

**TRANSYLVANIA COUNTY, NORTH CAROLINA**  
**FARMLAND PROTECTION PLAN**



*Prepared for the Transylvania County  
Agricultural Advisory Board*

**September 2009**

# ACKNOWLEDGEMENTS

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## EXECUTIVE SUMMARY

Protecting Transylvania County's 16,045 acres of farmland equates to future economic impact. Transylvania County's diverse agricultural industry constitutes 12.6 percent of the total economic activity in the County and employs 12.4 percent of its workforce. Farmland contributes more in property taxes than it requires in terms of the costs of community services received, and it provides much of the rural character that draws tourists and second-home owners to the County. Furthermore, farmland in Transylvania County helps to protect the environment as farmers employ practices that best manage the area's natural resources. The following Farmland Protection Plan provides an assessment of the County's existing agricultural industry, along with a set of actions designed to assist governmental leaders in protecting the future of this important industry.

Agricultural production in Transylvania constitutes approximately seven percent of County's total land mass, on which the following top crop and livestock items are produced:

Nursery Crops & Sod	Christmas Trees	Forage Crops
Vegetables	Trout/Aquaculture	Cattle & Calves
Laying Chickens	Horses & Ponies	Goats, Sheep & Lambs

The majority of Transylvania County's 279 farms are under 50 acres, report less than \$2,500 in annual income, and have part-time operators who, on average, are 57 years of age and claim primary employment off-farm. The major challenges to agriculture in Transylvania County include low profitability, farm management succession, high land prices, long distance to processing and marketing facilities, and scarce rental land. On the other hand, the most commonly cited strengths of Transylvania County agriculture are productive soils, mild climate, access to highway infrastructure, relatively short distance to a consumer base, geographically tied to local foods movement, and a strong tie to the heritage and culture of family farming.

The following actions are described in further detail in the Farmland Protection Plan:

- Set Enrollment Goals for the Voluntary Agricultural Districts.
- Establish an Enhanced Voluntary Agricultural District Program.
- Extend funding for the Community Development Agent Position in the Existing Transylvania County Extension Budget when funding permits.
- Develop a Land Lease Recruitment Program.
- Advocate for the Local Agricultural Industry both within and outside the County.
- Enhance Public Education and Awareness of Transylvania County Agriculture.
- Conduct Agricultural Impact Assessments before passing and/or implementing ordinances, plans, and policies in Transylvania County.
- Work with the municipalities of Brevard and Rosman.
- Include Agriculture as an Economic Development Focus Area in forthcoming Strategic Plans for Transylvania County.
- Support Evaluation of the Transylvania Tailgate Market.

The Farmland Protection Plan, in its entirety, is approved and supported by the Transylvania County Agricultural Advisory Board along with the North Carolina Agricultural Development and Farmland Preservation Trust Fund and recommended for approval by the Transylvania County Board of Commissioners.

## AGRICULTURE IN TRANSYLVANIA COUNTY – A NEED FOR ACTION

The purpose of this plan is to provide an assessment of the agricultural industry in Transylvania County, identify its challenges and opportunities, and develop a set of actions to assist government leaders in growing and protecting the County's agricultural industry. The recommendations of this plan are intended to encourage long-term policy formation in support of agriculture while providing a specific short-term framework to guide local programs regarding agricultural economic development and land use initiatives.

Transylvania County boasts a rich agricultural heritage. The French Broad and Little River valleys contain highly productive soil types in which farmers grow a diverse array of crops such as tomatoes, peppers, ornamental trees, sod and corn. The cool headwaters of the French Broad River support trout operations, while many mountain slopes are home to Christmas tree farms. Transylvania County farmers raise a variety of livestock, including hogs, sheep, goats, honeybees and layers (chickens for the production of eggs). Raising cow-calf pairs is one of the most traditional agricultural activities in Transylvania County wherein cattlemen raise their stock for wholesale at auction. Other cattle operations include raising replacement dairy heifers and, increasingly, finishing cattle to slaughter weight and selling the market-ready products directly to retailers and consumers. Many part-time farmers have used the production and sale of farm products to supplement their primary incomes and pay for children's college educations. Transylvania County is also home to Gaia Herbs, a producer of over 50 medicinal herbs for its line of plant medicines.

Although there are many economic forces challenging the agricultural industry today, farming maintains a significant presence in Transylvania County in terms of land use, economics, and social fabric. However, if the County intends to preserve its farms and all of the benefits those farms provide, it must protect farmland and strengthen the industry's viability in order to provide for future economic development. The County should provide economic, social, and political support on a continuous basis to expand existing programs and provide additional resources through Voluntary Agricultural Districts, economic development and planning, education and outreach, and political advocacy.

## DATA SOURCES

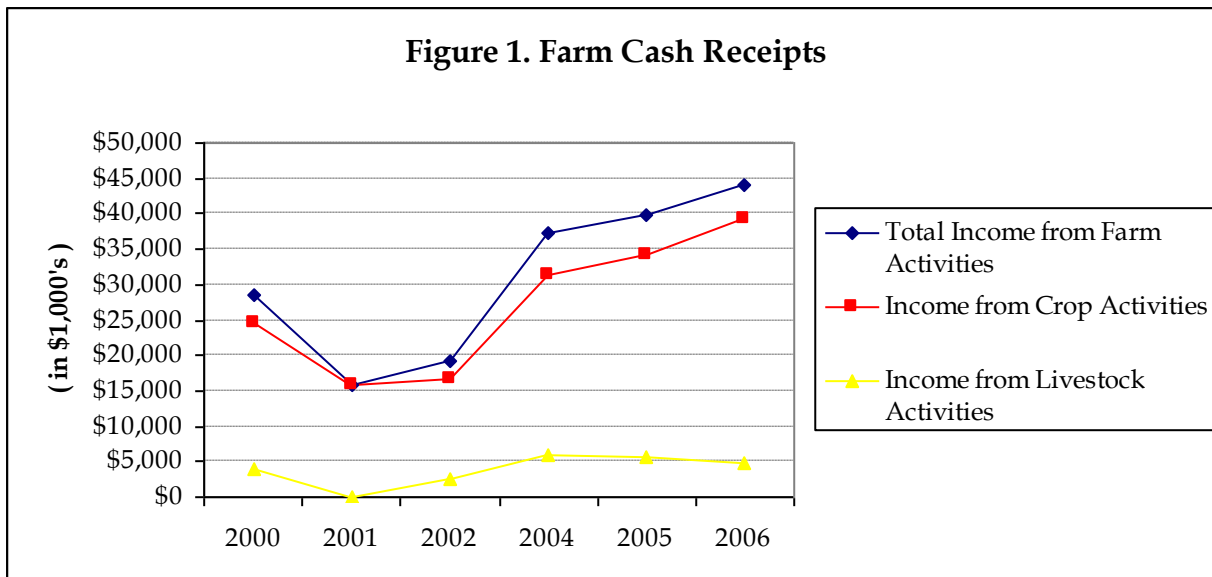
Data for this plan were collected from numerous sources. Statistical data related to non-timber activities were collected from the following three sources: Census of Agriculture, which is published every five years by the U. S. Department of Agriculture's (USDA) National Agricultural Statistics Service (NASS), and is compiled from surveys completed by farmers; an annual report published jointly by NASS and the N. C. Department of Agriculture and Consumer Services (NCDA) that is also compiled from surveys completed by farmers; and from a report published every three years by N. C. Cooperative Extension (NCCE) and N. C. State University (NCSU), which are estimates generated by County Extension Agents. County specific data was extruded from secondary sources including county tax records and District Soil & Water Conservation information. Demographic data was extruded from the US Census 2000. In addition to these and other technical reports, a focus group was held on March 3, 2009, to gather primary data from farmers who operate in Transylvania County, followed by one-on-one interviews with individual farmers and business owners throughout the county.

