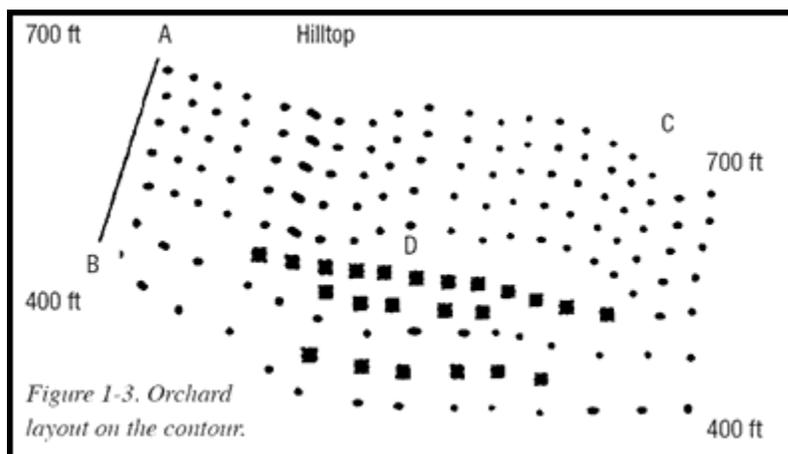




## Contour Orchard and Other Perennial Crops (331) Conservation Practice Jobsheet



### Definition

Planting orchards, vineyards, or other perennial crops so that all cultural operations are done on or near the contour.

### Purpose

- Reduce soil erosion
- Reduce transport of sediment and other associated contaminants
- Increase Infiltration

### Conditions Where Practice Applies

This practice applies on sloping land where orchards, vineyards, or other perennial crops are to be established. For annually planted crops use the practice Contour Farming (330).

### Practice Implementation

Implementation of this practice includes the initial design or layout of the area to be planted on the contour. This practice does not include the planting of the orchard, vineyard, or other perennial crops.

After practice implementation, it is the responsibility of the client to carry out the Operation and Maintenance Requirements to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation) and repair and upkeep of the practice (maintenance).

### Conservation Management System

Contour Orchard and Other Perennial Crops works best as a system in combination with vegetative ground cover and appropriate irrigation conveyance practices, where applicable.

## Plans and Specifications

Plans and specifications are to be prepared for each field.

Specifications for establishment and *maintenance* of this practice shall be prepared for each field according to the Criteria, Considerations, and Operation and Maintenance described in the Conservation Practice Standard. The plans shall include, as a minimum:

- Percent land slope used for conservation planning;
- The minimum and maximum allowable row grades for the contour system;
- A sketch map or photograph of the field showing:
  - ◇ the approximate location of the baselines used to establish the system
  - ◇ the location of stable outlets for the system

The following section of this Jobsheet shall be used to prepare and record the plans and specifications for each site and reviewed with the client.

Evaluation of the conservation system using the currently approved water erosion prediction technology will be documented in the plan.

**Contour Orchard and Other Perennial Crops – Jobsheet**

Jobsheet Prepared for						
Client Name:	Bob Farmer			Business Name:	Aloha Farm	
Plan Name:	EQIP Plan 201	Contract #:	153479251	Program:	EQIP	
Tracts No.(s)	Land Unit No.(s)	Land Unit Acres		Amount of Practice to be Installed / Land Unit		
12	1	10 acres		10 acres		
Jobsheet Prepared by						
Name:	Tom Planner	Title:	Soil Conservationist	Date Prepared:	3/30/2010	

Purpose for Client Applying Practice (“P” primary purpose and “S” secondary purposes, if any)	
P	Reduce soil erosion
S	Reduce transport of sediment and other associated contaminants
S	Increase infiltration

Current Site Conditions
Description of current site conditions in treatment unit including: type of crop to be established (orchards, vineyards, or other perennial crops), land slope, critical slope length, erosion rate: ----- <i>Planning to establish mango tree orchard.</i> <i>Land slope: 8%</i> <i>Critical slope length: 150 feet</i> <i>Sheet and rill erosion rate: 10 tons/acre/year. T = 5 tons/acre/year.</i> <i>Sediment runoff evident in nearby stream during heavy rains.</i>

Percent Land Slope and Allowable Row Grades (Also see Job Sketch.)	
Percent land slope used for conservation planning:	8%
Minimum allowable row grades for the contour system:	Perfect contouring(RUSLE2)
Maximum allowable row grades for the contour system:	Perfect contouring(RUSLE2)

Other Installation Requirements
Other requirements for contour system installation on treatment unit: ----- <i>Establish permanent vegetation between orchard rows</i>

Diversion of Overland Flow, If Required
Overland flow from adjacent fields shall be diverted as necessary to ensure the proper functioning of this practice. If diversion of overland flow is required, description of measures to be established (e.g., diversions): ----- <i>Not applicable.</i>

