

Washington State  
Department of Agriculture

# Organic Certification Calculator Template

Developed with support from U.S. Department of  
Agriculture's Agricultural Marketing Service, National  
Organic Program

<http://agr.wa.gov/foodanimal/organic/OrgCertFeeCalc.aspx>

September 2, 2015

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## Project Overview

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### **Project Objective**

The goal of this project is to encourage beginning/small-scale farmers to certify organic by offering resources and education, and by demystifying the process of organic certification.

To this end, Washington State Department of Agriculture Organic Program aimed to create a concise, user-friendly web application that would provide information about the organic certification process, certification costs, and additional licensing requirements and resources pertinent to the user's operation, based on specific information entered by the user. Further, the program's project management team endeavored to create a step-by-step procedure for use by other certifying and supporting entities to create a similar application, so that organic certification information and resources could be available to potential applicants nationwide.

### **Establish the Scope of the Project**

Washington State Department of Agriculture Organic Program staff met to brainstorm what features would be most valuable in a web application. By involving the certification staff in the initial project brainstorm, the project management team better understood what types of questions and concerns new applicants posed to staff, and how it could best support new and potential client needs.

Staff ideas and notes were gathered, and an inclusive list of potential features and concepts was drafted. Organic Program staff had many ideas to serve the target audience for this project, including:

- Access to direct markets
- Product prices and demand on a regional, searchable database
- Demand for specific crops, and what markets are saturated
- Double cropping information
- Acreage assessment tool – enter an ideal gross annual income and it calculates acreage required
- Top productive crops broken down by markets
- Material and seed cost comparisons for organic versus conventional
- Input material sources in client's region
- Labor costs
- Farmer experience forum
- Local resource listings

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- Expected returns – yield and price
- Processing markets for value added products
- Livestock sales – milk plus animal
- Time spent on organic certification based on operation application, recordkeeping, inspection, labor costs associated
- Crops and yields – money for crops based on cost of certification

Suggestions determined to be within the scope of the objective were further evaluated by the project management team. Items beyond the scope of this project were maintained for future projects, but were not further considered for this application.

The project management team weighed each idea against the objectives for this project, then refined the project scope based on the following criteria:

- Feasibility. Is it possible to gather and input this information, or would it be too large a scope for the term of this project? Is this concept within program budget and resources?
- Value to clients. Is the information valuable to the majority of the audience that this application is attempting to reach?
- Longevity. For what duration would the information be valid? If the application and resources needed frequent updating, the web application would more likely be out of date, and far less valuable to potential applicants.

While many of the staff suggestions were important and relevant, they did not meet the criteria for this project timeline and resources. Under these considerations, the project team finalized the scope of the application to focus specifically on certification information, fees, and additional licensing requirements, regulations, and resources for Washington State.

#### **Identify Potential Resources**

Once the scope of the project was developed, the project management team considered the resources necessary to complete the project. Resources were required for four aspects of the project:

- Basic certification information and links to forms
- Fee structure, additional fee, and cost share refund information
- Additional licensing/regulatory requirements for specific types of operations
- Resources tailored to each operations using the web application

Because our organic certification program operates under Washington State's Department of Agriculture, the regulatory information and resources specific to our state's requirements are easily attainable within the agency. An independent certification agency would access their own

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county and state regulations to provide up-to-date, accurate information about additional requirements.

Basic certification information and forms were contained within the Organic Program, and required no additional resources. However, the project team considered the accessibility of these items and streamlined current web pages to make finding information as easy as possible for potential applicants. These changes were made by Organic Program staff, with the support of Washington State Department of Agriculture Information and Technology Services.

In order to integrate the organic certification fee structure into the web application, current fee forms were evaluated by the project team and program staff to ensure that all aspects of certification costs were included for each scope of certification (producer/processor/handler/retailer). Additional organic certification fees not specifically noted on the fee form, but that may be incurred during the certification process (export fees, for example), were also noted for addition to the web application. Further, current USDA organic cost share figures were compiled, to give potential new applicants an estimate of their cost share refund eligibility.

For additional licensing, regulations, and resources, the project team was able to utilize information from Washington State Department of Agriculture (WSDA) web pages and resources. In 2014, WSDA Office of Compliance and Outreach updated a comprehensive guide for agricultural businesses. The Handbook for Small and Direct Marketing Farms identified many of the licenses and requirements associated with operating an agricultural business in the state of Washington. Since this handbook contained much of the information required for this project, it was identified as a key resource for the web application.

Subject matter experts were also identified and contacted to ensure that they could be consulted throughout the development and implementation process. Areas of expertise for subject matter experts included, but were not limited to: Communications and Public Outreach, Information and Technology Systems, Compliance and Outreach, and Organic Certification.

Once scope and potential resources were clarified, meetings were held between the project management team and the Washington State Department of Agriculture Information and Technology Services department. These meetings served to determine if the department had the resources to develop the application internally, or if an outside vendor would be required.

Information and Technology Services (ITS) concluded that the time and resources necessary to complete this project were available, and the project management team began work with ITS regarding the best method and process for developing and implementing the web application.

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#### **Drafting Application Process**

To harbor effective communication between the project management team and the developers, the project team developed a visual representation of the web application. The visual model consisted of two key components:

1. A flowchart to organize the scope and question series, and to map client input
2. A results page (in spreadsheet format), which provided potential responses or results that could be generated from the user input.