# THE IMPORTANCE OF AGRICULTURE TO TRANSYLVANIA COUNTY

## Economic Impact of Agriculture

Agriculture is a diverse industry characterized by hundreds of individual businesses of varying size and enterprise. Though most individual operations may, alone, appear insignificant, the cumulative contribution of Transylvania County's farms and the businesses they support substantially impacts the local economy. Farms and agribusinesses produce revenues, provide jobs, and generate sales and property taxes directly for Transylvania County. The households supported by these local farms and agribusinesses also contribute to the County's economic activity through expenditures for their families.

Farms in Transylvania County, on average, generate cash receipts in excess of \$30 million each year (see Figure 1). Dr. Michael Walden of N.C. State University uses data and software from IMPLAN, an economic research firm, to estimate the gross county product for each county in North Carolina. Gross county product is described as value-added, which is the production value of goods and services using inputs—material and labor—from a county. In 2006, the gross product for Transylvania County was \$637,050,000. Gross product for the agricultural industry in 2006 was \$80,058,360, or 12.6 percent of the County's total value added. In 2007 farms in the County employed 329 workers and had a payroll of \$2,662,000 (USDA, 2007). In 2006, agriculture and agribusiness—the manufacturing, wholesaling and retailing of food, fiber and forest products—combined to employ 1,552, or 12.4 percent of the Transylvania workforce (Walden, 2006).



Source: NCCE & NCSU

American Farmland Trust has conducted or reviewed 128 county-level studies that evaluate the contribution of property taxes and the consumption of public resources by land use type—residential, commercial, and agricultural. In all but one county, including five in North Carolina, the studies found that agricultural lands, even under the Present-Use Value tax program, contribute more in property taxes than they require in terms of the costs of community services they receive. A cost of community services study commissioned by neighboring Henderson County in 2008 reported that farmland in Henderson County generates \$1.03 in tax revenue for every \$1 it receives in government services

(Renkow). The agricultural land in Transylvania County likely contributes more to the local tax base than it takes from the County in terms of public services, a net gain to the County.

### **Rural Character and Heritage**

Farms and forests constitute the primary land uses in rural areas that provide scenic beauty and relief from urban proximity for residents and visitors. In addition to pleasing scenery, rural landscapes provide a connection to the history and the foundations for which local communities have been built. Today the remoteness and quietness of rural communities are serving to form a comparative economic advantage over urban and suburban communities as retirees and professionals who work remotely are seeking refuge from the confinements of large cities. Farmland is an invaluable asset to Transylvania County in this regard. A study conducted by Mathews (2008) at the University of North Carolina - Asheville investigated the importance and value of farmland to residents and visitors of Henderson, Buncombe, Haywood and Madison counties. The study revealed that farmland is important to both residents and visitors because of its contribution to scenic beauty, rural heritage, open space and as a source of food. Using two economic methods, the study found that both residents and visitors were willing to make annual contributions to pay for the protection of farmland.

In its nearly 150 year history, Transylvania County has been home to at least two families who have been recognized by the NCDA as Century Farm Families, meaning that at least five generations of those respective families have continually owned and operated farms in the County for over 100 years. Transylvania has also supported Future Farmers of America (FFA) chapters at both Brevard and Rosman High Schools since 1928 and boasted one of the first FFA programs in North Carolina to have a working farm on which students could apply the knowledge they gained in the classroom. Other youth leadership organizations, including 4-H, have provided educational opportunities and career development for young Transylvanians. Today, Transylvania County farms and its people who are involved in agriculture continue to play important roles in the social fabric of the area. Farms provide much of the scenic beauty for which the County has come to be known; they provide a growing portion of the foods that mindful consumers purchase through retail outlets, direct-markets, and restaurants; and they also support people who provide educational, support, and developmental services to fellow Transylvania County citizens through their community involvement both on and off farms.



Local Farmers Giving Back a Portion of Their Harvests for "God's Acre" Circa 1940

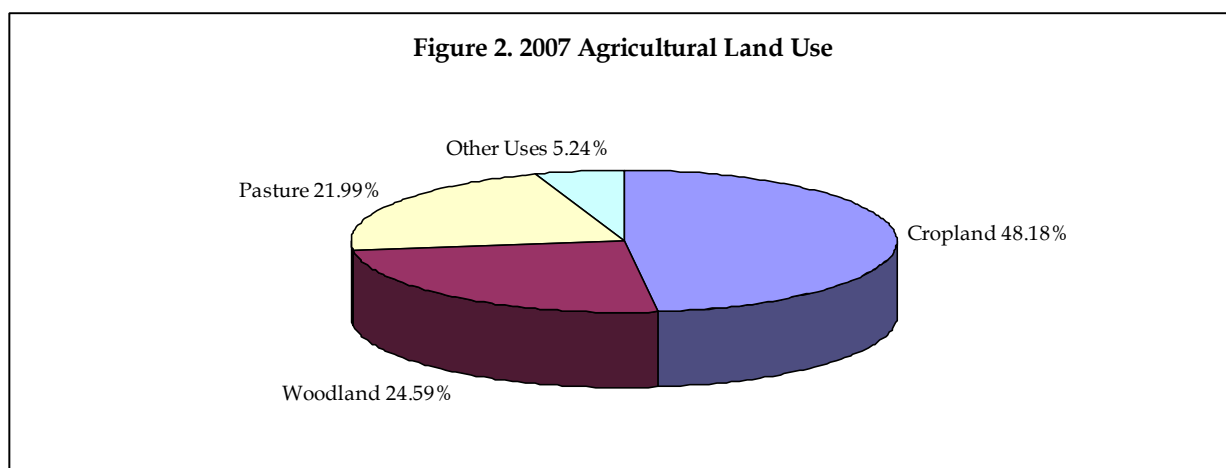
### **Ecological Benefits**

Farm and forestland provide many environmental benefits and eco-services to the public, including storm water retention and filtration, flood control, air filtration and wildlife habitat. In the past, agriculture contributed its share of air and water pollution; today, however, farmers employ numerous Best Management Practices (BMPs) to protect soil, water and air quality. The Transylvania Soil and Water Conservation District reports that since 1999, at least 62,570 tons of soil – which equates to over 5,000, 12-ton dump truck loads – have been saved from erosion and 257 tons of animal waste have been contained (Parker, 2009). The Natural Resource Conservation Service and the Transylvania Soil and Water Conservation District provide financial and technical assistance to farmers who implement BMPs that protect streams from erosion and pollution run-off from livestock operations. Livestock are

managed using a system of practices that includes exclusion fencing, watering tanks, heavy use area protection, feed/waste storage buildings, stock trails, stream crossings and cross fencing for rotational grazing. Other practices like road stabilization, stream bank stabilization and pasture renovation are directed at controlling erosion. Other BMPs used to protect water quality from the effects of agricultural operations, such as riparian buffer enhancement, also improve wildlife habitat.

