FINDING FARMLAND

NATIONAL YOUNG FARMERS COALITION

A Farmer's Guide to the Land Access Affordability Calculator findingfarmland.youngfarmers.org

EST 2010

Land Access Affordability Calculator

NYFC launched the Finding Farmland website to help farmers and ranchers make informed financial decisions during the process of accessing land. The site was created in partnership with Fathom Information Design, a renowned firm that partners with clients to understand, express, and navigate complex data through visualizations, interactive tools, and software.

The main feature of the website is a Land Affordability Calculator, which you can use to compare financing costs for two different farm properties, or to compare different financing scenarios for a single property.

Even if you are not currently looking for land, you can use the Calculator to better understand the process. To get the most out of the tool, we recommend gathering the following information:

- Your business plan,
- The cost of the property (or properties) you are considering,
- Estimated property taxes and insurance rates,
- Whether a conservation easement is an option on the property,
- The details of your finance options (interest rate, amortization, term, and fees), and
- A tally of your personal income and any personal debts.

You can use the calculator without these materials, but it will be easiest to have them on hand. You will also need to create an account the first time you use it.

The calculator is available at:

https://findingfarmland.youngfarmers.org

Following is an example of how you might use the Land Access Affordability Calculator if you were looking for land.

SCE! \$2,1 \$1,1	188 /mo 90 /mo	SCENARIO 2 \$1,616/mo				
DOWN PAYMENT \$ 180,000 Cash C FSA Loan	45 % of farm cost Rate 3 % Amortization 20 yr Term 20 yr	DOWN PAYMENT \$ 123,705 Cash © FSA Loan	45 % of farm cost Rate 3 % Amortization 20 yr Term 20 yr			
DOWN PAYMENT \$ 20,000 Cash FSA Loan + Add down p	5 % of farm cost	DOWN PAYMENT \$ 13,745 Cash FA Loan + Add down p	5 % of farm cost			
LOAN 1 \$ 200,000 Interest-only + Add Ioan	Rate 4.5 % Amortization 30 yr Term 30 yr	LOAN 2 \$ 137,450 Interest only + Add Ioan	Rate 4.5 % Amortization 30 yr Term 30 yr			
+ Add conserv	ration easement	+ Add conservation easement				

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SCENARIO 1



46.6 acres 1927 farm house w/ 3 bdr, 2 bath

Listed at \$400,000 \$1,320 annual taxes

\$800 annual insurance

In this example, we will assume that the farmer:

- Has enough farming experience to qualify for an FSA Direct Down Payment Loan;
- Earns \$18,000 per year from their current farm enterprise, and that they have a spouse who earns an income of \$35,000 per year at an off-farm job;
- Pays \$1,000 per month in rent on their current farm property;
- Pays \$1,500 per month in rent, along with their spouse, on their current home, and they plan to move into a house on the new farm property;
- Has saved \$20,000 for a down payment; and,
- Makes a \$400 monthly student loan payment.

SCENARIO 2



39 acres 2012 house w/ 3 bdr, 1.5 bath

Listed at \$274,900 \$2,000 annual taxes \$800 annual insurance

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First, we enter the asking price of each farm property on the calculator's home page. In this example, we will look at two different properties side-by-side. You can also enter the same property price in both scenarios to learn how different inputs will affect a property's affordability.

Affordability Ca	lculator		SCENARIO 1 \$1,052/mo + taxes	SCENARIO 2 111-4 5687/ma+taxes 1115-30 \$177/ma+taxes	Show details
This tool will help you estimate th	e costs of securing your land	55	a serverst 0,000 effere cod	DOWN FATMENT \$50,000 O /Skien	
Before you start, we recommend information: your business plan, ti	gathering the following ne cost of the property (or	57	5,000 Ares. 38/	LOAN 2 80% 85% \$100,000 Ares. 107	
properties) you are considering, e	stimated property taxes,	LOAN 812	12 form 4.81 25,000 denot. 38/1	LOAN 2 Bate 4.8	
whether a conservation easement the details of your finance options term, and fees), and a tally of any	is an option on the property. (interest rate, amortization, personal debts. You can use		+ Add san	Ordenstody tem Marrie	
the calculator without these mate	ials, but it will be easiest to		Add assersed	EAGEMENT System II	
This phase of the tool does not in your progress, but you can downl an excel file.	clude an option for saving bad an amortization table as		5250,000 firm card 525,000 rume hing	5146,000 frem cert 518,000 remaining	10
Enter the specs for your potential scenario comparison.	land to start building a				
					<u></u>
COMPARE PROPERTIES	Property price	\$400,000	Property	/ price \$274,9	900
SHOW \$/ACRE					

Next we enter a down payment for each property. Our farmer qualifies for an FSA Direct Down Payment Loan, which covers up to 45% of the purchase price if the farmer can provide 5%. To enter this into the calculator, we create two down payments for each scenario. The first covers the FSA's loan of 45% of the farm cost; the second is your cash down payment of 5% of the farm cost.

