

**Whole Farm Plan****I. Whole Farm Goals**

My goals for my farm center around the need for it to be a sustainable enterprise that is fulfilling for myself and the community it produces for. I plan to start small as a red raspberry producer, slowly expanding the varieties I grow and then further diversifying into vegetable and herb production. As soon as it becomes physically and economically viable, I hope to incorporate goats and poultry. All of these enterprises may lead into value-added products. I envision my farm using limited inputs, operating in a manner that sustains natural resources, and eventually providing a livable income for my family. Finally, I would love for my farm to get to a point that its methods are valuable enough for people to gain an on-farm learning experience through apprentice work.

**II. Evaluation of Current Resources****Human Resources (Personal Farm Interests & Skills):**

Myself and my family (Mom, dad, brother and sister-in-law)

**Other Management and Labor Resources:**

In the future, apprentices and u-pick for the raspberries.

**Natural Resources (Land, Soil, Water, Other):**

About 20 acres of tillable and pasture land that is composed of a very fertile silt loam soil type. Water is available from two wells with natural ponds in two of the pasture areas.

**Physical Resources (Buildings, Equipment, Other):**

A barn exists (but is in need of repair) and several out buildings in addition to the farm house. Existing equipment that I could use includes a small tractor and rototiller.

**Market Resources:**

The farm is located near Uniontown and Colton, Washington positioned in an area where access is easily made onto major highways that lead to Pullman, Moscow, and the LC Valley. This would make easy access to farmer's markets, restaurants and retail outlets (i.e. the Moscow Food Co-op) located in these places.

**Financial Resources:**

My financial resources include myself, my parents and bank loans or credit card if necessary.

**Community Resources:**

Resources include the Univ. of Idaho and Washington State Extension Services and the Washington State Small Business Development Center.

**III. Capsule Definition**

My farm will grow beautiful heirloom red raspberries for both fresh and value-added use. These berries will be picked at the height of summer and are delicious for fresh eating right out of the pint basket. Available as single pint baskets, half flats, and full flats through the local farmer's market, customers will find these berries stand up well in baked goods, jams, jellies and in the freezer. Eventually, I hope to extend my farm through growing more varieties, offering u-pick events, and creating my own value-added jams and jellies to be sold year-round.

## IV. Marketing Assessment & Plan

### Marketing Options:

- Farmer's markets in Moscow, Pullman, and Lewiston
- Restaurants and bakeries in Moscow, Pullman and Lewiston

### Location(s) (and their approximate distances from the farm):

- Large towns: Moscow (14 miles), Pullman (17 miles), Lewiston (18 miles), Clarkston (22 miles)
- Small towns: Uniontown (2 miles), Colton (3 miles), Genesee (12 miles)

### Target Market Description:

- People and family households that have a sincere interest in local food and eating well, yet inexpensively. These people range widely in age and occupation but all value good quality food that is consistently available.
- Approximately 2500 people (based off of numbers of people who attend the Moscow Farmer's Market)

### Competition:

- Little or none from other local growers.
- Competition from larger retail outlets providing raspberries from places such as Western Washington and California.

### Demand for Product/Service

- Moderate to high as there is not an existing farm in the area who focuses on red raspberry production. As a result there is a demand for local berry producers. Furthermore, raspberries are a popular fruit and I would be able to supply them fresh and locally.

### Unique Product/Service Attributes (features to highlight):

- Locally grown from a farm that has been growing raspberries on the Palouse since the farmstead was built in the 1920s. The main variety grown is a berry that has adapted to the area and produces fruit that is excellent eaten fresh or processed into jams and jellies.

### Promotional Materials & Advertising Ideas:

- Advertise through word of mouth, fliers in the Co-op

## V. Enterprise Requirements (include challenges & possible solutions)

**Climate (Requirements, Challenges & Solutions):** Red raspberries are fairly drought tolerant, do not like hot temperatures and are particularly winter hardy. This is good for my site, considering the summers often offering little moisture and are usually not severely hot, and the winters can be fairly cold. Additionally, I have the advantage of cultivating raspberries that have been growing at the site for over 25 years making them superbly adapted to the microclimate of the farm.

**Soils:** Raspberries prefer well-drained, deep, fertile soil that is high in organic matter and within a pH range of 6.0-6.5. My site provides these characteristics as the soil is a rich silt loam that has a pH of 6.5-7.0.