## THE STATE OF AGRICULTURE IN TRANSYLVANIA COUNTY

In 2007, Transylvania County had 16,045 acres of land in farm use, representing seven percent of all the land mass in the County or twelve percent of all privately owned land. Figure 2 shows the distribution of land in farms for 2007 by use, which included 7,730 acres of cropland, 3,945 acres of woodland, 3,528 acres of pasture land, and 841 acres in other uses.



Source: 2007 USDA Census of Agriculture

### Agricultural Production (USDA 2007<sup>3</sup>)

Table I lists the top agricultural items in terms of acreage and inventory produced in the Transylvania County in 2007, along with respective state rankings as compared to the other 99 counties in North Carolina. Cattle led the livestock numbers with 4,262 units raised on 104 farms. In order to support cattle and other livestock, farmers utilized 2,613 acres for growing forage crops. Transylvania County is one of the top ten producers of ornamental crops including nursery stock and sod. Not included in Table I (due to the concentration of production on small acreage), but extremely important to the agricultural industry in Transylvania County, is aquaculture – primarily trout production.

Transylvania is home to 14 trout operations and ranks third in the state for aquaculture with sales of over 1.1-million pounds of trout valued at more than \$3.1 million. Transylvania County ranks 12<sup>th</sup> in cut Christmas trees and short rotation woody crops with 26 Christmas tree farms that cut and sold 5,760 Christmas trees 2007 (Ibid).

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<sup>3</sup> Unless cited otherwise.



**Table I. Top Crop & Livestock Items**

<b>Top Crop Items</b>	<b>Acres</b>	<b>State Rank</b>
Forage land	2,613	66
Nursery Stock	977	7
Sod Harvested	(D) <sup>a</sup>	5
Corn for silage	353	33
Vegetables harvested, all	260	51

<b>Top Livestock Inventory Items</b>	<b>Number</b>	<b>State Rank</b>
Cattle & calves	4,262	52
Layers	877	64
Horses & ponies	493	58
Goats	226	81
Sheep & lambs	193	48

*a: Cannot be disclosed*

*Source: 2007 Census of Agriculture*

#### **Farm Statistics and Trends (USDA 1997, 2002, 2007<sup>4</sup>)**

Table II summarizes figures on the number and size of farms in 1997, 2002, and 2007. In the past ten years, the number of farms has increased while the area of farmland has risen and fallen. Between 1997 and 2007, 105 new farms were established in Transylvania County, raising the total number of farms to 279. During the same time period, the total area in farmland increased by 3,370 acres to 16,045 acres; however, in 2002 Transylvania had 18,171 acres in farmland, indicating a decrease of 2,126 acres between 2002 and 2007. The median size of farms grew by nearly one-third (from 31 to 40 acres) between 1997 and 2002, but shrunk by almost one-half (to 21 acres) between 2002 and 2007. The average value of land and buildings increased on a per acre basis between 1997 and 2007 from \$4,382 to \$7,345. However, because the median size of farms has decreased so significantly, the average value of land and buildings at the farm level decreased between 2002 and 2007 after increasing between 1997 and 2002.

**Table II. Farm Statistics**

<b>Year</b>	<b>2007</b>	<b>2002</b>	<b>1997</b>
Number of farms	279	256	174
Land in farms (acres)	16,045	18,171	12,675
Median farm size (acres)	21	40	31
Average value of land & buildings (per farm)	\$422,408	\$433,673	\$317,525
Average value of land & buildings (per acre)	\$7,345	\$6,417	\$4,382

*Source: Census of Agriculture*

<sup>4</sup> Unless cited otherwise.

Tables III and IV, respectively, demonstrate the distribution of farms by annual income and by acreage. In 1997, farms earning less than \$2,500 per year comprised 34 percent of all Transylvania County farms; this segment increased significantly to constitute 52 percent of all Transylvania farms by 2007. It is likely that most of the 85 new farms earning less than \$2,500 per year were among the 105 farms established during the past ten years, many of which may be considered hobby or lifestyle operations. Not all growth was observed in low-revenue farms however, as the number of farms earning \$100,000 or more increased from 11 in 1997 to 21 in 2007. The majority of farms in Transylvania are considered small in terms of acreage; 74 percent of all farms in the County operated on fewer than 50 acres in 2007 and 60 farms (22 percent) operated on fewer than ten acres. No farms in Transylvania County reported operating on over 1,000 acres, and only three reported operating on more than 500 acres.

**Table III. Distribution of Farms By Annual Income**

<b>Year</b>	<b>2007</b>	<b>2002</b>	<b>1997</b>	<b>Change from 1997 to 2007</b>
Less than \$2,500	144	115	59	85
\$2,500 to \$4,999	33	41	28	5
\$5,000 to \$9,999	27	23	32	(5)
\$10,000 to \$24,999	22	39	26	(4)
\$25,000 to \$49,000	21	12	10	11
\$50,000 to \$99,999	11	6	8	3
\$100,000 or more	21	20	11	10

*Source: Census of Agriculture*

**Table IV. Distribution of Farms by Size**

<b>Year</b>	<b>2007</b>	<b>2002</b>	<b>1997</b>	<b>Change from 1997 to 2007</b>
1 to 9 acres	60	31	20	40
10 to 49 acres	145	133	86	59
50 to 179 acres	50	68	54	(4)
180 to 499 acres	21	21	11	10
500 to 999 acres	3	3	3	0
1,000 or more acres	0	0	0	0

*Source: USDA Census of Agriculture*

Agriculture has been a growth industry in Transylvania County as seen in Table V, which summarizes cash revenue for the years 1997, 2002 and 2006. Caution should be taken when viewing annual revenue however, because the figures are subject to significant volatility due to both climate and market fluctuations. From 1997 to 2002 revenue increased by 11 percent, or from \$17,415,670 to \$19,342,300 (NCCE and NCSU 1997, 2003, 2007). This growth, driven by a 28 percent increase in the revenue from crop products, offset the 40 percent decrease in revenue from livestock sales. Total revenue from 2002 to 2006 increased by 127 percent to \$43,992,300, which was led again by revenue from crop sales that grew by 133 percent to \$39,244,000 (Ibid). The aforementioned growth in cash receipts was derived in

the markets for nursery crops and sod, which benefited from the real estate boom and has been adversely impacted by the recent decline in the housing market. Livestock sales rebounded from the previous period increasing by 87 percent to \$4,748,300 (Ibid).

**Table V. Annual Cash Revenue from Agricultural Products**

Year	2006	2002	1997
Revenue from crops	\$39,244,000	\$16,800,600	\$13,174,034
Revenue from livestock	\$4,748,300	\$2,541,700	\$4,241,636
Total revenue	\$43,992,300	\$19,342,300	\$17,415,670

Source: NCCE & NCSU

### Farmers (USDA 1997, 2002, 2007<sup>5</sup>)

Given the large portion of farms earning less than \$5,000 annually, it is not surprising that 180 of the 279 farmers list farming as their secondary occupation. Table VI summarizes occupation and age figures of Transylvania farmers for the years 1997, 2002 and 2007. Not only were most respondents part-time farmers, the number of farmers listing production agriculture as their primary occupation has decreased by 19 since 2002. The population of part-time farmers has steadily risen over the past decade; the increasing number of vendors participating in the Transylvania Tailgate Market and anecdotal evidence suggest the increase may be due, in part, to seasonal farmers and gardeners. Whether farmers report being full-time or part-time operators is neither indicative of their contributions to household income nor the importance of their contribution. The average age of farmers held constant at 56.7 between 2002 and 2007, but an aging farmer population is the trend across the United States and the rest of North Carolina. In fact, growing concern over the aging farm operator population, coupled with the low numbers of young successors has been cited as a challenge to agriculture in North Carolina that needs to be addressed within the coming decade (Whitmire, 2007).