The responses spreadsheet and flowchart were developed concurrently, with both adapted to mirror the other. As subject matter experts and resources were consulted to determine user inputs and responses, each model was updated in tandem. In an effort to present the information in a concise and clear manner, any inputs that did not alter the results were determined to be unnecessary and were discarded. Any results or notices that did not have a clear logical flow as to what input they were responding to were evaluated for relevance in the application and adjusted accordingly.

The developers were consulted throughout the drafting process to ensure that the models were in a format that was clear and conducive to the development process. The flowchart served as a framework for the layout of the application, providing the questions and desired form of response from the user as well as grouping them in a logical flow. The results spreadsheet was adapted into the results page of the application.

#### **Initial Application Development**

The application was developed in an iterative process, with each iteration followed by thorough testing.

The first iteration involved developing the interface and general layout. The general layout consisted of a web page divided into distinct tabs using Cascading Style Sheets (CSS). The elements on the web page were given unique background colors to allow for ease of identification for testing. Aesthetic styling was not included at this stage.

The second iteration consisted of creating and grouping the user input fields. Questions were added to each section of the webpage as well as their corresponding input fields. A standard naming convention was established, and related fields were grouped into collections so that each individual item may be referenced individually or as a component of a larger group.

The third iteration saw the development of the results page. The results page was populated with unformatted draft text for each response. Each potential response was referenced by a unique ID so that its visibility could be toggled depending on user input. This iteration also included the development of the calculation phase Javascript.

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Following the third iteration, the initial application development was complete and the web page was functional.

#### **Primary Functionality Testing**

The visibility criteria for each potential response was evaluated and tested to ensure accuracy in the application. Thorough testing of the fee structure was also conducted at the minimum, maximum, and a random value within each step of each function.

During this phase there was frequent communication between the project management team and the development team. As each correction or revision was made, the potential impact of that change was evaluated and all potentially affected features were retested.

Cross browser compatibility and error trapping were key components of the testing.

Reasonable error handling was implemented to correct potential user input errors. In situations where error handling was not feasible, an error message would appear on the results page notifying the user of the error.

Cross browser compatibility was maintained for current versions Internet Explorer, Firefox, and Chrome. For outdated versions of Internet Explorer, IE7 and older, an initial message notifies the user that this application is not compatible with their browser.

#### **Final Development**

The focus of the final iterations of development was specific to application aesthetics and appearance. Formatting that had been applied during the initial development process was replaced with more aesthetically pleasing styling that allowed better readability and a more user friendly interface.

All text within the web application was also evaluated at this stage. Each item was thoroughly reviewed to ensure that it was clear, concise, and appropriate for the target audience.

#### **Final Review - Focus Groups**

An initial focus group was created consisting of organic program staff outside of the project management team. Each tester was given a description of an operation and an accompanying scenario to mimic potential users.

No additional instructions were provided to the focus group, aside from the instructions provided on the webpage. The group was asked to evaluate the application using the following criteria: ease of use, aesthetic quality, value of information, and overall impression.

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The feedback provided by the focus groups was evaluated by the project management team and feasible suggestions and improvements were implemented.

A second focus group consisting of organic stakeholders was convened. The Washington State Organic Advisory Board, which includes representatives of each scope of operation defined in the web application, was instructed to use the utility as if they were considering initial certification for their operation.

The second focus group evaluated the application using the same criteria as the initial group, and their recommendations were evaluated by the project management team and implemented as appropriate.

#### **Implementation**

The application was transferred from the development server into the production environment and made available to the public at <http://agr.wa.gov/foodanimal/organic/OrgCertFeeCalc.aspx>. WSDA Communications and Public Outreach utilized their media to distributed information regarding the web application, including through the agency's social media accounts on Facebook and Twitter. Additionally, WSDA Organic Program provided information and links to Tilth Producers of Washington and Washington State University's Small Farms team for their use and distribution. The Organic Program also notified currently certified clients through the program newsletter.

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## Application Description

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For speed and size considerations the application was coded using 64-bit encoded compressed client-side Javascript in an ASPX (IIS) web environment. There are no postbacks; all computation is performed client-side.

Screen layout for positioning uses standard HTML such as <DIV> and <SPAN> elements with CSS applied to CLASS and ID attributes. HTML elements are also colored using CSS applied to CLASS and ID attributes.

Current web standards were followed to the extent possible while developing this application and the code is internally commented.

The user input was divided between the four scopes as designated by the Washington State Department of Agriculture Organic Food Program: Producer, Processor, Handler, and Retailer.

The layout was designed so that a separate jQuery UI tab layout was used for each scope. All input specific to that scope is included within that single tab which becomes available when the user clicks on an activity data-entry tab.

In an effort to make the application clear and concise only the questions that are applicable to the user's specific operation, as determined by their input, are visible on screen at any given time. As the input from the user changes controls are dynamically added or removed from the page.

Upon selection of the Calculate button a calculation phase is entered and the Results page is enabled. During the calculation phase a list of conditions is tested to enable error messages and informational text messages to be displayed on the results page. These messages are based directly off the data input performed by the customer.

Once the Results page is enabled the calculation function is called on direct click of either the Calculate button or by selecting the Results page, this allows users to update their information and see the results in real time.

Numeric input fields are protected via event traps to limit input capability to only allow digits and decimal points. Users are also prevented from pasting entries into those fields. All checkbox labels are clickable for ease of toggling checked states.