



Washington State Agriculture: 2025

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Vision 2025

The vision for Washington agriculture is a profitable and sustainable agricultural and agribusiness sector with supporting infrastructure and communities that is proactively positioned for unprecedented change to enhance the lifestyle of the citizens of Washington State.

Proactively Positioning for Change

Powerful and persuasive forces are propelling the agricultural industry and rural areas into new dimensions in the second and third decades of the 21st Century. The dramatic changes are due to the convergence of influential forces. Revolutionary and scientific developments are occurring in biotechnology, nanotechnology, information systems, and the life sciences. Couple this with domestic and global income and population dynamics, and social and political activism worldwide, and the state of Washington and the Northwest will need to be proactively positioning for change.

Opportunities for profitability and improved quality of life for the agricultural industry and rural landscape in the state of Washington are very good. The agricultural industry is moving toward a future that is five dimensional, which is creating a renaissance. Traditionally, the industry has focused on the production of food and fiber. Now and in the future, fuel (alternative energy), products for the life sciences (organs for humans from transgenic animals), and life experiences (agri-entertainment) will be added dimensions to enhance the traditional segments. This new era will perpetuate change and bring prosperity to agricultural producers and rural communities savvy enough to recognize and capitalize on opportunities and interface with proactive public policy makers.

Futuristic Opportunities

Opportunities for Washington State agriculture are immense. Proximity to the global markets, particularly in Asia, where 40 percent of the world population resides, with growing populations and incomes is a strategic strength (Wikipedia). By 2025, the Asian region will approach 50 percent of the world population. For example, Dr. Josephine Smart states, "Despite China's impressive uninterrupted rate of growth since the mid-1980s, the 2005 average annual income remains modest at \$1,750 for the urban population and \$550 for the rural population. However, consumption power has been rising and the emergent economic elites and middle class are keen consumers of

all goods. With a tenfold increase in average income since the mid-1980s, the future potential rise of consumption power in China is indeed a force to be reckoned with.” (Kletke). Similar dynamics can be seen in the Pacific Rim and ASEAN/Asian regions.

The affluent population centers of the Northwest, Western Canada, and the West Coast in general are a growing market for high intensity production agriculture and agribusiness, as well as niche and value-added markets. Pockets of high intensity agriculture utilizing state-of-the-art technology and production techniques operated by owner-managers with high levels of expertise will provide products and services domestically and globally on an economically competitive basis. The increased desire by consumers for organic, local, and natural foods produced in a sustainable manner presents opportunities for smaller niche producers. The slow food movement and growth of the romance industries such as vineyards and wine production are emergent opportunities also. The state of Washington historically has had strong branding in many enterprises, such as apples, dairy, wheat, and hops. Enhancing these brand images through production and marketing activities will be critical for future success.

A strong agribusiness structure and rural infrastructure that is continually upgraded and modernized providing inputs such as feed, fertilizer, and credit, and selling outputs in an efficient manner is crucial for agriculture to be globally competitive. Strong educational institutions at all levels including K-12, collegiate and post-graduate need to be emphasized to provide an educated, empowered workforce and necessary research for a knowledge-based industry. Many of Washington’s communities are positioned to provide lifestyle attributes that attract and retain a highly talented, motivated workforce.

The agricultural industry and rural areas frequently have older population bases. The average age of producers in Washington has increased from 52 to 56 years of age since 1974, mirroring the trend in national statistics (USDA-NASS). The transition of agricultural businesses from the older to the younger generation, while a challenge, is also an opportunity to create new energy for the agricultural and rural landscape. Women and minorities are increasingly sharing in management decisions and ownership of agribusinesses and this trend will only increase in the future as well.

Issues and Challenges

There will be several catalysts for change that will shape the agricultural industry and supporting institutions and communities in the future.