**Table VI. Farmers**

Year	2007	2002	1997
Number of farmers with farming as primary occupation	99	118	62
Number of farmers with farming as secondary occupation	180	138	112
Average farmer age	56.7	56.7	N/A

Source: USDA Census of Agriculture

### Challenges and Threats

Agriculture in Transylvania County faces numerous challenges, including low profit margins, lack of young successors, and the limited availability of farmland for purchase and/or lease. The challenges to farmers in the County and their strengths are summarized in Table VII. Most of the farmers who provided primary data for this project cited profitability as either a direct problem or the underlying cause of other challenges. The typical cause of low profitability is high production costs relative to wholesale prices. Small-scale and part-time farms that market directly to consumers typically receive higher retail prices for their goods, but generally lack the volume to operate as full-time farms or

<sup>5</sup> Unless cited otherwise.

generate over 50 percent of their household's incomes. The current agricultural marketing and production infrastructure systems favor very large farms that can produce the volume necessary to survive on low profit margins; however, for the size and scale of the majority of Transylvania farms, the current infrastructure does not fit.

The long-term viability of agriculture in Transylvania County is threatened by the lack of young people starting new operations or taking over existing farms. For the past few decades young adults have been given more opportunities to pursue post-secondary degrees and find professional work. For those youth who do not attend a college or University, many have found employment opportunities with service and trade occupations. In both situations, the opportunities equate to a lifestyle that involves less risk and more income than working full-time in production agriculture. Although children of farmers express sentiment for their family's farm and would like to see it remain in operation, many do not choose to take over management of the farming operations. In some instances, the farm is sold by the older generation farmer, or the land is bequeathed to heirs who, in turn, often divide and sell it. Conversations among agricultural activists indicate that there is renewed interest in farming among young adults; however, most do not seem to be coming from farming families and thus have no land to start an operation. Some of the related challenges include identification and selection of successors, aligning the strategic plan for the operation with the succession plan, assessing current and future farm operator knowledge and skill requirements, and gap training to successfully transition farmland from retiring operators to their chosen successors (Whitmire, 2007).

Both the high price and limited availability of land to purchase and/or lease for agricultural production purposes poses a significant threat to the future of farming in Transylvania County. Rental land for pasture, crop and forage has become scarce for those seeking additional acreage, and land for sale in the County is generally priced for its "highest and best" use, which is generally considered development, either residential or commercial. Both the limited availability of land and its high cost may be partially attributed to the popularity of Transylvania County as a place



to retire and/or own a second home; 15 percent of the homes in the county are for seasonal, recreational, or occasional use (Census, 2000) and 26 percent of the tax bills for improved land in Transylvania are mailed to addresses outside of the County (Transylvania County Tax Records, 2008). Residential development has consumed a significant amount of farmland and, subsequently, increased the value of remaining land to the point that farm revenues are often unable to cover the purchase costs. In 2007, the average net income for all farms in Transylvania County was \$75 per acre; in 2002, it was \$309 per acre (USDA, 2007). Land in the County's floodplains, which cannot be developed but is influenced by market prices of developable land, is regularly priced at \$10,000 per acre on the real estate market. Considering a theoretical annual interest payment of \$500<sup>6</sup> on an acre of floodplain, purchasing land at current market prices is clearly not feasible for an agricultural operation. Thus, the price of farmland compounds the problems of the aging farmer population and farm scale because

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<sup>6</sup> Based on a 5% interest rate

beginning farmers have difficulty purchasing land initially, and existing farmers are limited on purchases of land to expand their operations.

Another challenge for Transylvania farmers is the long distance to marketing and processing facilities. There are no crop or livestock wholesale or processing facilities in the County. The closest livestock auctions are at least 40 miles away, and the nearest NCDA or USDA-inspected slaughter/processing facility is a two-and-a-half hour haul and at least 60 miles from Transylvania County. Farmers growing grain have to haul their product over 50 miles into South Carolina, or pay freight to have it picked up at the farm. Neighboring counties of Haywood and Henderson have the closest facilities for trout processing and produce packing, respectively. The distance away from infrastructure results in higher transportation costs that must be either passed along to consumers or absorbed into an already slim profit margin of a farm’s operating budget. Overall, marketing and processing facilities for other types of agricultural commodities require transporting products at least an hour to have them processed, packed, and/or distributed.

Farmers cite lifestyle as a reason for remaining active in agriculture. The revered farmer’s way of life, though, is under threat from new neighbors who are unfamiliar with the characteristics of production agriculture and complain about noise, odor and the slow movement of traffic due to farm equipment on the roads. These conflicts often arise because new residents do not recognize the connection between farming operations and the bucolic scenery that may have attracted them to Transylvania County in the first place. The conflicts not only taint the quality of life farmers experience, they can also become costly when litigation ensues.

