along with the Volstead Act, which prohibited “intoxicating liquors” (excluding those used for religious purposes) and sales throughout the U.S., established Prohibition in the United States. Its ratification was certified on January 16, 1919. It was repealed by the 21st Amendment in 1933, the only instance of an amendment's repeal. The 18th Amendment was also unique in setting a time delay before it would take effect following ratification and in setting a time limit for its ratification by the states.

¹⁰ Almost \$10 billion dollars when adjusted for inflation to reflect the value in 2010 dollars.

¹¹ A property tax circuit breaker is a tax relief program that is designed to prevent property taxes from “overloading” a household's budget by limiting the amount of property taxes paid based upon the total income of the household. The circuit breaker is often considered one of the simplest and most efficient means of providing property tax relief to those who need it most.

Property Taxation in the United States Today

Property tax, or millage tax, is an *ad valorem* tax that an owner pays per dollar of assessed property value. The rate is expressed in “mills,” where one mill is one-tenth of a cent (\$0.001). Property tax can be defined generally as tax imposed by municipalities upon owners of real property within the municipality’s jurisdiction based on the value of such property (Gifis, 1984).

The authority to legislate and administer *ad valorem* taxes rests with the states. States usually define, in very specific detail, the scope and requirements of real property tax law that is administered at the local level of government.

The assessed property value is usually based on market value or a percentage of market value. Real property is assessed at full market value or its equivalent in 20 states and at a percentage of market value in 15 states. Other states have schedules of land use classes for which different assessment market value percentages or differential tax rates apply; this is true in New Mexico.

In most states, some classes of property are fully or partially exempt from taxes, such as educational, religious, and governmental. Exemptions for homesteads and elderly, disabled, low income, or veteran taxpayers add to the complexity of tax administration and decrease revenue collections. The final, effective rate of taxation on a parcel of land may depend more on its ownership than its underlying value (Wunderlich, 1995).

Special-Use Value Assessment for Tax Purposes

Adam Smith, in his landmark 1776 book *The Wealth of Nations*, was the first to advocate income as the basis of taxation:

The subjects of every state ought to contribute toward the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state. (Smith, 1776)

Interpreting Adam Smith, Warren W. Finney (1930, p. 39) commented, “Taxes should be distributed among citizens according to their ability to pay, and ordinarily the fairest way to measure ability to pay is by income.”

Finney went on to say, “Taxation studies conducted on states have all had one common theme: all show that the farmer, in proportion to his ability to pay, is taxed more heavily than any other

gainfully employed group of American citizen.” A bulletin produced by the Great Plains Industrial Council condensed fair taxation to a concise statement when it wrote:

A good tax system furnishes adequate revenue, conforms to acceptable principles of fairness among taxpayers, and has as little adverse effect as possible on the production and free flow of goods and services. “The property tax constitutes a fixed cost to farmers and ranchers and increases the instability of their net incomes.” (Great Plains Industrial Council, 1963)

As the tax is a “fixed” charge, it cannot influence production decisions as to either method or intensity of use. The property tax favors the owner of personal property over the owner of real property. Real estate is always included in the tax base, while personal property is often overlooked (Finney, 1930).

The Public Range Improvement Act has the “ability-to-pay” concept embodied in the formula to calculate the fair market value (FMV) of a grazing fee on federal grazing land.

$$FMV = \frac{1.23 * FVI + (BCPI - PPI)}{100}$$

Where FVI represents the “Forage Value Index” as indicated by private grazing land lease rates plus the difference between an index of the price of beef cattle sold (BCPI) less the costs of the factors of production for producing beef known as the price paid index (PPI). The difference between the indices for prices received less the costs of production are referred to as the “ability-to-pay” component of the fair market value for grazing federal land (PRIA, 1978). The appreciated value of the extensive land base necessary to conduct a modern agricultural business, however, does not reflect the owner’s “ability to pay” property taxes (USDA-ERS, 1956).

Maryland established the first statewide use-value assessment program for agricultural property in 1956; Florida was the second state to adopt a program, in 1959. Between 1959 and 1969, another 19 states adopted some form of a statewide use-value assessment program. Currently, land uses receive some special-use valuation (SUV) treatment in assessment in all 50 states, tied directly to the income-earning value of land in agricultural production. Use-value assessment is the most widely used technique in the U.S. today for maintaining land in agricultural production (Wunderlich, 1995).

Three primary types of use-value assessment programs have evolved in the United States: SUV, deferred taxation, and restrictive agreements. Special-use valuation, which is used in New

Mexico, is based on agricultural income earning potential, with no penalties levied against the land or landowner if agricultural land is converted to non-agricultural uses. Other SUV states include Arizona, Arkansas, Idaho, Iowa, Kansas, Louisiana, Missouri, Montana, North Dakota, Oklahoma, West Virginia, and Wyoming (Chicoineet et al., 1983). South Dakota revamped its property tax system in 2010 to become the 43rd state to base their agricultural property tax system on productivity and income rather than unrealized market values for sales.