Consumer Preference

The evolving preferences and attitudes of the end consumer will continue to have major implications for agriculture. Globally changing lifestyles, levels and distribution of income, changing demographics of the consumer, and an increased awareness of food safety, health, natural resources, and environmental issues have created a fragmented agribusiness sector and marketplace. Consumer demands for safety, convenience,

nutrition, variety, products to meet lifestyle habits, and what is perceived as value will continue to escalate in the future.

Consumer demands will break the marketplace into three distinct areas. The first is industrialized contracts driven as agribusinesses coordinate production to deliver. Second is the traditional commodity marketplace as it has existed over the years, and finally value-added and niche market producers. The industrialized and value-added sectors will see increases in the marketplace while the traditional commodity producer market will be challenged as variety and choice are sought by consumers.

Food safety issues will cut across all three sectors. The potential market risks associated with food safety problems, whether it is a branded food company, private label, local, state, national, or global market regulation, will become more stringent. The ability to track the product from the farm gate to the consumer will evolve as data information systems become more sophisticated. For example, Fort Boise Produce in Parma, Idaho, incorporates a Trace Recall Program into their quality control procedures. Every package of onions packed at their facility is coded with an eight digit identification code identifying a lot number given at the time of harvest. The coded lot number follows the product from the field, to the storage facility, and to the packing facility. Receivers and customers can then go online to view important food safety information regarding these onions.

Natural Resources and the Environment

Increasingly, economic change in the state of Washington and around the world is adversely affecting public perceptions of agriculture's impact on the environment and natural resources. These effects are resulting in governmental efforts to protect the ecosystems. Fundamental differences between growth and profit objectives of agribusinesses and environmental and natural resource concerns will force government to enact legislation for environmental and natural resource protection.

The result could be geographic migration of the agricultural industry along with consolidation of production. In some areas the waste issue has resulted in halt of enterprise expansion, and migration to other areas with less stringent standards. The hog sector is a classic example. Formerly the majority of hog farms were located in the Midwest and North Carolina, and now many have relocated to the South Central parts of the U.S. Water shortages and quality will continue to be a challenge in Washington and the Northwest as competition intensifies between agriculture and the public. By 2020, water will become what oil was and currently is as a strategic issue.

Agribusinesses will be required to track environmental and natural resource management practices and keep the non-farm public informed. In the next 20 years, leading agriculturalists at all levels will have to develop a system to efficiently use their soil, water and livestock resources in a more natural and sustainable biological manner.

Information and Biotechnology Explosion

Most recently, the information and biotechnology explosions have been major contributing factors to increased productivity in agriculture. With these two powerful forces converging, changes will be (1) increased productivity; (2) fewer farms and a bimodal farm/ranch and support services sector; (3) consolidated productivity in more commercialized and industrialized segments; and (4) an accelerated shift toward a knowledge based industry.

The central role of information technology is going to move up the information value chain. The use of the computer and data mapping to collect data, organize it into information, and then customize it into knowledge and provide solutions will become more standard to highly productive agriculturalists.

More agribusinesses will form strategic alliances across input sectors, i.e. lenders, input supply services, and e-commerce delivery systems, to provide products at a low cost in a real time format, but with customized solutions. For example, strategically placed local consultants will work with a centralized knowledge center of information and leading global experts in many fields of agriculture to provide customized solutions. One firm may sell the fertilizer, another feed, while the other provides the financing. Strategic alliances are going to be critical, even with competitors, as the information society blurs marketing channels. The biotechnology revolution will reshape agriculture, affecting livestock and crop genetics, tillage systems, crop protection, individual human health, and more.

Agribusinesses will have to ask four major questions before making an investment in new technology:

- Does management have the knowledge and skills as well as the capital to adopt and implement the technology?
- Will it be economical and cost effective?
- What are the short and long run impacts on the consumer and marketplace if they purchase the product as a result of the technology used?
- What are the social and political implications in the adoption of the technology?

As farm sizes increase and with information more widely available than ever before, technologies that add value will be embraced more quickly. Product life cycles will be dramatically shortened by the introduction of new technologies. The rapid adoption will place tremendous pressure on academic institutions and agribusiness suppliers to stay on the cutting edge.