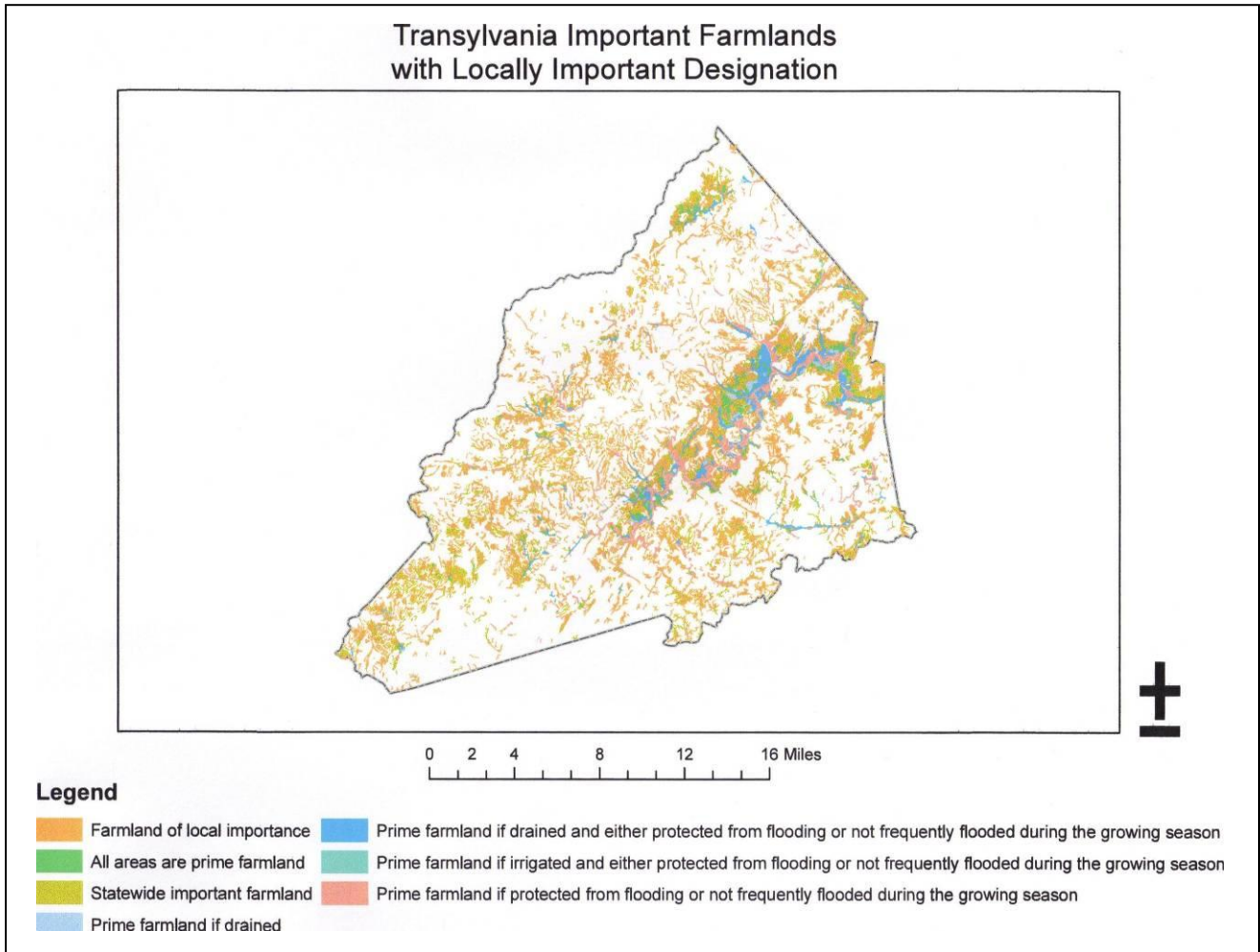
**Table VII. Challenges and Opportunities**

<b>Challenges &amp; Threats</b>	<b>Strengths &amp; Opportunities</b>
Profitability: High production costs and low wholesale prices	Productive soils: Ability to grow a variety of crops to support a variety of livestock
Farm transition: an aging farmer population; few replacement farmers	Mild climate: Suitable temperatures, ample rain and sunshine for growing season
High land prices	Highway infrastructure: Relative proximity to Interstates 26 and 40
Long distance to wholesale and processing facilities: High transportation costs relative to product value	Relatively short distance to consumers: Within a one-day drive of 50% of the US population; transportation costs could be greater.
Conflicts with non-farm neighbors	Local food movement: Especially beneficial to small-scale farms who direct-market products
Scarce rental land	Strong tie to heritage and culture of family farming

**Strengths and Opportunities**

Transylvania County is endowed with assets that are strengths for the agricultural industry. A fundamental component of farming is soil, and Transylvania County has some of the most productive soils in the world, including: 18,503 acres of prime farmland; 14,203 acres of farmland of statewide importance; and 39,592 acres of farmland of local importance (USDA, 2009) (see Map 1). Transylvania County has a climate that complements the soils, receiving an average of 77 inches of rainfall each year and 212 days of sun. The physical and climactic attributes of the County combine to form an

environment suitable for a diverse agricultural industry that produces trout, Christmas trees, herbs, fruits and vegetables, sod and ornamentals, and livestock.



Transylvania County is located within a day’s drive of 50 percent of the American population. The comparative advantage of location is characterized by fresher farm products and lower transportation costs. If transportation costs continue to rise, then it is likely that demand for products grown in Transylvania County will increase.

Selling crop and livestock products locally may be the greatest opportunity for Transylvania County farmers. Interest in and the demand for locally produced food is increasing throughout the region, as is evidenced by the expansion in the number of tailgate market vendors; the continued growth of two community supported agriculture (CSA) projects, one of which is operated within the jurisdiction of the City of Brevard; and the establishment of grocers specializing in locally-grown food products. Poppies Gourmet Farmers Market, located in Brevard, is evidence of consumers’ interest in and preference for locally-grown foods and food products. Restaurants are also featuring more local foods, and a number of Brevard restaurants feature local produce seasonally on their menus. Research by the Appalachian Sustainable Agriculture Project (ASAP) indicates that there is more demand for local food than is currently produced and that the region has the capacity to increase the supply of locally-grown

food. However, the research also indicates that there are barriers to local markets like distribution systems, infrastructure, prices and training for farmers.

## FARMLAND PROTECTION POLICIES & PROGRAMS

Present-Use Value Tax Program Present-Use Value, or PUV, is a program established in 1973 by N.C.G.S. §§ 105-277.2 to .7 and administered by the county assessor through which qualifying property can be taxed based on its use as agricultural, horticultural, or forest land rather than for its highest and best use. The objective of the program is to keep the family farm in the hands of the family farmer. The present-use value of a parcel is determined by the quality of its soils. The NC Use-Value Board sets the value schedule based on the rent a parcel could receive given its soils and its use for agriculture, horticulture or forestry. Qualifying property is assessed at its present-use value rather than its market value. Deferred taxes are the difference between the taxes due at market value and the taxes due at the present-use value. Deferred taxes for the current year plus the previous three years will become due and payable with interest when a property loses its eligibility in the present-use value program.

- Basic Requirements
  - Minimum acreage of production land:
    - 10 acres for agricultural use
    - 5 acres for horticulture use
    - 20 acres for forest use.
  - Production must follow a sound management plan.
  - Agricultural and horticultural land must have at least one qualifying tract that has produced an average gross income of at least \$1,000 for the 3 years preceding the application year.
  - Forest land use must follow a forest management plan.
- Benefits
  - Protection from increasing land values that are based on development potential and the potential increase in property taxes.
- Current Enrollment
  - Horticulture. 634.45 acres
  - Agriculture. 6,731.55 acres
  - Forestry. 27,220.34 acres

More information can be found at <http://www.dor.state.nc.us/publications/property.html> or by contacting the County Assessor.

Voluntary Agricultural Districts (VAD) Established by N.C.G.S. §§ 106-737 to 743 and administered at the county level, Voluntary Agricultural Districts are designated areas where commercial agriculture will be encouraged and protected. The purposes of the districts are to increase identity and pride in the agricultural community and to increase protection from nuisance suits and other negative impacts on properly managed farms.

- Requirements
  - Land must be enrolled in the Present-Use Value program or otherwise be determined to meet the qualifications of the program.
  - The landowner must enter into a revocable agreement to limit development for a 10-year period.

- Benefits
  - Notification to buyers of nearby property that they're moving into an agricultural area.
  - Abeyance of water and sewer assessments.
  - Public hearings on the condemnation of farmland
  - Stronger protection from nuisance suits.
  - Representation by an appointed board regarding concerns on threats to the agricultural sector.
- Current Enrollment
  - 27 farms encompassing 2,228 acres of farmland

Enhanced Voluntary Agricultural Districts (EVAD) Established by N.C.G.S §§ 106-743.1 to .5, an Enhanced Voluntary Agricultural District is a VAD formed of one or more farms that are subject to an IRREVOCABLE ten-year agreement to limit development. In return for the condition of irrevocability the landowner receives the added benefits of being able to receive 25 percent of gross revenue from the sale of non-farm products and still qualify as a bona fide farm, and becomes eligible to receive up to 90 percent cost-share assistance from the NC Agricultural Cost Share Program. Transylvania County does not have an EVAD program.