<b>Stable Outlet, If Required</b>	
Runoff from contour rows shall be delivered to a stable outlet.	
If a stable outlet is not available, description of measures to be established (e.g., grassed waterways):	
<i>Stable outlet available: grassed waterway. See conservation plan map for location.</i>	
<b>Bench or Terrace, If Required</b>	
Planting orchards and fruit areas on the contour generally requires a bench or terrace to be constructed to provide access to the growing trees or shrubs. The bench or terrace may reduce surface runoff and increase the opportunity for infiltration. Either inward sloping or outward sloping benches may be appropriate.	
If a bench or terrace is required, description of measures to be established:	
<i>Terraces will be installed via a separate practice. See job specifications for Terrace (Code 600).</i>	
<b>Vegetative Ground Cover, If Required</b>	
Vegetative ground cover, particularly in alleys between rows of trees/vines, in row furrows, and on terraces and diversions can increase infiltration, reduce runoff, aid in controlling erosion, provide habitat for beneficial species and pollinators, and facilitate nutrient cycling.	
If a vegetative ground cover is required, description of measures to be established (e.g., conservation cover):	
<i>Vegetative ground cover will be established via a separate practice. See Jobsheet for Conservation Cover 327).</i>	
<b>Temporary Erosion Control Measures, If Required</b>	
Where sites are disturbed, temporary erosion control measures should be applied until the planting is established.	
If a temporary erosion control measures are required, description of measures to be applied (e.g., structural measures or vegetative cover species to be established):	
<b>Operation and Maintenance Requirements</b>	
Maintenance needed for this practice includes:	
<ul style="list-style-type: none"> <li>• Performing all cultural operations between tree or vine rows on or near the contour.</li> <li>• Periodic inspection and repairs to runoff water outlets</li> <li>• Protecting uphill and downhill farm roads from erosion, and</li> <li>• Maintaining adequate vegetative cover to control erosion.</li> </ul>	
Site-specific and/or additional maintenance requirements:	
<i>None.</i>	
<b>Practice Location</b>	
The practice location is shown on the following document: ("X" below)	
X	On the conservation plan map located in conservation plan file folder.
	On another job sketch, drawing, map, photo. Name: _____

**Job Sketch**

The following job sketches, drawings, maps, and/or photographs have been prepared to assist with practice implementation, operation and maintenance. Type of information which shall be shown includes: the approximate location of the baselines used to establish the system and the location of stable outlets for the system (existing or to be established). Other information which may be shown include: size and area to be contoured and the minimum and maximum allowable row grades for the contour system. (The empty box below may be used to create a job sketch or to insert a job sketch file. Separate job sketch documents should be stapled to this Jobsheet.)

*No Job Sketch available for this example.*

## Practice Approvals

This section documents the practice approvals and the client's acknowledgement of his/her responsibilities.

Job Approval Authority	
NRCS policy requires that the practice inventory and evaluation (I&E) data, design, and installation be approved by a NRCS or partner employee with the required Job Approval Authority (JAA) or higher.	
Required Job Approval Authority for Practice (Enter Job Class I-V.): (Refer to <a href="#">Ecological Practice JAA Worksheet</a> )	Required JAA (I-V) <b>II</b>

Practice I&E and Design Approvals				
Practice Approvals for	Print Name	Signature	Date	JAA of Approver (I-V)
Inventory and Evaluation*	<i>Bill Technician</i>	<i>Bill Technician</i>	3/15/10	II
Design**	<i>Tom Planner</i>	<i>Tom Planner</i>	3/30/10	III

\* The inventory and evaluation data needed to design the practice is adequate and accurate.

\*\* The practice "design" (job specifications - requirements for installation, operation, and maintenance) as documented in this Jobsheet has been prepared in accordance with the Conservation Practice Standard.

Client's Acknowledgement (To be completed after practice I&E and design have been approved.)		
By signing below, I acknowledge that I:		
<ul style="list-style-type: none"> <li>• have reviewed this Jobsheet and have an understanding of its contents and requirements;</li> <li>• will make no changes to this Jobsheet, without prior concurrence of NRCS;</li> <li>• will install, operate, and maintain this practice in accordance with this Jobsheet; and</li> <li>• will obtain all necessary permits and/or rights, comply with all ordinances and laws, and notify all utilities pertaining to the installation, operation, and maintenance of the practice.</li> </ul>		
Print Name	Signature	Date
<i>Bill Technician</i>	<i>Bill Technician</i>	3/15/10

Practice Layout Notes (Description of pre-installation layout assistance (staking and layout, conference, design modification, etc.) provided to the client, if any.)			
Description of Assistance Provided:	<i>Met with farmer to review installation and field layout assistance provided.</i>		
Assistance Provided by:	Print Name	Signature	Date
	<i>Tom Planner</i>	<i>Tom Planner</i>	4/15/10

Practice Checkout Notes (Documentation of field check done and/or records obtained from the client to determine the amount installed and actual materials and methods used.)			
Amount installed:	<i>10 acres</i>		
Was the practice installed in accordance with the job specifications in this Jobsheet? If no, how did it differ?	Yes		
Method of checkout used? (field check and/or records from client)	<i>Field check.</i>		
Checkout Completed by:	Print Name	Signature	Date
	<i>Bill Technician</i>	<i>Bill Technician</i>	4/20/10

Practice Installation Approval (To be completed after practice checkout.)				
Practice Approval for	Print Name	Signature	Date	JAA of Approver (I-V)
Implementation*	<i>Mike Smith</i>	<i>Mike Smith</i>	4/25/10	III

\* The practice has been installed in accordance with the job specifications in this Jobsheet, as verified by the practice checkout notes.