Most estimates conclude that over 60 percent of the private land in the 48 contiguous states is in farms and ranches. On average in the U.S., 75 percent of assets in a farm or ranch are land. Because of the amount of property included in this category, the fate of agricultural land is of vital importance to a large sector of the economy and to a large demographic group of Americans. Recent concerns with the future of food production in this country illustrate the fact that an economically viable land taxation program is in the best interest of all Americans (Dunford, 1986).

The justification for SUV treatment of agricultural land is based on the premise that “land rich and income poor” agriculturists have relatively low income in contrast to capital required for the enterprise. High outlay costs and high land taxes create a condition that is insufferable for those in agriculturally related enterprises. To further support the argument for SUV treatment, proponents argue that undeveloped land requires fewer public amenities on a per acre basis than residential or commercial land use (Clouser, 2005). Rapid growth and development bring with them the added burden of increased demand for public goods that may result in higher taxes for the public, whereas slower growth and retention of open land requires minimal public goods, or, more simply, “You don’t have to send a cow or an ear of corn to school” (Michos, 1991).

The American Farmland Trust conducted a 20-year study and determined that agricultural land produced less tax revenue per acre than urban land, but received only 37 cents back in services for every dollar of tax collected. Residential properties received \$1.19 in public services for every dollar paid in property taxes (AFT, 2009).

The primary goals of preferential tax treatment of agricultural lands are to preserve land for agriculture and timber production, and to protect ecological, recreational, and scenic resources. Relieving the economic pressure created by property taxes based on values incompatible with the preferred use is designed to accomplish these goals (Declaration of Purpose for the California Land Conservation Act, 1965; Declaration of Policy in Connecticut Gen. Stat., 1965; The

Declaration of Intent in N.H., 1956; The Tennessee Agricultural, Forest and Open Space Act, 1976).

Farm and ranch land is important not only because it supplies safe, locally grown food, fiber, and shelter but also because agricultural land supplies open space and room for multiple uses. The concern about uses and ownership of agricultural land is not limited to farmers and ranchers. A general concern about agricultural land use has resulted in widespread political support for laws and regulations to protect agricultural land use. With few exceptions, each state has one form or another of agricultural tax laws designed to promote and sustain agriculture (Schnidman, 1990). This SUV treatment reflects a strong public interest in land and its improvements (Anderson & Bunch, 1989).

Does Special-Use Valuation of Agricultural Property Work?

Published research vilifies agricultural land tax relief programs by advancing the theory that economic incentives using SUV tax treatment have only a minimal effect in preventing conversion of agricultural land to more intensive uses. Urban planners argue that tax reductions have not matched the profits available from subdivision or development. However, current research simply cites earlier studies that indicate there is a growing trend in agricultural land conversion (Malme, 1993). The 1987 census of agriculture clearly shows that in the five years since the initial report, decline in the number of farms (-6.8%) and acreage (-2.3%) nationally refutes the prevailing thought on this matter (USDA, 1987).

The language of Maryland's differential taxation law is unambiguous: It strives to prevent the forced conversion of farmland to more intensive uses because of economic pressures created by highest and best use assessment (Atkinson, 1977).

From an equity perspective, agricultural landowners may receive a lower level of community services, such as road maintenance, police, schools, fire, and emergency medical, compared to urban dwellers who own much less land.

Does use-value assessment always result in lower tax on agricultural properties as the opponents to this assessment method claim? As a case in point, intensively produced, high-valued commodities may result in higher assessments than less intensive and less valuable crops. The same could be true in areas with low potential for land development and low housing demand. Use-value assessment could result in higher values for tax purposes than land left idle, open space, or land owned by governmental bodies that is often tax exempt¹². As an example, in a rural county in New Mexico, orchard land is assessed in the \$1,500 range, farmland is assessed at \$1,000, and unimproved pasture is assessed at less than \$3 on a per acre basis under use-value assessment. A large, vacant parcel of land in a rural area in the same county, with poor soil conditions and not managed in any active manner, has an assessment value in the neighborhood of \$1,000 per acre. Therefore, even with use-value assessment, the orchard land would be

¹² The Department of the Interior reports on the acreage owned in each county of the U.S. through a system called Payment in Lieu of Taxes (PILT). PILT payments are made to compensate a local government for some or all of the tax revenue that it loses because of the nature of the ownership of a particular piece of real property. The land owned by the federal government is generally not subject to taxation by state and local governments. Under Public Law 94-565, enacted in 1976, the federal government began a program of making payments in lieu of taxation to local governments affected by this reduction in tax base. PILT payments averaged \$0.94 per acre in 2009 (DOI, 2010). In contrast, the potential property tax on land held by federal agencies represents a broad public interest in its values and uses. The USDA estimates that taxes on land held by the federal government within a state would yield an average of \$5.69 per acre in tax revenue. For revenue purposes, true taxation of government properties in a state would be the logical assessment choice (USDA, 2008).

assessed at a higher value, and farmland at approximately the same value as vacant land assessed at fair market value (Clayshulte, 2010).

While land/property can provide many useful functions, such as habitat and watershed value, it produces nothing by itself; income or useful products are only produced through the sweat equity of labor and management combined with land and capital, the other major factors of production (Clouser, 2005).

Fair Market Value

“Market price” is taken as a standard for administering the property tax. But what is market price? Historically, market prices are derived from an investor’s estimate or perception of the worth of a particular unit of property from the investor’s particular point of view¹³.