Land Use Policy Local governments within Transylvania County have adopted land use policies intended to protect farmland and other open spaces. The City of Brevard's Focus 2020 plan and the Comprehensive Land Use Plan both call for the protection of farmland within the City's planning jurisdiction through conservation easements and through policies and regulations that steer development away from agricultural lands. Transylvania County and the City of Brevard have incorporated agricultural exemptions into most local land use regulations, and the City promotes density and conservation design in new development.

Conservation Easements A conservation easement is a written agreement between a landowner and a qualified conservation organization or public agency under which the landowner agrees to keep the land available for agriculture and to restrict subdivision, non-farm development and other uses that are incompatible with commercial agriculture.

- General Information
  - Cash payments in the range of \$20,000 to \$40,000 are needed to cover the costs of the transaction. These costs are for legal services, a survey, an appraisal, long-term stewardship services provided by the conservation partner, and other miscellaneous activities. In some cases grant funds will cover these costs.
  - A portion of the property can be left out of the easement, thereby providing an area for future homes and other non-farm activities.
  - Agricultural activities, including forestry, are allowed under the agreement.
  - Despite the term "easement" access to the public is not provided by the agreement.
  - The value of a conservation easement is determined by a licensed land appraiser and is typically between 25 percent and 75 percent of the land's market value.
  - A periodic inspection of the property is required to ensure that development does not occur. This provision will be included in the agreement.
  - The agreement is recorded on the county's land records and runs with the title. All future landowners must comply with the terms and conditions of the agreement.
- Financial Benefits



- If the conservation easement is donated then the landowner will likely qualify for a federal income tax deduction and a state income tax credit. The value of these benefits depends on the appraised value of the easement and the income tax situation of the landowner.
- A conservation easement can also be sold by the landowner through a transaction commonly referred to as a Purchase of Development Rights (PDR), or Purchase of Agricultural Conservation Easement (PACE). Funds to purchase a conservation easement can be raised from private and government sources. North Carolina and the federal government have programs to purchase agricultural conservation easements. Funding through these programs is very competitive and will generally amount to a percentage of the easement's value. The tax benefits described above can be claimed for any of the easement's value above the purchase price.
- Conservation Easements in Transylvania County
  - Three farms in Transylvania County have been preserved with conservation easements. An easement on a conservation easement on a fourth farm is under development.
  - In 2007 and 2008, the Transylvania County Farm Bureau pledged to donate \$5,000 each year to assist with the transaction costs of a conservation easement for a total of \$10,000.
  - In 2007 and 2008, the Transylvania County Board of Commissioners appropriated \$15,000 each year to the Agricultural Advisory Board for a total of \$30,000 to assist with the transaction costs of a conservation easement.

Term Conservation Easements Also called Agricultural Agreements, these easements are similar to conservation easements but apply for a finite period of time agreed to by the landowner and conservation partner. There are no organizations currently accepting term conservation easements on properties in Transylvania County.

Transfer of Development Rights A program set up by local units of government that utilize conservation easements to preserve farmland by providing incentives to increase development density in designated area. The program identifies the "sending area" where conservation is being encouraged and the "receiving area" where development is preferred. A landowner in the receiving area can purchase a conservation easement on a property in the sending area and receive additional density allowances. In North Carolina counties must receive authorization from the General Assembly to develop and implement a TDR program.

Farm Transition Planning Making careful plans for the transfer of ownership of farm property and assets from the current owner to the next can be enough to preserve a farm for decades. Many options are available when planning an estate or land transfer. Farm owners can increase the likelihood of a successful transition that maintains the viability of the farm by obtaining professional assistance early in the process. The NC Farm Transition Network provides educational and technical resources to professionals and landowners.

Right-to-Farm Law North Carolina has a state right-to-farm law (N.C.G.S. §§ 106-700 to 701(2006)) protecting farm and forestry operations from being declared a nuisance as long as they have been in operation for at least one year and are operated properly and without negligence.

NC Agricultural Development and Farmland Preservation Trust Fund N.C.G.S. § 106-744(c) established a trust fund to be administered by the Commissioner of Agriculture. The purpose of the

trust fund is to provide monies to purchase of agricultural conservation easements and to fund programs that promote the development and sustainability of farming, and the transition of existing farms to new farm families. Counties and nonprofit conservation organizations can apply for grants for these purposes. The General Assembly appropriated \$8 million to the trust fund for the 2008 fiscal year and \$4 million for the 2009 fiscal year. In 2008 Carolina Mountain Land Conservancy (see below) received a grant from the trust fund to purchase a conservation easement on a farm in Transylvania County.

## RECOMMENDED ACTIONS

The recommended actions described here involve multiple County departments and boards. It will be incumbent upon the Agricultural Advisory Board (AAB) to provide leadership and oversight to the implementation of these actions. It will also fall upon the AAB to evaluate the impact of each action and to revise the plan as challenges to and opportunities for agriculture in the County evolve. The actions and a proposed schedule for implementation are summarized in Table VIII.

Set Enrollment Goals for the Voluntary Agricultural Districts As described above, a VAD can serve to increase identity and pride in the agricultural community and to increase protection from nuisance suits and other negative impacts on properly managed farms. The VAD can also serve to organize the agricultural community, strengthening solidarity and providing a mechanism for farmers to speak with a unified voice. Promoting the VAD and setting enrollment goals will expand the program and improve farmland protection.

*Implementation:* In 2010 the AAB should set a goal for enrolling farms into the VAD and develop strategies to meet the goal. The initiative should be evaluated in 2011 and changes to and continuance of the initiative will be conditioned on the findings of the evaluation.

Establish an Enhanced Voluntary Agricultural District program The standard VAD is an excellent program to organize and promote the farming community, but since farmers do not have to commit to anything – they can revoke the agreement to not develop the farm at any time without penalty – it does not go very far in protecting farmland from development. An Enhanced Voluntary Agricultural District (EVAD), which requires an irrevocable ten-year agreement to not develop the farm, will provide Transylvania County with a tool to protect farms in the short-term against conversion (See definition of EVAD in previous section). The temporary nature of the agreement gives a landowner the opportunity to experiment with deeded restrictions and consider the permanent protection of a conservation easement. Farms enrolled in an EVAD may also be more competitive for economic development grants, especially those from the NC Agricultural Development and Farmland Preservation Trust Fund.

*Implementation:* The BOC should establish an EVAD program in 2011, including the authorizing ordinance and the administrative system.

Extend funding for the Community Development Agent position in the existing Transylvania County office for N.C. Cooperative Extension In 2008, a position description was developed for the Transylvania County Cooperative Extension office, resulting from a reorganization of planned program areas following the loss of two agents. The proposed Community Development Agent would

assist the Agricultural Advisory Board, research issues and available programs for marketing and agribusiness development, coordinate tailgate/farm markets in Transylvania, and develop and administer applicable grants. In 2009, a hiring freeze prevented Transylvania County Cooperative Extension from filling the Community Development Agent position. In the future, when the hiring freeze is lifted, the County should consider extending the existing funding it provides for Transylvania Cooperative Extension to provide gap funding for the Community Development Agent.