**Water:** Raspberries require about an inch of water a week and they don't like to be in wet soils (which will make them susceptible to root rots). Since not a whole lot of moisture is available to the raspberries during the growing season, I would provide this through drip irrigation for its effectiveness in applying water directly to the root zone.

**Buildings & Fencing:** No requirements needed as the raspberry variety I use does not require trellising.

**Machinery:** Some tillage between rows to incorporate compost/green manures and to reduce weeds is necessary. This would require a rototiller.

**Labor:** Raspberries are mildly labor intensive. With the amount of raspberries currently growing, I could easily manage the fall pruning, fertilizing, tillage, weeding, laying of irrigation line, and

harvesting required by raspberries. It would be helpful to have one or more people to make these tasks more efficient and fun. In the past, my family has always been involved in the up keep and harvest of these raspberries.

**Regulatory/Liability Factors:** None, unless I decided to start a u-pick and if I begin using the berries in value-added products.

Crop	Acreage	% of Total Land
<b>Raspberries</b>	<b>About ½ acre</b>	<b>About 8%</b>
Eventually to include: Market vegetables, herbs, poultry (chickens and /or weeder geese and ducks), goats	To be determined but in total, will amount to about 5.5 acres	About 92%

## VI. Crop Production Plan

**Type of Enterprise/Crops:** Red raspberries

### **Soil & Crop Fertility Management**

**General Soil Types & Location:** Silt loam throughout entire farm

**Major Components of Crop & Soil Fertility Management Program:** Compost applications pre-bloom; Fall sown cover crop/green manures

**Methods for Monitoring Effectiveness of Program:** Home soil tests; plant-tissue testing if affordable; a visible increase in plant productivity and soil tilth

### **Seeds and Seedlings Production**

**Sources, Suppliers, & Specifications:**

- Use existing raspberries and will use them to propagate
- For new varieties: local farm supply store and nurseries, online nursery sites, and/or Johnny's Seeds

**Greenhouse Specifications:**

n/a

**Other Season Extension:**

- Since existing berry variety is not ever bearing, adding varieties that ripen at different points in the season would help extend my season

**Materials Needed (Soil Mix, Fertilizers, and other Inputs):**Seeds for cover crops– use a grass/legume mix

**Watering System:** Drip line irrigation purchased from an online company (or locally if I can find it)

**Greenhouse Crop/Seedling Insect & Disease Control:** n/a

### **Crop Rotation Plan**

**Describe:** None with the raspberries as they are a perennial which does not need to be rotated. If a root disease becomes prevalent, than I would institute a rotation to eliminate the pathogen in the soil.

### **Cover Crop/Green Manure Use**

**Describe:** Will use a grass/legume mixture in between the rows of raspberry canes. A cover crop will be planted late summer to early fall, after the canes are done producing and pruning spent floricanes is complete. This crop will most likely consist of a winter wheat or rye and either winter pea or vetch. The planting will be tilled under as soon as the soil is workable in the spring.

### **Compost Use**

**On-Farm Materials to be composted:**

- Spent raspberry canes and other pruned foliage
- Weeds that have not gone to seed
- Grass clippings

### **Manure Use**

**Source &Type (On-Farm or Off-Farm,Species):**

- Eventual on-farm poultry and goat

<p>-Eventually crop residues from market vegetable garden</p> <p><b>Method of Composting:</b> Static pile</p> <p><b>Uses for Compost:</b> Main source of fertility for raspberries</p>	<p><b>Treatment, if Any Before Use (Composting, Tea):</b> -Composting</p> <p><b>Uses for Manure:</b> Fertility for raspberries and veggie crops applied late fall and/or early spring</p> <p><b>Potential Problems:</b> Not knowing the exact amount of nitrogen that is present -Shouldn't have problems with pathogens or weed seeds as long as composted</p>
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### Crop Production Plan, Continued