- To the landowner, taxes are an expense that must be covered (or lose the land), so the market price is determined net of taxes.
- To the public collection through government, the tax is a return on land.
- Full value of land (public and private) would be represented by the sum of market price and the value represented by the capitalized value of the tax.
- Lowering the tax raises the market price.
- Raising the tax lowers the market price, but the full value remains the same.
- Whatever the division between public and private portions of value, the quantity of land remains unchanged (Edelman et al., 1988).

Ratios of taxes to gross rents show that in some areas of the country, where urban pressures heavily impact agricultural land, taxes consume virtually all of the agricultural returns to agricultural land (as estimated by cash rents on farmland). Rational investors would hold such land only because they believe the non-agricultural potential is sufficient to warrant holding it (Adams & Mundy, 1991). Valuation of land according to its earning capacity is consistent with the policy of linking taxation to income derived from the land as opposed to the land’s speculative market value. The initial benefit can help farmers or ranchers stay in business by reducing their cost basis (through lower property taxes) and reducing regional cost differentials by taxing land at a similar basis throughout a state. The second benefit is easing development pressures and sprawl that may force the farmer or rancher to sell their land prematurely.

Taxes in Kansas, for example, are gradually absorbing the rental value of land, which means that farmers are, by degree, being deprived of their real property. If this tendency is not halted, taxes will eventually take all income from the land, and to take all income potential from property is equivalent to taking the property itself (England, 1991).

¹³ **Capitalization rate** (or “cap rate”) is the ratio between the net operating income produced by an asset and its capital cost (the original price paid to buy the asset) or, alternatively, its current market value. The rate is calculated

$$\text{Capitalization Rate} = \frac{\text{annual net operating income}}{\text{cost (or value)}}$$

In a 1935 publication, a study of tax delinquency on rural real estate in New Mexico was conducted by the Agricultural Experiment Station of the then New Mexico College of Agriculture and Mechanic Arts. This comprehensive study examined the effect that the Great Depression had on property tax collection in New Mexico. The study concluded that increased rural real estate taxes and agricultural enterprise failure were highly correlated. The study explains that because agriculture suffered catastrophic losses in the period from 1928 to 1932—totaling almost 64% of income—if cost items such as general property taxes levied on rural real estate had been reduced in proportion to the losses in farm income, farm tax delinquency and failure would have been relatively small. In addition, the percentage of rural farm property tax delinquency compared to commercial property tax delinquency was much higher, poignantly underlining the implication that rural real estate held in farm or ranch operations reacts swiftly and negatively to external economic shocks, and thus cannot be sustained with the added burden of static tax policy (Cockerill & Callaway, 1935).

When real estate taxes are keyed more directly to current earnings (i.e., net income), landowners are more responsive to government inducements to reduce outputs such as in the Conservation Reserve Program. The fixed real estate tax exerts pressure on the landowner to keep the land in use, thereby seeking the largest current profit, even though its future productivity potential may be impaired.

Relatively low taxes encourage landowners to conserve forage resources rather than “mining” the range resource through overgrazing to pay a heavy tax burden. A heavy tax burden stimulates the rapid development of land to higher-valued uses and discourages long run conservation investments in property that remains in rangeland.

Speculators, hedging on anticipated future increases in demand for land or anticipated higher net income, may have market values far out of line with the income potential of the property. Major adjustments in market value occur when income potential is not realized; this drastic market adjustment actually occurred in New Mexico from 1982 to 1985, with deeded rangeland values dropping over 16% (Torrell & Fowler, 1985).

Rangelands have a marginal ability to absorb input. In other words, sage plowing, herbicidal or mechanical brush control, water spreading, and intensive cross fencing rarely pay from an economic perspective due to low marginal responses of forage, which then is translated into pounds of calf. Even if the practice were successful, doubling output from six head per section to

12, the additional income from the calves raised per section over the life of the improvements rarely has the ability to pay for the cost of the improvements.

Ranches in New Mexico produce calves according to the “Law of Least Comparative Disadvantage.” This is where a neighboring state can out-compete New Mexico in the production of a commodity such as corn, as well as out-compete New Mexico in the production of calves per unit of area. However, following this logic, New Mexico is out-competed the “least” in calf production compared to corn production; thus, calves are produced instead of corn (Gray, 1968).

The primary difference between ranching and crop production through farming is the amount of land required. Cattle ranches require a vastly greater amount of land to yield the same revenue as farming. The amount of land required is calculated using carrying capacity, which is a long run estimate of the number of animal units that may be sustained on the ranch. Stocking rates are annual estimates of the number of animal units that the range can safely handle under the current climatic conditions (Holocek, 2000).

The determinant of carrying capacity is a measurement known as the animal unit month (AUM). The concept of the AUM has been useful in helping range and pasture managers work out sustainable carrying capacity rates for pastures under a wide variety of conditions.