*Implementation:* When the hiring freeze is lifted the AAB should request that the BOC extend funding to Transylvania County Cooperative Extension to fill the Community Development Agent position to implement this plan and work towards the long-term viability of the agricultural industry in Transylvania County. In the interim, the AAB may pursue partnerships with other organizations in Transylvania that would provide grant writing, business planning, and development assistance to County agricultural producers. Such organizations may include Blue Ridge Community College Small Business Center, SCORE, Transylvania County Planning & Economic Development, etc.

Develop a Land Lease Recruitment Program Existing farmers need rental land to expand and/or to replace fields previously rented but lost to development. Beginning farmers need rental land to establish their operations. The Present-Use Value tax program and other incentives can be used to get the owners of inactive farmland to lease their properties and put them into production. Educating landowners about the incentives and the potential land stewardship benefits a farmer will increase the supply of rental land and slow the conversion of farmland to development.

*Implementation:* Conceptualization of the Land Lease Recruitment Program should begin in 2011 with implementation beginning in 2012.

Advocate for the Industry Policies set by state and federal governments and their agencies can have adverse effects on Transylvania County farms and businesses. The Board of Commissioners can be proactive in advocating to elected officials and agency leaders on behalf of Transylvania County farmers and business owners both to prevent adverse policies and to promote beneficial policies. Examples of beneficial policies may include the following: a partnership between Transylvania Cooperative Extension and the Transylvania Tourism Development Authority that couple the marketing of agricultural products/experiences with the promotion of Transylvania as a tourist destination; a partnership between the Transylvania County Planning & Economic Development Office and Transylvania Cooperative Extension to promote the development and expansion of small agri-businesses.

*Implementation:* Advocacy for the industry by the AAB, BOC and Farm Bureau will be ongoing.

Public Education Educating the public of the benefits of Transylvania County farms and the threats to them will reduce conflicts and stimulate the market for locally grown products. The campaign can take many forms and utilize multiple outlets such as mass media, schools and civic organizations. Landowners and farmers could benefit from educational programs about estate planning, farm transition and conservation easements.

*Implementation:* Educational programs directed towards farmers are scheduled to begin in the fall of 2009. Workshops and other educational events should be offered annually. Education and outreach

directed towards non-farmers should begin in 2010 and be ongoing. Education will be coordinated by Transylvania Cooperative Extension.

Agricultural Impact Assessment Evaluating the effects of county ordinances, plans and programs on agriculture before they are passed or implemented will prevent adverse impacts and maintain awareness of agriculture's existence and needs. Furthermore, consideration of land banking for potential agricultural uses should be considered in the development of local ordinances, plans, and programs; land with the most productive soils and agricultural attributes should be "banked" or reserved for agricultural uses if alternative land plots are available for various development activities. The AAB, Transylvania Cooperative Extension, Transylvania Soil & Water Conservation District, and the Natural Resources Conservation District should be included in plans for development when land with locally important designations are involved.

*Implementation:* The AAB should request that the BOC pass a resolution in 2010 to require an Agricultural Impact Assessment be conducted before ordinances, plans and policies are passed or implemented.

Work with the Municipalities The City of Brevard has taken steps to support agriculture by providing agricultural exemptions to some land use ordinances and by adopting land use policies that encourage density within appropriate areas while protecting key open spaces. The County should communicate and work with the City of Brevard and the Town of Rosman to coordinate agricultural economic development and farmland protection initiatives. Furthermore, the County should request the municipalities to allow the AAB to review and comment upon ordinances, plans and policies before they are passed and implemented.

*Implementation:* The AAB should request the BOC to pass a resolution in 2010 to work and communicate with the municipalities on agricultural issues. The BOC should ask the municipalities in 2010 to pass resolutions to work with the County and the AAB.

Economic Development The forthcoming 2009 – 2012 Economic Development Strategic Plan will contain a section on agriculture that will incorporate elements of this plan. The Board of Commissioners has appropriated funds to assist with farmland conservation easements and should allocate additional funds to assist farmers making capital investments in equipment or infrastructure. Annual investment in agricultural economic development and farmland preservation will improve the industry's viability and lead to greater levels of farm enterprise retention and farmland preservation. Grants can be made to individual farmers or to non-profit organizations, and can be independent or in conjunction with other grant funds. Partial funding for economic development activities can come from rollback taxes collected when properties leave the Present-Use Value tax program. Other economic development considerations include the transfer of development rights and term conservation easements (see definitions for TDR and Term Easements in previous section).

*Implementation:* Agriculture will be included in the forthcoming Economic Development Strategic Plan. The AAB should request that the BOC encourage the Planning and Economic Development Department to devote time and resources each year to farm and agribusiness recruitment, development and retention.

Tailgate Market The Transylvania County tailgate market has been in operation for 20 years. Currently the Tailgate Market provides a marketplace for 83 local vendors selling fresh produce, meats, cheeses, value-added products and crafts. For all its success though, the tailgate market is approaching capacity at its current location. Furthermore, the program may benefit from a dedicated manager and permanent facilities that include restrooms and protection from weather. The county and city should cooperate to identify and develop a permanent location with adequate infrastructure to accommodate growth in the market's use by vendors and customers. Furthermore, the county and city should cooperate to identify smaller, "satellite" or neighborhood market sites in other locations throughout the county.

*Implementation:* Evaluation of the Transylvania Tailgate Market should be made in 2012.

**Table VIII. Recommended Actions & Implementation Schedule**

Action	2010	2011	2012	Beyond 2012	Participating Organizations <sup>a</sup>
VAD Enrollment	✓				AAB
EVAD Program	✓	✓			BOC, AAB
Transylvania Cooperative Extension Community Development Agent		✓			BOC, AAB
Land Recruitment Program		✓	✓		AAB, NCCE, Tax Assessor, SWCD
Political Advocacy	✓	✓	✓	✓	BOC, Farm Bureau
Education & Outreach to Farmers	✓	✓	✓	✓	AAB, NCCE
Education & Outreach to Non-Farmers	✓	✓	✓	✓	AAB, NCCE
Agricultural Impact Assessments	✓	✓	✓	✓	BOC, AAB, PB, PEDD
Work with Municipalities	✓				AAB, BOC, City of Brevard, Town of Rosman
Economic Development	✓	✓	✓	✓	BOC, AAB, PB, PEDD
Tailgate Market	✓				AAB
a. AAB, Agricultural Advisory Board; BOC, Board of Commissioners; NCCE, N.C. Cooperative Extension SWCD, Soil & Water Conservation District; PB, Planning Board; PEDD, Planning & Economic Development Department					

## ACTION STEPS

Transylvania County has already taken many steps to maintain the viability of its agricultural community. Prior to the adoption of this plan, the County has appointed an Agricultural Advisory Board, supported N.C. Cooperative Extension, Transylvania County Soil and Water Conservation District, and the Natural Resources Conservation Service; made available the benefits of the Present-Use Value tax program; established a Voluntary Agricultural District program; provided \$30,000 for farmland preservation; supported the Transylvania County Tailgate Market; and provided agricultural exemptions to most of its land use ordinances.