<p><b>Additional Soil Amendments to be used</b> <b>Describe:</b> Cottonseed meal or blood meal for a more predictable source of nitrogen. Either applied late winter to early spring to allow adequate decomposition and release of nitrogen.</p>	<p><b>Tilling, Preparation &amp; Cultivation Practices</b> <b>List:</b> Light tillage of compost and cover crops into the soil (no more than 4 inches) as to avoid disrupting roots and allowing entry for root pathogens.</p> <p><b>Machinery/Equipment Needed:</b> -Rototiller</p>
<p><b>Water Use</b> <b>Describe Needs:</b> About an inch or less a week throughout the growing season as these raspberries are used to little to no irrigation.</p> <p><b>Sources:</b> An on-farm well.</p> <p><b>Water Quality Protection Practices:</b> Get it tested for soluble salts and any pesticides as the land surrounding the farm has been under conventional agriculture for many years.</p>	<p><b>Natural Resources Management</b> <b>Soil Conservation Practices to be used:</b> Cover crops, drip line irrigation, addition of compost to soil</p> <p><b>Practices to Minimize Soil Erosion:</b> Cover crops sown after raspberries are done producing for the year -Reduced tillage that is only used once a year in the spring to incorporate cover crops and compost. -Drip line irrigation</p>
<p><b>Weed Management Plan Summary</b> <b>Monitoring &amp; Identification of Weeds:</b> -Few noxious weeds are currently present on the farm -Some weed types that are present include: lambs-quarter, crab grass, a few thistle types, amaranth types, bedstraw</p> <p><b>Issues:</b> Weeds are not a huge issue on this farm but they are still present with some perennial types</p> <p><b>Strategies to be used:</b> -Hand pulling throughout season to reduce seed bank -Cover cropping</p>	<p><b>Insect &amp; Pest Management Summary</b> <b>Anticipated/Expected Pests:</b> Aphids, raspberry crown borers</p> <p><b>Monitoring &amp; Identification of Pests:</b> Regularly checking the plants for aphids on the leaves and root crowns for borers</p> <p><b>Economic Threshold:</b> When 5% of canes appear to have declined in growth/health due to the pest</p> <p><b>Strategies for Control:</b> -Keeping a refuge for beneficials (lady beetles, lacewings) on the farm -Applying insecticidal soaps only if the aphid populations get too high - Remove canes that have borers present.</p>
<p><b>Disease Management Summary</b> <b>Anticipated/Expected Problems:</b> Phytophthora root rot, crown gall, gray mold</p> <p><b>Disease Monitoring &amp; Identification:</b> Checking plants regularly for root galls, shriveled leaves, lack of fruit production on floricanes, and presence of mold</p> <p><b>Strategies for Prevention/Treatment:</b> Fertility management, destruction of sick plants, reducing</p>	<p><b>Harvest &amp; Storage</b> <b>Methods:</b> Hand harvested into pint baskets/cardboard flats -Stored in a place cool place with good ventilation</p> <p><b>Facilities/Equipment:</b> No special facilities to harvest, and they will not keep for long so special refrigeration is not necessary as they will hopefully be in customers hands within a few days -Eventually, a commercial kitchen to create value-added products</p>

weeds, avoiding deep tillage that will wound roots	<b>Processing or Transportation Concerns:</b> Keeping the berries from going bad before they get to the consumer or get processed -Little concerns with transportation as my potential markets are fairly close -Gaining access to a commercial kitchen
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**Additional Notes:**

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**VII. Financial Plan**

<p><b>Overview</b></p> <p><b>Financial Goals:</b> At the outset, my main goal is to simply cover my costs so that I don't go in to debt as a result of this enterprise. It will not be my primary source of income, and I hope that one day it could become a stable supplementary income.</p> <p><b>Start Up Capital Needed:</b> Based on my budget analysis, I would need \$1000-1500.</p> <p><b>Sources:</b> My personal savings and my family</p> <p><b>Operating Costs:</b> Based on my budget analysis, my annual operating costs are \$1200-2800 depending on if I choose to include my own labor cost.</p> <p><b>Sources:</b> Sales of my product, my personal savings, and my family.</p>	<p><b>Enterprise Budget Summary &amp; Analysis</b></p> <p><b>Conclusions Drawn from Enterprise Budget:</b> If I my raspberries were productive ("a good year"), I could use my fresh-market profits to cover my costs, not including labor. (Or if I did u-pick labor cost would be covered and I would gain more of a profit). This meets my overall goal to cover my costs. However, if the plants are less than productive or sales slump, I would not be able to cover my costs. With an increase in plants, I would hopefully give myself more of a financial cushion for bad years.</p> <p><b>Feasibility of Proposed Enterprise:</b></p> <p>a. Short Term: Very feasible. It would not be difficult to cover my start-up costs and/or survive as an enterprise during less than productive years.</p> <p>b. Long Term: Extremely feasible. If I were to expand my acreage into new and different varieties, it would bring in more money to cover costs and eventually see a profit. Plus, diversifying my farm would give me better market opportunities and more financial security. As long as I built it up slowly, I could eventually make a profit to pay myself with.</p>
<p><b>Risk Management</b></p> <p><b>Describe a plan to help minimize financial risk in this enterprise:</b> I hope to build it up slowly towards making a profit and will limit variable costs as needed (namely labor costs). I hope to institute a strong marketing plan to get my berries sold. Initially, I only wish to cover my costs and not lose money.</p> <p>Address any potential issues and their solutions:</p>	<p><b>Next Steps</b></p> <p>What other information or resources do you feel you need to successfully attempt this enterprise? As far as value-added products, I have not accounted for costs associated with them (amount of berries needed, packaging, labor, storage, commercial kitchen etc.). Further research and information on this subject would help diversify my enterprise especially if I had the yields to properly support it.</p>