By definition, the AUM is the amount of forage needed by an animal unit (AU) grazing for one month. This can be extended to an animal unit year (AUY), or the amount of forage needed by an AU for one year. The quantity of forage needed is based on the cow’s metabolic weight, and the AU is defined as one mature 1,000-pound cow and her suckling calf. It is assumed that such a cow nursing her calf will consume 26 pounds of dry matter (DM) of forage per day (20 lb for the cow and 6 lb for the calf) (Holocek, 2000).

The ranching sector in New Mexico is unique from all other ranching states in the western U.S. One of the primary differences is the amount of acreage required to graze an animal unit for a year (AUY). Table 1 presents estimates of various carrying capacities of rangeland in 10 western states and Texas. Essentially, it requires more than five times the acreage to graze one AUY in New Mexico (102.94 acres) as it does in Texas (19.01 acres). In fact, every western state except Nevada requires less acreage than New Mexico to graze one AUY. This is important for two obvious reasons: 1) A viable cow/calf operation running 300 head in New Mexico would require almost 31,000 acres, whereas a Texas ranch could run over 1,600 head on the same size ranch. 2)

The net profit potential for a ranch in Texas is over five times that of a New Mexico ranch of equal size.

Table 1: Estimated Carrying Capacity of Pasture Land by State

	Pastured Acres	Beef cattle	AUY/ acre	AUY/ section	AUM/ section	AUM/ acre	Acres/ AUM	Acres/ AUY
Arizona	40,509,000	763,000	0.019	12	145	0.23	4.42	53.09
California	21,729,000	620,000	0.029	18	219	0.34	2.92	35.05
Colorado	28,158,000	714,000	0.025	16	195	0.30	3.29	39.44
Idaho	25,416,000	440,000	0.017	11	133	0.21	4.81	57.76
Montana	46,361,000	1,494,000	0.032	21	247	0.39	2.59	31.03
Nevada	46,448,000	450,000	0.010	6	74	0.12	8.60	103.22
New Mexico	51,676,000	502,000	0.010	6	75	0.12	8.58	102.94
Oregon	23,239,000	535,000	0.023	15	177	0.28	3.62	43.44
Texas	98,263,000	5,170,000	0.053	34	404	0.63	1.58	19.01
Utah	24,339,000	338,000	0.014	9	107	0.17	6.00	72.01
Wyoming	44,323,000	694,000	0.016	10	120	0.19	5.32	63.87

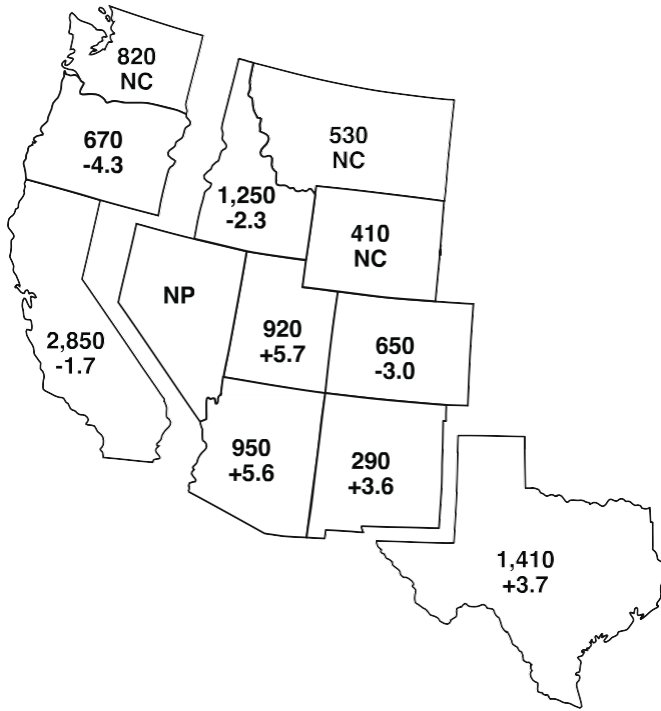
Source: NASS quickstats; Major Uses of Land in the United States, 2002

KEY: Cattle numbers = 2009. Pasture Data = 2002 in all states, except Arizona = 1997.

1-Does not include Beef cattle on Feed Lot

2- Pastured acres include private,state and federal, but exclusive of no capacity forest

The value of pastureland for the 10 western states and Texas in 2010 is displayed in Figure 1. Nevada (NP = non-published) did not have sufficient data to provide an average without disclosing the identity of specific entities. It is interesting to observe that the value of Texas pasture per acre was nearly five times (4.9) that of New Mexico pastureland, which closely correlates with the inverse pasture productivity ratio (5.4) between the states. The ratio of productivity for New Mexico to its surrounding states (Table 2) is consistent with the ratio value of pasture. This solidifies the relationship for a working ranch of correlating potential income to the productivity of the rangeland and resultant market value.



NASS: Charts and Maps – Land Values and Cash Rents, 2010

Figure 1: Pasture Value by State, 2010

Table 2: Inverse Productivity Ratio and Ratio of Pasture Value of Neighboring States to NM

Neighboring State	Productivity Ratio	Ratio of Value
Colorado	2.61	2.24
Utah	1.43	3.17
Arizona	5.42	4.86
Texas	5.42	4.86

Ranch Property Taxation in New Mexico

For assessment purposes, counties are typically divided into school districts, where individual parcels of land are “coded” for analysis. This coding specifies the school district, whether or not it lies in an incorporated town, and the area on a county map in which the parcel is located with its associated parcel number. Most districts classify land into three basic categories: 1) irrigated land, 2) dry-land farming, and 3) rangeland.