To continue its efforts to maintain the viability of the agricultural community, the County will consider each of the recommended actions of this plan and implement each action determined to be feasible. Furthermore, the Board of Commissioners will request from the Agricultural Advisory Board an annual report on the state of agriculture in Transylvania County, as well as on related programs and activities.

Funding for these and other programs may be sourced primarily from the County's annual budget. Other funding sources may include N.C. State University through Cooperative Extension, WNC AgOptions, RAFI-USA Tobacco Communities Reinvestment Fund, the N.C. Agricultural Development and Farmland Preservation Trust Fund, the Community Foundation, and other government and non-governmental organizations. The Board of Commissioners should set an allocation goal for funding agricultural development and farmland preservation and work within reason to meet that goal each year during the budgeting process.

## SUPPORTING AGENCIES AND ORGANIZATIONS

**US Department of Agriculture (USDA).** USDA provides a wide range of services to farm owners and farmers through its 17 agencies. USDA has a service center in Hendersonville that is staffed by agents of its Farm Service Agency (FSA) and the Natural Resource Conservation Service (NRCS) – NRCS also has a field office in Brevard. FSA provides farm loans and services, disaster assistance, and conservation programs. NRCS works with private landowners to help them conserve, maintain and improve their natural resources. NRCS also administers several programs that purchase, or provide grants to purchase, conservation easements. Information about USDA's agencies and programs can be found at their website, [www.usda.gov](http://www.usda.gov).

**NC Department of Agriculture & Consumer Services (NCDA).** NCDA provides many valuable services to the agricultural industry and individual farmers. It provides services covering agronomy, animal health, commodity distribution, marketing and promotion, grading, seed and fertilizer inspection, nursery and plant pest eradication, and more. NCDA also operates the five state farmers markets, 18 state research stations and farms, and the two state fairs. Information about NCDA's programs can be found at their website, [www.ncagr.gov](http://www.ncagr.gov).

**Soil and Water Conservation District (SWCD).** SWCD provides assistance to private landowners implementing practices to prevent soil erosion and protect water quality. Landowners can receive technical and financial assistance through the Agricultural Cost Share Program and the Conservation Reserve Enhancement Program. SWCD also conducts several education programs for students and is

working with its partners to develop a North Carolina Plan for Working Lands Conservation. Information about Transylvania SWCD's programs can be found at their website, <http://www.transylvaniacounty.org/soilwater.htm>.

**NC Cooperative Extension.** Cooperative Extension provides education programs to farmers based on research conducted at NC State University and NC A&T State University. The Transylvania County Extension Center has agents for Horticulture, Livestock, and 4-H/Family and Consumer Sciences . Information about Transylvania County Cooperative Extension can be found at its website, <http://www.transylvania.ces.ncsu.edu>.

**Mountain Horticultural Crops Research & Extension Center.** Faculty and staff from NC Department of Agriculture and NC State University conduct research and extension programs in entomology, forestry, horticulture, plant pathology, soil science and zoology on a 349-acre farm and research center in Fletcher. They disseminate their findings through organized programs and demonstrations, and many of the researchers also make themselves available to individuals seeking technical assistance. Many farmers in the area identify the Center as an invaluable resource. More information about the programs offered by the Mountain Horticultural Crops Research & Extension Center can be found at its website, <http://www.ces.ncsu.edu/fletcher/>.

**Appalachian Sustainable Agriculture Project (ASAP).** A non-profit organization located in Asheville, ASAP is working to create and expand local food markets that will preserve agricultural heritage, provide fresh and healthy food, and keep farmers farming. ASAP is working to link family farms to institutional food buyers such as schools and hospitals, has helped to establish tailgate markets, provides marketing assistance through workshops, and publishes a local food guide every year. More information about ASAP's programs can be found on its website, [www.asapconnections.org](http://www.asapconnections.org).

**Carolina Mountain Land Conservancy (CMLC).** CMLC is a land trust in Hendersonville that is working to protect natural and working lands throughout Henderson and Transylvania counties. CMLC holds a conservation easement on three farms in Transylvania County and is in the process of putting an easement on a fourth farm. Information about CMLC's programs can be found at its website, [www.carolinamountain.org](http://www.carolinamountain.org).

**North Carolina Farm Bureau Federation (NCFB).** NCFB is a non-profit organization that actively promotes farm and rural issues through governmental relations, marketing, field representation, agricultural education, member services and other programs. Transylvania is represented, along with other counties, and is served locally by the Transylvania County office. More information about NCFB's programs can be found on its website, [www.ncfb.org](http://www.ncfb.org).

## REFERENCES

American Farmland Trust. *Cost of Community Services Fact Sheet*. Northampton, MA, 2007.

Kirby, Laura D., Charlie Jackson, and Allison Perrett. *Growing Local: Expanding the Western North Carolina Food and Farm Economy*. Appalachian Sustainable Agriculture Project. Asheville, NC 2007.

- Mathews, Leah Greden. *Farmland Values Project Quick Facts*.  
[http://www.unca.edu/farmlandvalues/pdfs/Farmland\\_Values\\_Project\\_Quick\\_Facts.pdf](http://www.unca.edu/farmlandvalues/pdfs/Farmland_Values_Project_Quick_Facts.pdf), 2008.
- Parker, Jeff. Personal Communications. Soil Conservationist, Transylvania County Soil and Water District, June - July 2009.
- N.C. Cooperative Extension Service and N.C. State University. *North Carolina Estimated Income from Sale of Farm Products and Government Payments, By County, Extension District, and State for 1995, 1996, and 1997*. Raleigh, NC, 1998.
- \_\_\_\_\_. *North Carolina Estimated Income from Sale of Farm Products and Government Payments, By County, Extension District, and State for 2000, 2001, and 2002*. Raleigh, NC, 2003.
- \_\_\_\_\_. *North Carolina Estimated Income from Sale of Farm Products and Government Payments, By County, Extension District, and State for 2004, 2005, and 2006*. Raleigh, NC, 2007.
- Renkow, Mitch. *The Cost of Community Services in Henderson County*. N.C. State University. Raleigh, NC, 2008.
- Transylvania County Tax Records. 2008 Listing of Tax Bills.
- U.S. Census Bureau. *Census 2000, Profile of General Demographic Characteristics for Transylvania County, NC*. 2002.
- U.S. Department of Agriculture, National Agricultural Statistics Service. *1997 Census of Agriculture, North Carolina State and County Data*. Washington DC, 1999.
- \_\_\_\_\_. *2002 Census of Agriculture, North Carolina State and County Data*. Washington DC, 2004.
- \_\_\_\_\_. *2007 Census of Agriculture, North Carolina State and County Data*. Washington DC, 2009.
- U.S. Department of Agriculture, Natural Resource Conservation Service. Soil Survey Geographic (SSURGO) Database. <http://soils.usda.gov/survey/geography/ssurgo/>, July 2009.
- U.S. Department of Agriculture, National Agricultural Statistics Service and N.C. Department of Agriculture and Consumer Services. *North Carolina Agricultural Statistics*. Raleigh, NC, 2008.
- Walden, Michael. *Agriculture and Agribusiness in Transylvania County*. N.C. State University, 2006.
- Whitmire, Brittany F. Who Will Fill the New Boots: Examining the Use of Succession Planning in Farm Businesses. *Popular Government*, 72 (2). School of Government, UNC-Chapel Hill, 2007.