More value-added crops and livestock with specific quality/output traits for food, industrial, and medical use will explode on the marketplace from about 2015 to 2025. In the crop sector, improved high-lysine and high-methionine corn and soybean oil, protein, and carbohydrate composition will be utilized. In animal agriculture, similar developments are allowing genetic firms to link with agribusinesses to control and influence characteristics such as feed efficiency and meat quality. However, public consumer and media reaction to these developments in animal agriculture may slow adoption in the markets.

Government Policy

Globalization and protectionist attitudes of countries and regions of the world will ebb and flow depending upon the health of world economies and geo-political agendas. Regardless, environmental and natural resource regulations, food safety, and farm subsidies along with intellectual and property rights will play a major role in agribusiness firms' strategic plans.

Federal agricultural policy is truly at a crossroads being challenged by demographics and domestic and global factors. First, many Americans and politicians serving in Congress no longer have a heritage or linkage to agriculture or rural areas. Future agricultural policy at the Federal level will have three dimensions: conservation and environment, rural and energy, and security and nutrition. Programs will be curtailed as the Federal budget is squeezed and other entitlement programs take higher priority. Historically, farm subsidies have been focused on the grains sector in the state of Washington. Elimination of these subsidies would not only decrease cash flow, but land values in Washington State would decrease by about 25.6 percent (Kastens and Dhuyvetter).

Public policy in agriculture will be influenced more by the public, consumers, special interest groups, and the media than politicians. A recent example is animal welfare groups' pressure on McDonalds Corporation to discontinue purchasing product made from animals raised in livestock confinement systems. The result was a shift in production practices.

Farm Structure and Community Dynamics

Concerning farm structure, the typical is becoming mythical. This is the result of urban sprawl, water availability, environmental and natural resource issues and challenges, shortages of qualified labor and management, technology and rural community amenities and lifestyle demands of agriculturalists. One size will not fit all.

Large complex agribusiness units over \$1 million in revenue annually will consolidate in areas of prime natural resources. More of these farms and ranches will branch out into businesses outside of agriculture as a diversification strategy and operate a family business. Some of these farms and ranches will be vertically integrated or contract

growers. Those pressured by population shifts and regulatory constraints will be required to adjust operations to continue to operate or relocate operations.

The traditional family farm will be pressured by the aforementioned forces. Ten percent will increase operations, 30 percent will scale down to become lifestyle producers near population centers, and 30 percent will exit. The remaining producers will focus on efficiency versus growth. As evidence of this shift, since 1982 the number of farms in Washington generating below \$2,500 in sales increased from 25 percent to 41 percent of all farms, with much growth coming later in the period. Farms between \$100,000 and \$500,000 in sales experienced a 12 percent drop in numbers from 1992 to 2002. (USDA-NASS)

The lifestyle segment of farms, generally below \$100,000 in revenue, will locate within a reasonable distance of metropolitan areas and smaller satellite rural communities with dependence on non-farm income and wealth. Their goal is to maximize lifestyle rather than a pure profit motivation. Some will seek isolated rural areas for recreational and pleasure activities.

An emerging segment is the value added and agri-entertainment segment. This segment can represent a range of revenue, acreage or livestock numbers; however, the commonality is that they serve a specific niche or number of niche markets. They will exploit a location, product or service advantage in the eyes of the consumer.

Urban sprawl and encroachment will challenge agricultural producers near metropolitan areas such as Seattle-Tacoma, Spokane and the Tri-Cities area. Since 1978 over 1.4 million acres, or 8 percent of farmland in Washington State, has gone out of production according to the Census of Agriculture. Public and agricultural interface will challenge regulations and legislation from the local, state and regional levels. An analysis of population dynamics from census data finds a large share of the counties experiencing population growth from 7 to 25 percent or greater are in prime agricultural regions. The state of Washington as a whole had five counties with population decline from one to 5 percent (WA Census). People will continually be attracted to many areas of Washington because of climate, natural amenities and lifestyle attributes which will challenge natural resource management as well as the public's perception of farms and ranches.