According to a 1965 report of county assessments of New Mexico agricultural properties, county assessors were asked to give their opinion of the assessment procedures in place at the time. The general consensus was that the procedures were weak in several areas and led to widespread inequality in assessments between counties. The short term of the assessors' appointment (two years) led to the opinion that there was not enough time to acquaint themselves with the office, and thus many irregularities took place that could have been avoided. In addition, the small staff employed by the office was inadequate for the task. A recommendation was compiled that emphasized the need for a standardized system of assessment coupled with more "boots on the ground" in order to remedy the existing inequalities (Gray & Gollehon, 1965).

In a direct response to this problem with respect to livestock grazing, General Order no. 33 was promulgated in 1977. A value for land and livestock was established within the property tax code¹⁴ that indicated the "class" of grazing land within each county of New Mexico. Each class, with its accompanying AU¹⁵ carrying capacity, was definitively outlined. Each class holds an alphabetic designation of A through G, which corresponds to a geographic location map for each county¹⁶. The production capacity of grazing land is determined by the income being derived from the use of the land for agricultural purposes (PTC 36-20:4, 1996).

Impact of Taxation on Profit Potential

The impact of the potential tax increase is a function of the type and size of the tax, as well as how it is administered. If a profit is defined as the difference between total revenues and total costs, it is essential that four distinct components be defined.

When $\pi = TR - TC$

Thus $\pi = P_y * Y - P_x * X$

Where π = Profit, TR = Total Revenue & TC = Total Costs

Then

1. P_y = Price of outputs
2. Y = Number of outputs
3. P_x = Price of inputs
4. X = number of inputs

¹⁴NMSA 1955 72-29-9 and 72-29-10 (supp. 1975) P.T.D regulation 29-9:4 effective 1/1/1975

¹⁵ Animal unit; the standard set by this general order adopted the common algorithm of 5 sheep or goats being equivalent to 1 cow, or 1 AU.

¹⁶ See "Grazing Capacities and Selected Factors Affecting Public Land Use," NMSU AES Research Report 158, 1969, p. 3 for map.

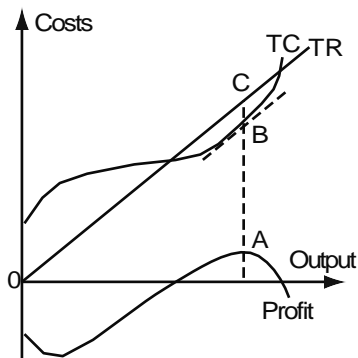


Figure 2: Total Cost-Total Revenue Curve

This straightforward relationship is useful in understanding the correlation between the number of animals (variable input) and stocking a unit of land¹⁷ (fixed input) in the production of calves (variable output). The variable output is calculated on a cow/calf operation as “pounds of calves sold”; on a steer operation it is termed “pounds of gain.”

The link between the variable inputs and the output of calves on a fixed land unit is described as the “Law of Variable Proportions.” This production function states that Y_{pounds} is a function of $X_{\text{mother cows}}$ and/or X_{steers} on a fixed unit of land (L). The physiology of the animal is incorporated in the Y_{output} and X_{input} component of the equations. Coupling the cost of the input (P_x) and the price you receive for selling the calves or steers (P_y) forms the basis for determining profit and the consequences associated with alternative forms of tax. The revenue side of the profit equation incorporates output (Y) and price of the output (P_y). A tax on the combination of either price (P_y) or output (Y) would be equivalent to a gross receipts tax where the gross receipts would be reduced by the amount of the tax.

Livestock tax is established for each class of livestock (e.g., cows versus bulls or heifers), as well as whether the animal is commercial grade or registered in each class. Considered a variable cost, livestock taxes fluctuate according to the number of animals in the herd. Visually consulting Figure 3, an increase in a variable cost would increase marginal costs (the cost to produce the next pound of calf per acre), resulting in the lowering of the optimal number of mother cows and the efficient number of pounds of calves produced per acre (Workman, 1986).

¹⁷ Either an acre or a section (640 acres).