## Additional Notes:

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## VIII. Risk Management Plan

Please describe your farm's risk management approach in the following five areas.

### Production:

- Diversifying my crop to include more varieties that would appeal to a wider group of people and somewhat extend my season.
- Appropriately managing soil fertility and water quality for good plant health as a first defense against pests and disease. Otherwise, I will continually scout for weed problems, pests, and disease and react to them accordingly (removal, spraying organically approved products etc.).
- Begin producing my own value-added products to increase profits and use up excess berries.

### Marketing:

- Diversifying my crop to appeal to more customers tastes.
- Always use direct marketing so I can change my prices according to my crop quality and quantity.
- Progress slowly in my marketing plan so that I always have product to support my customer demand i.e. first small-word-of-mouth sales and farmer's market, and then Co-op and restaurants.

### Financial

- Maintain an off-farm job as to avoid debt
- Only expand my operation when I have the capital and finances to support it – I want to avoid borrowing money if I can help it.

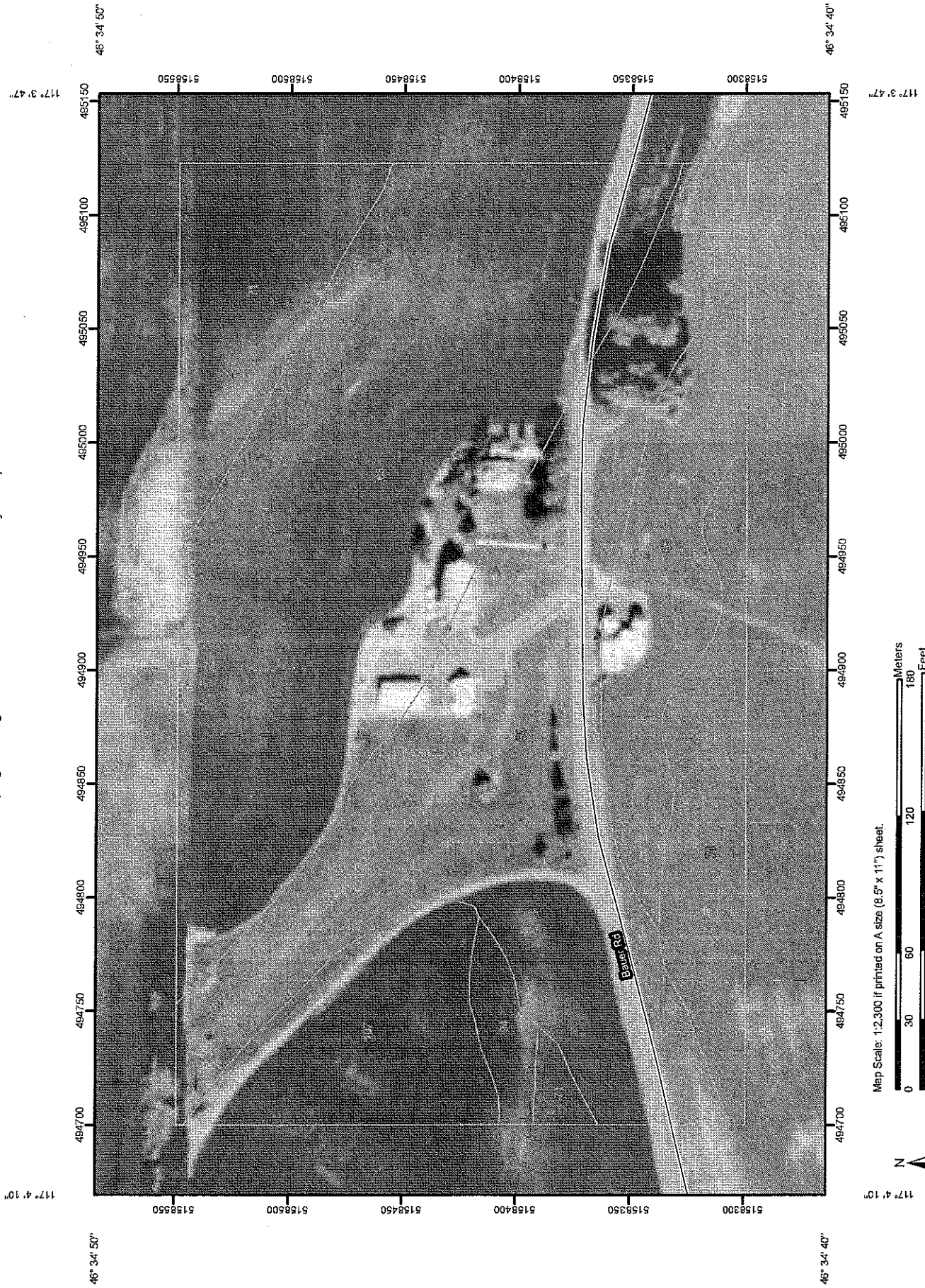
### Legal:

- Have liability insurance if I open the farm to U-pick events
- Only produce value-added products in commercial kitchens

### Human Resources:

- Only expand if I have the labor to support it (if I couldn't handle it myself than it's probably not a good idea)

Soil Map—Whitman County, Washington  
(Angela Anegon's Farm Site - Wittman Family Farm)



## MAP LEGEND

	Area of Interest (AOI)		Very Stony Spot
	Soils		Wet Spot
	Soil Map Units		Other
<b>Special Point Features</b>			
	Blowout	<b>Special Line Features</b>	
	Borrow Pit		Gully
	Clay Spot		Short Steep Slope
	Closed Depression		Other
	Gravel Pit	<b>Political Features</b>	
	Gravelly Spot		Cities
	Landfill	<b>Water Features</b>	
	Lava Flow		Oceans
	Marsh or swamp		Streams and Canals
	Mine or Quarry	<b>Transportation</b>	
	Miscellaneous Water		Rails
	Perennial Water		Interstate Highways
	Rock Outcrop		US Routes
	Saline Spot		Major Roads
	Sandy Spot		Local Roads
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		
	Spoil Area		
	Stony Spot		

## MAP INFORMATION

Map Scale: 1:2,300 if printed on A size (8.5" x 11") sheet.  
 The soil surveys that comprise your AOI were mapped at 1:20,000. Please rely on the bar scale on each map sheet for accurate map measurements.  
 Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: UTM Zone 11N NAD83  
 This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.  
 Soil Survey Area: Whitman County, Washington  
 Survey Area Data: Version 8, Jun 10, 2009  
 Date(s) aerial images were photographed: 7/7/2006; 7/8/2006  
 The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

Whitman County, Washington (WA075)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
54	Latah silt loam	8.0	30.6%
65	Palouse silt loam, 7 to 25 percent slopes	11.6	44.4%
71	Palouse-Thatuna silt loams, 7 to 25 percent slopes	4.0	15.5%
94	Staley silt loam, 7 to 25 percent slopes	0.4	1.5%
107	Thatuna-Tilma silt loams, 7 to 25 percent slopes	2.1	8.1%
<b>Totals for Area of Interest</b>		<b>26.1</b>	<b>100.0%</b>