Community dynamics will have a large impact on farm structure in the future. Future generations will seek lifestyle amenities in a rural community such as good school systems; health and fitness centers; high speed internet access; roads and infrastructure; reasonable cost of living areas; access to natural amenities; and shopping and entertainment activities. Rural communities that demonstrate these attributes will grow, while those with few will observe declines in population. A vibrant area that attracts and retains qualified employees, managers, family members, and support services is critical to the future of agriculture.

Human Resources

To efficiently operate in the agricultural industry, a high quality workforce needs to continually be enhanced. An 18-year perspective of Northwest Farm Credit Services' Executive Producer Roundtable, a three-day conference attended by over 1000 producers, many who are from Washington state, provides a venue for a focus group on key issues impacting their businesses. The attraction and retention of a high quality workforce and management team is usually listed as one of the top three issues.

Many of the state's fruit and vegetable operations and large livestock farms and ranches, which represent over 70 percent of the state's \$6.5 billion agricultural industry, are dependent on migrant labor (USDA-NASS). Regulations pertaining to access and supply, housing and other compliance issues will be critical to the economic viability of these industries.

Minimum wage, competitive rates and fringe benefit structures compared to the highly compensated suburban and urban areas are one of the greatest challenges to a globally competitive agribusiness. Labor regulation and compliance is increasingly taking more of an agricultural producer's time and capital resources. Educational systems able to train highly skilled individuals to operate machinery and equipment with global positioning systems and sophisticated data management systems for traceback capabilities will be crucial for food safety and overall enhancement of the product for the end consumer.

Mission 2025

Given the opportunities and challenges outlined in this report, baseline initiatives are imperative from policy makers and others to meet the vision of the agricultural community in 2025.

1. Legislative action needs a balanced approach pertaining to natural resource management and the carbon print movement, concerning the agricultural industry. This includes land and water use, property rights, air quality, and environmental compliance. Common ground must be sought amongst key stakeholders with flexibility and adaptability in developing programs and initiatives that enhance economic viability in a sustainable manner for the agricultural industry. Specifics could be:
 - Economic incentives for conversion of waste into renewable fuels, fertilizers, etc.
 - Utilization of agricultural produce for energy development
 - Economic enhancements for maximizing water use and quality
 - Regulatory policy that encourages land to be utilized for agriculture
2. Continue to support and build strategic alliances with public and private sectors at all levels designed to build upon past success, but support changes necessary

to meet emerging trends in agricultural and rural communities in transition.

Specifics include:

- Research and scientific advances
 - Farm and ranch transition
 - Communication and advocacy using agricultural success stories
3. Support entrepreneurial activities and new market development in domestic and global markets for the five dimensions of agriculture. Continue to support existing successful structures that are attempting to proactively manage change.
- Specifically:
- Global market development for Washington crops and livestock
 - Farmers markets, tourism, and agri-entertainment
 - Value added initiatives in food, fiber and fuel
4. Increase work with stakeholders of the agricultural community to support research, extension, outreach, and teaching at public and private institutes in the sciences, communications, business, and economics. Support vocational and technical education and community colleges for adult education for the agricultural industry and rural communities. Specifics include:
- Support Washington agricultural leadership program
 - Enhance internships designed for citizens to understand global cultures
 - Support of female and minority ownership and management careers in agriculture.
5. Energize the agricultural industry and rural areas by providing public and private incentives and educational benefits for youth who desire to pursue agriculture.
- Specifically,
- Enhance credit and terms for those beginning in agriculture.
 - Tuition incentives for those pursuing agricultural degrees.
 - Farm and ranch link program similar to other states, providing a database and consultation for linking older and younger generations.

Each initiative that meets the following criteria will be successful in a changing environment. Programs and initiatives must constantly seek input from the grassroots level, find common ground, and be flexible and adaptable to proactively meet emerging trends and opportunities.

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