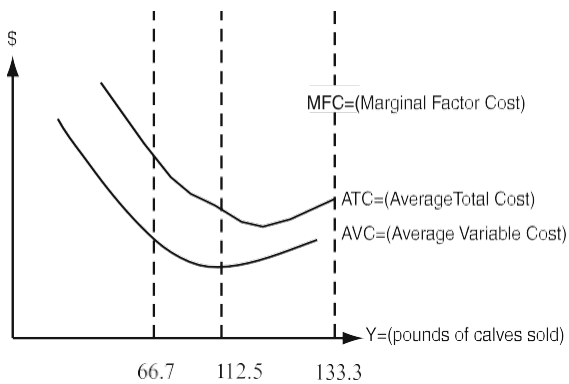
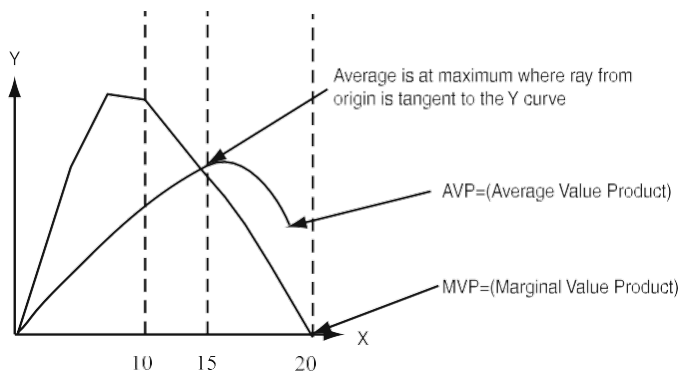
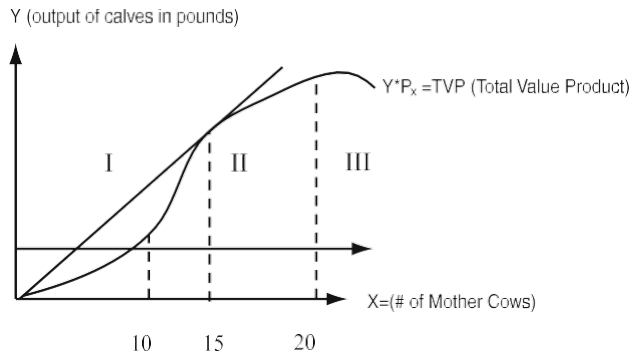


Figure 3: Total Value Product and Marginal Value Product Curves in Typical Factor Product Production Function

Livestock tax on classes of livestock, such as is levied in New Mexico, impacts the cost side of the profit equation and directly reduces profit. Further, as a variable cost, it has an additional

impact in the form of lowering the optimum level of production. The degree of the impact would depend on the slopes of the marginal revenue and marginal cost curves.

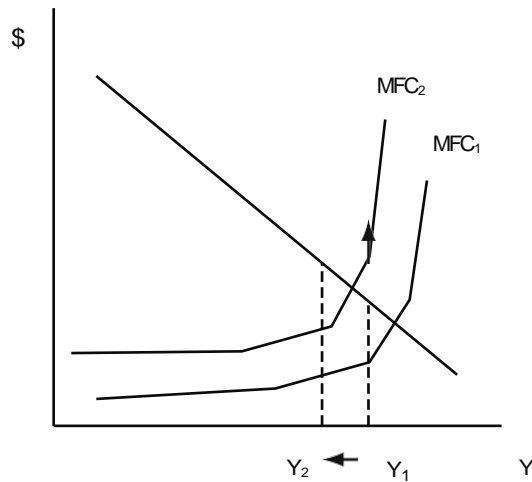


Figure 4: Marginal Cost Curve

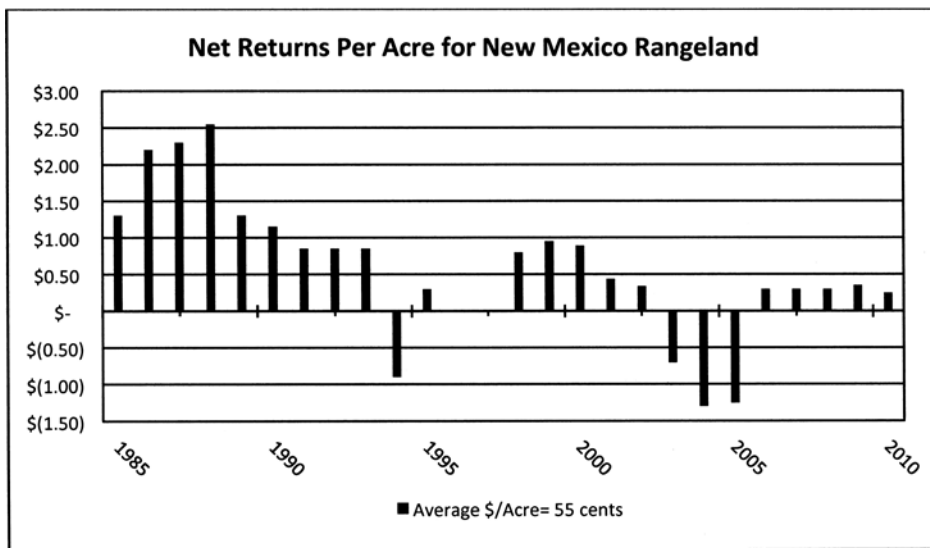
Increasing or decreasing exemptions on feedstuffs that are used to support the mother cow would also constitute changes in variable costs that consequently impact the marginal decision of production. The marginal decision is to keep adding inputs, or the variable factors of production, until the “marginal” or last unit of production just pays for itself. A more expensive feed would increase the marginal factor cost to MFC_2 , resulting in a lowered output of calves from the rangeland (Figure 4).

