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# AGRICULTURAL ALTERNATIVES

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## Instructions for using the interactive budgets

You will need Adobe Acrobat Reader to use these forms. If you do not have this program installed on your computer, you can download a free version [here](#).

You can make changes to the interactive PDF budget files for this publication by inputting your own prices and quantities in the green-outlined cells for any item. You will need to click on and add your own estimated price and quantity information to all of the green-outlined cells to complete your customized budget.

The cells outlined in red automatically calculate your revised totals based on the changes you made to the cells outlined in green.

When you are finished, you can print the budget using the green **Print Form** button at the bottom of the form.

You can use the red **Clear Form** button to clear all the information from your budget when you are finished.

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**[extension.psu.edu/ag-alternatives](http://extension.psu.edu/ag-alternatives)**

**This publication is available in alternative media on request.**

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**Fresh-market apple production budget, 908 trees per acre, with mating disruption, Pennsylvania, 2020.**

Summary of estimated costs and income per acre.

Item	Quantity	Your Quantity	Unit	Price	Your Price	Total	Your Calculations
<b>Receipts</b>	1,000	_____	bushel	\$ 10.00	_____	\$ 10,000.00	_____
<b>Variable costs</b>							
Lime	0.5	_____	ton	\$ 28.00	_____	\$ 14.00	_____
Fertilizer							
N	40.0	_____	pound	\$ 0.45	_____	\$ 18.00	_____
K	100.0	_____	pound	\$ 0.37	_____	\$ 37.00	_____
Urea (spray additive)	21.0	_____	pound	\$ 0.21	_____	\$ 4.41	_____
Solubor	6.0	_____	pound	\$ 1.92	_____	\$ 11.52	_____
Calcium chloride	47.5	_____	pound	\$ 0.48	_____	\$ 22.80	_____
Herbicides**	1	_____	acre	\$ 148.60	_____	\$ 148.60	_____
Fungicides**	1	_____	acre	\$ 575.80	_____	\$ 575.80	_____
Insecticides **1	1	_____	acre	\$ 321.64	_____	\$ 321.64	_____
Plant growth regulators <sup>2</sup>	1	_____	acre	\$ 57.61	_____	\$ 57.61	_____
Mating disruption	1	_____	acre	\$ 324.00	_____	\$ 324.00	_____
Labor							
Trellis maintenance	1	_____	acre	\$ 90.00	_____	\$ 90.00	_____
Pest scouting	1	_____	acre	\$ 40.00	_____	\$ 40.00	_____
Thinning andd misc. <sup>3</sup>	22.4	_____	hour	\$ 15.00	_____	\$ 336.00	_____
Operator	5.5	_____	hour	\$ 17.00	_____	\$ 93.50	_____
Pruning	908	_____	tree	\$ 0.55	_____	\$ 499.40	_____
Harvesting	1,000	_____	bushel	\$ 1.50	_____	\$ 1,500.00	_____
Other							
Bee rental	1	_____	acre	\$ 125.00	_____	\$ 125.00	_____
Insect traps	1	_____	acre	\$ 40.00	_____	\$ 40.00	_____
Rodenticide	10.0	_____	pound	\$ 1.35	_____	\$ 13.50	_____
Surfactants	0.13	_____	gallon	\$ 17.00	_____	\$ 2.21	_____
Crop Insurance - APH <sup>4</sup>	1	_____	acre	\$ 293.00	_____	\$ 293.00	_____
Crop Insurance - SCO <sup>4</sup>	1	_____	acre	\$ 36.00	_____	\$ 36.00	_____

Diesel Fuel	35.4		gallon	\$ 2.80	\$ 99.12	
Repairs and maintenance						
Tractors	1		acre	\$ 18.16	\$ 18.16	
Equipment	1		acre	\$ 59.62	\$ 59.62	
Additional costs						
Additional costs						
Interest on operating capital	1		acre	\$ 115.87	\$ 115.87	
<b>Total variable costs</b>					<b>\$ 4,896.76</b>	
<b>Fixed costs</b>						
Tractors	1		acre	\$ 37.57	\$ 37.57	
Equipment <sup>5</sup>	1		acre	\$ 121.20	\$ 121.20	
Land charge	1		acre	\$ 200.00	\$ 200.00	
Additional costs						
Total fixed costs					<b>\$ 358.77</b>	
<b>Total costs</b>					<b>\$ 5,255.53</b>	
<b>Returns over variable costs</b>					<b>\$ 5,103.24</b>	
<b>Net returns</b>					<b>\$ 4,744.47</b>	
<b>Break-even yield (bushels)</b>					<b>526</b>	
<b>Break-even price (per bushel)</b>					<b>\$5.26</b>	

\* Budget estimates are based on data available in August 2019.

\*\* For more detailed information concerning pesticides, please see the 2020-2021 *Pennsylvania Tree Fruit Production Guide*.

1. Additional insecticide sprays may be required for control of brown marmorated stink bug. Insecticides such as Actarra, Assail, Belay, Danitol, provide control for a cost of approximately \$12-41/A for each additional spray (plus application cost if not tank mixed with a fungicide) Other insecticides may be available for use on BMSB under Section 18 emergency exemptions.
2. See tables 1-17 and 1-18 in the *Penn State Tree Fruit Production Guide* for alternative growth regulators used in apples. Depending on the thinning, growth control, and harvest management program used, plant growth regulator costs vary from \$0 to over \$500 per acre.
3. Assuming chemical thinning in addition to hand thinning.
4. Hypothetical cost of crop insurance coverage in Adams County PA (APH: actual production history and SCO: supplemental coverage option) assumes no participation in ARC (Agricultural Risk Coverage from USDA-Farm Service Agency) at the 50% coverage level for

*100% of the standard \$13.30/bushel fresh market price election and an APH yield of 1,000 bushels per acre. Contact your crop insurance agent for a quote based on your county, government program participation, yields, and pricing preferences.*

5. Includes irrigation costs.

You should monitor local markets and contact suppliers to determine current prices for all items contained in this sample budget.