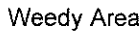


# Property Inventory Map

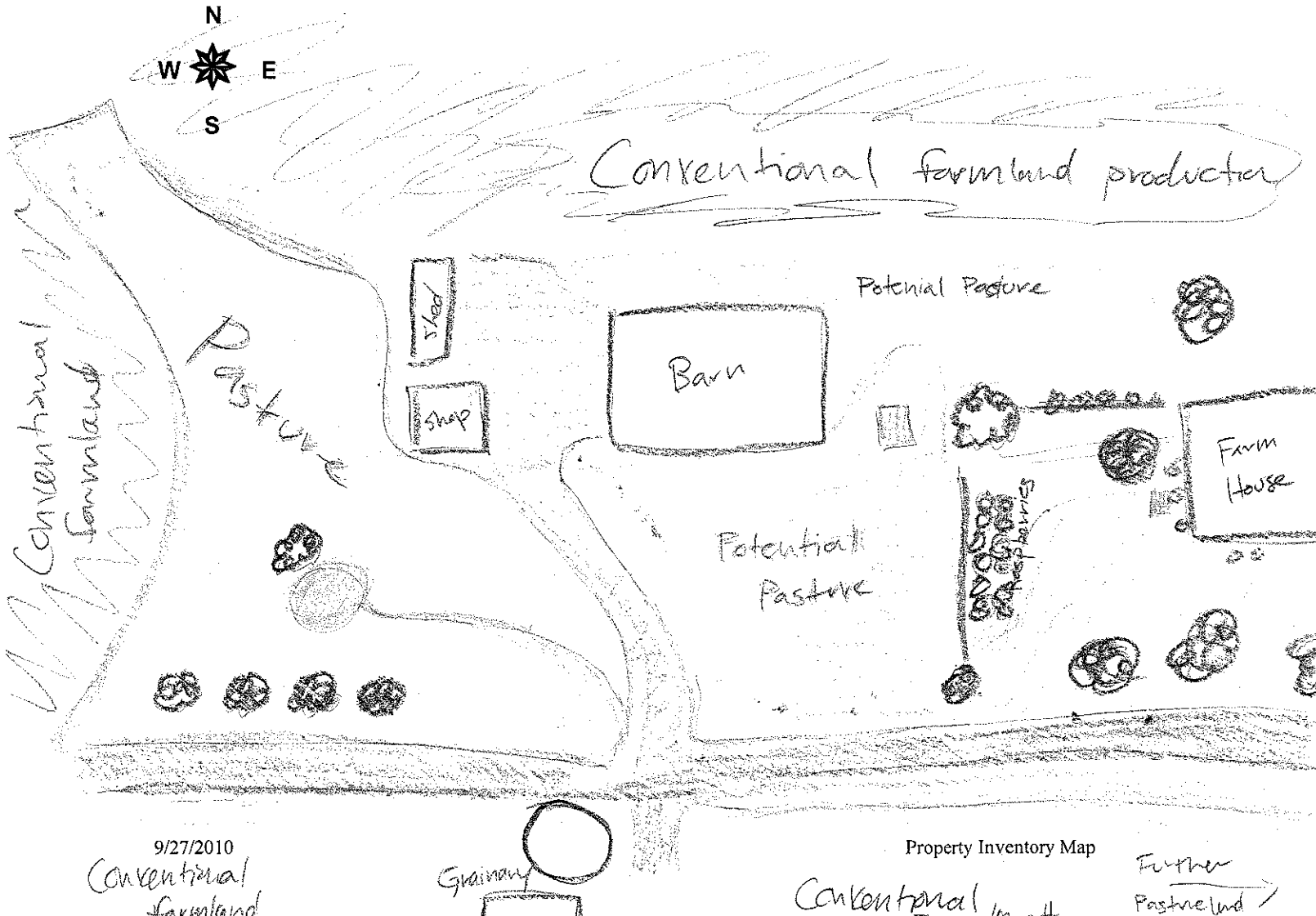
## Legal Description of Property:

- Farmland
- Rural Residence
- Approximately 20 acres

## Additional Notes on Map Below:

## Legend

- |   |  |
|---|--|
|  Fence         |  Creek          |
|  Gate          |  Pond           |
|  Buildings     |  Stream/Wetland |
|  Pasture       |  Well           |
|  Road (Gravel) |  Septic System  |
|  Trees/Shrubs  |  Water Line     |
|  Weedy Area   |  Water Trough   |
|  Manure Pile  |  |



9/27/2010

Conventional Farmland

Grainary

Property Inventory Map

Conventional Farmland

Further Pastureland