The property tax in New Mexico functions as a fixed cost on a per acre basis even though the fundamental basis is the productivity of the fixed input of rangeland or pasture. Property tax is derived from the “historical productivity” of the land, measured in AUMs per acre, reflecting the long-term carrying capacity of the parcel. To the operator, the property tax is “fixed” in nature and is paid as a flat tax regardless of the number of mother cows on the parcel. Because of the “fixed” nature of the property tax, the question of how many mother cows to stock does not enter the decision paradigm. It does, however, directly impact profitability because a fixed production cost, on a fixed land input, reduces the profitability of an enterprise by adding additional production costs. Changes in fixed property taxes thereby change profit per unit of land, but do not change the efficient level of input and resultant efficient output of pounds of calves produced per unit of land.

Although the fixed property tax has no effect on efficient output, it directly influences profitability in all but one situation: The property tax, if increased to the extreme of eliminating

all profit, would drive the property owner over the threshold and cause the enterprise to cease and desist operation. The decision to minimize loss or maximize profit occurs when all variable costs are covered and fixed costs are partially covered to minimize loss, or when all fixed costs and variable costs are covered to maximize profit. An increased fixed cost that pushes the enterprise past “zero profitability” would result in abandonment of the enterprise and the property as well as tax delinquency, or would require conversion to a higher valued use (typically known as development).

It is essential that we know the magnitude of the net profit per acre to determine an absolute upper limit of the property tax. A strong indicator of this figure is provided by determining the net ranch income per acre. This figure can be derived from the historic ranch budget (Hawkes & Libbin, 1986-2010). The average net ranch income before federal and state taxes, social security, Medicaid, and self-employment taxes are paid over the 25-year period is 55 cents per acre. The 25-year period incorporates two complete cattle price cycles, which reflects both peaks and troughs in the price cycle on the price of calves sold, and thus a representative net ranch income (Figure 5). This 55 cents per acre figure would function as an absolute upper limit for property tax on a representative ranch in New Mexico as described in the following section.



Data Source: Hawkes and Libbin Ranch Budgets, 1986-2010

Figure 5: Net Returns Per Acre for New Mexico Rangeland

Taxation Example on a Representative New Mexico Ranch

Livestock production in New Mexico is certainly not an easy proposition from either a financial or a production perspective. Many factors, including climatic conditions, price cycles, government policy, and input costs, produce annual fluctuations in financial performance.

This ranch example incorporates several assumptions about average tax liability that an operator will incur on federal, state, and local levels. The acreage associated with the ranching unit, number of deeded acres, carrying capacity, number and class of livestock, and purchased inputs are the most important parameters in determining tax liability through a comprehensive tax return on the federal and state level.

The assumption for this representative ranching unit will include a 50% deeded, 50% leased ranch comprising 25,600 total acres (or 40 sections), with a carrying capacity of 10 animal units (AU) per section, or 400 animal units all year long (AUY). The animal units for this study will be beef cattle placed in south-central New Mexico rangeland. Historical New Mexico range livestock cost and return estimates will be employed to develop production costs (Hawkes & Libbin, 1986-2010).

Projected Tax Changes for 2011

Taxes that are payable at the local level include gross receipts on consumptive items (excluding groceries), livestock ownership taxes, and property taxes on both residential and non-residential properties. A discussion of the methodology of each of these types of taxes may be useful for the reader. Gross receipts taxes are paid on a percentage of the overall cost of the item in question, excluding grocery items. An example of this may be the purchase of clothing: A tax of approximately 7% is added to the cost of clothing throughout most municipalities in New Mexico, though the gross receipts tax varies among municipalities in the state.

Livestock ownership taxes are paid at the county level and are based on indemnity rates associated with each class of livestock. These values are constant throughout the state for each class of livestock held. The total market value of the livestock is established annually by a panel at the state level; this value is divided by three to determine the taxable value for the current tax year. For example,

- If a beef cow were valued at \$900, her taxable value would be \$300 (New Mexico TRD, 2009).

- Taxes are assessed on property each year, with a state-mandated cap increase of 3% annually (New Mexico TRD, 2009).
- All classes of real property are considered, with most producers holding both residential headquarters taxed at market value as well as agricultural lands.
- These classes of property are taxed based on market value, taxable value, and a mill levy, which varies at the municipal and county levels.

It is important to note that the homesteads of ranches are taxed at the same rate as other residences in the county; as such, the SUV has no impact on the rancher/farmer homes.

Federal and State Taxation

There are taxes that accrue at the state and federal levels (e.g., fuel and income taxes). Fuel taxes are a regressive tax based on a consumptive value—the tax liability per gallon is held constant. The more fuel an individual consumes, the greater their tax expenditure will be at the federal and state levels. Agricultural producers may purchase fuel and have it delivered to their homes. As long as this fuel is only used in vehicles that will not be on state or federal highway systems, it is tax exempt. The most common example of this would be fuel used to operate a tractor.

Income taxes are payable on all profits gained in the operation of any kind business and are accumulated on a percentile basis relative to the profit or income level. These are progressive taxes at the federal level, where the percentage increases as the profit level rises. Seven states do not have a personal income tax assessment, and two other states only tax dividend and interest income. New Mexico residents, including livestock producers, are subject to personal income taxes.

Two scenarios were analyzed, one representing a ranch owner who has a mortgage on the property and the other representing a ranch owner who does not have a mortgage. If mortgage interest is paid during the year, the taxable amount of income will vary greatly based on the individual's ability to itemize deductions via a Schedule A. Those taxpayers who complete a Schedule A will reduce their taxable income level at both the federal and state level through the allowable deduction of mortgage interest.

The south-central New Mexico cattle ranch with 400 AUYS generated a hypothetical net income of \$68,750, assuming the ranch does not have a mortgage associated with it. Assuming a ranch mortgage is in place reduces the projected net income to approximately \$9,060. Thus, a mort-

gage of \$59,690 must be retired annually as part of the operating costs for this production unit. Net income was derived by employing market prices received and normal operating costs associated with livestock production in this region as reflected by cost and return estimates. Tables 3 and 4 reflect the level of taxation the producer can anticipate with respect to state and federal policies as they currently exist.

As shown in Table 3, the aggregate tax liability for a ranch with a mortgage for the 2006 tax year exceeded \$18,000, with a net profit level of just greater than \$9,000. This is the profit/income left to sustain the family after all business expenses. Clearly, income taxes do not play a dramatic role in overall taxation in this example, but the combination of property, self-employment, and livestock ownership taxes composes 86% of the total tax liability for the year. These cash costs have a direct impact on a business owner's ability to manage their business from both a financial as well as a productive point of view.

Table 3: Taxes Paid by New Mexico Livestock Producers (2006), With Mortgage

Type	State	Federal	Total	% of total
Gross receipts	\$722		\$722	4.0
Livestock ownership	\$1,185		\$1,185	6.5
Income	\$63	\$363	\$426	2.3
Property	\$4,800		\$4,800	26.2
Fuel	\$659	\$790	\$1,449	7.9
Self-employment		\$9,714	\$9,714	53.1
Total			\$18,296	

Table 4: Taxes Paid by New Mexico Livestock Producers (2006), Without Mortgage

Type	State	Federal	Total	% of total
Gross receipts	\$722		\$722	2.4
Livestock ownership	\$1,185		\$1,185	3.9
Income	\$3,359	\$8,959	\$12,318	40.8
Property	\$4,800		\$4,800	15.9
Fuel	\$659	\$790	\$1,449	4.8
Self-employment		\$9,714	\$9,714	32.2
Total			\$30,188	

Numbers in Table 4 are generated using the same criteria as in Table 3 but for a ranch that is currently not mortgaged.

The basic distinction between the two scenarios presented is that as net profit levels increase, income taxation begins to have a greater impact on the overall tax burden. Income taxes payable at the state and federal levels represent 41% of the tax liability for the tax year in the no mortgage example. The combination of livestock ownership taxes, property taxes, and self-employment taxes makes up 56% of the aggregate tax bill.

Taxation is an important part of the U.S. economy and has an impact on every citizen employed throughout the nation. Income taxes in the U.S. in 2006 were approximately \$6.5 billion (U.S. Census Bureau, 2007). This impact may be felt more intensely by those who own businesses, whether these are agricultural or not. The most significant difference that exists between taxation policies toward agribusiness and taxation policies toward other business is the additional levies against livestock ownership and the additional requirement of capital invested in real estate.

Summary

Special-use property taxation has been adopted in 43 states as of this writing. Real property is taxed in these states based upon income earned by the property rather than value in the marketplace that is realized only after the property is sold. State and local governments, suffering under recessionary economic conditions, are scrambling for additional sources of income to support existing infrastructure and services. Ranch properties are marginal properties with little ability to adjust quickly. The perfectly competitive market does not allow increased costs to be passed on to consumers, and profit margins are low, especially when compared to the amount of property required to achieve any degree of economy of scale (historically, the return on investment is 2 percent). New Mexico semiarid ranches are made of some of the least productive native rangeland due to the persistence of droughts. There are notable exceptions to this generalization, however, in the shortgrass prairies, high mountain meadows, and alluvial fed river bottom pastures.

It is necessary to refrain from increasing real property taxes, even if fixed in nature, so as not to affect the marginal decisions of the profit motivated ranch family. Fixed property taxes do, however, affect the amount of profit, and thereby reduce the ability to pay taxes and stay in business. Ranchers have traditionally lived on a non-cash basis, using accounting concepts such

as depreciation to survive drought troughs of the price cycle. Policy makers need to view the rangeland as the cementing fiber of the custom and culture of New Mexico, and not treat the industry as a “weed” to be poisoned.

Rangeland in New Mexico is already converting to higher taxed uses at an alarming rate; 1.5 million acres were shifted out of pasture from 2002 through 2007 (USDA, 2008). The increased market-assessed value and tax liability owed to the state and county governments, along with county and state “belt-tightening,” should be more than sufficient to overcome budget shortfalls to propel New Mexico through the economic downturn and not irreparably damage the stable agricultural industry and local communities it supports.

Policy makers should take heed from the lessons learned from the Great Depression and refrain from dramatically increasing taxes on the agricultural sector. The rural property tax delinquency rate was much higher than commercial tax delinquency after the Great Depression. The economic downturn currently experienced in New Mexico cannot be rectified by increased rural property tax for state and local government; investment in capital infrastructure may be facilitated by a stable tax burden and is an alternative path toward increased profitability, reduced delinquency, and state-generated income taxes.

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