SCENARIO 1			SCENARIO 2					
\$998/mo + taxes			\$686/r	mo + taxes				
				_				
DOWN PAYMENT			DOWN PAYMENT					
\$ 180,000			\$ 123,705 🗸	45 % of fa	rm cost			
Cash C FSA Loan	Rate	3 %	Cash 🔵 FSA Loan	Rate	3 %			
	Amortization	20 yr		Amortization	20 yr			
	Term	20 yr		Term	20 yr			
DOWN PAYMENT	<u>k</u>		DOWN PAYMENT					
\$ 20,000 🗸	5 % of fa	ırm cost	\$ 13,745 🛛 🔫	5 % of fa	rm cost			
Cash D FSA Loan			Cash 🌑 FSA Loan					

To finance the remaining 50% of each property purchase, our farmer found a 4.5%, 30-year mortgage from a lender. In Scenario 1, our farmer's monthly payment would drop by about \$1,000 after they pay back the 20-year FSA loan, which is shown in the monthly payment header.

SCENARIO 1			SCENARIO 2					
\$2,188 /mo \$1,190 /mo			\$1,616 /mo					
DOWN PAYMENT			DOWN PAYMENT	_				
\$ 180,000	45 % of fa	irm cost	\$ 123,705	45 % of farm cost				
Cash OFSA Loan	Rate Amortization Term	3 % 20 yr 20 yr	Cash O FSA Loan	Rate3Amortization20Term20				
DOWN PAYMENT			DOWN PAYMENT					
\$ 20,000	5 % of fa	irm cost	\$ 13,745	5 % of farm cost				
Cash 🗩 FSA Loan			Cash 🌑 FSA Loan					
+ Add down p	ayment		+ Add down pa	ayment				
LOAN 1 \$ 200,000	Rate Amortization	4.5 % 30 yr	LOAN 2 \$ 137,450	Rate 4.5 % Amortization 30 yr				
Interest-only	Term	30 yr	Interest-only	Term 30 yr				

Remember to enter the taxes, insurance, and fees for each property to create more realistic monthly payments.



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To determine affordability, we enter the farmer's personal financial information into the affordability section. (This information is listed on the third page of this guide.)

In this scenario, the estimated gross income is all family income before expenses are deducted. We will add the farmer's current land lease and mortgage payments (totaling \$30,000/year) to the gross income because those expenses will go away if they purchase a farm property. And don't forget to add the spouse's off-farm income of \$35,000!

We chose to include all family income in this example because the family plans to live at the property. You may choose to look at farm gross income independently if you want to make sure the farm alone can afford the property, or if there is no home on the property.



Now that our farmer has entered all of their inputs, the calculator generates a range of Affordability tools. These include:

1. Debt-to income ratio	The debt-to-income (DTI) ratio is a measure used by lenders to determine your ability to repay debts. The ratio divides total monthly debts by monthly income and is expressed as a percentage. The higher the DTI, the bigger the portion of your income reserved to pay off debt.
2. Chart of monthly payments	This chart shows your monthly payments over the amortization period, or fixed schedule of loan payments.
3. Total financing cost	The total cost shows how much you will pay over the life of your loans, and breaks down these costs by down payment, principal, interest, taxes, insurance, and fees.
4. Chart of equity vs debt	This chart will help you visualize how much equity you can expect to build over time versus how much debt you will take on.
5. Amortization table download	Download a .csv file breaking down the monthly payments over your amortization period, or the span of time over which you pay back your loan.

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1. Debt-to-income ratio



Success! The calculator determines that either property will be affordable for our farmer. In Scenario 1, the farmer would have to use 37% of their income to pay for land financing; in Scenario 2, the more conservative investment, land financing would cost 29% of their income. The debt-to-income ratio is calculated as monthly debts divided by monthly income. In both examples, our farmer would have more than 60% of their income available for non-debt-related expenses—like health insurance, groceries, and utilities—each month.



2. Monthly payments chart



In Scenario 1, the farmer's payment decreases significantly after Year 20 because they have paid off their FSA Direct Down Payment Loan during year 20. Remember that we entered an amortization period of 20 years for the FSA loan and 30 years for the conventional loan.

3. Total costs



Total Cost

Total Cost

Notice that interest is the largest cost in these financing scenarios. The sooner our farmer can pay off these loans, the lower the interest expense will be. The small bars at the top represent costs of taxes and insurance.



4. Equity vs debt

When the equity and debt lines cross, the farmer has built more total equity than debt in the property. At this point, the farmer owns more than they owe. While debt will steadily decrease over a fixed payment schedule, a property's equity will actually fluctuate with land values. The calculator includes charts that show the historic values of agricultural land in different regions over time to help you get a sense of how your equity might go up (or down).

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Now that we have two fully built scenarios, we can toggle the inputs to learn more about their impact on our farmer's monthly or overall payments. For instance, our farmer might be able to sell a conservation easement to a land trust to protect their property from future development.

Easement value is based on a number of factors, and is ultimately decided by an appraisal. In cases where there is high development pressure, it could be as high as 70% of the property value. Likewise, if land values are being driven up by farmers, the easement might not be worth much at all. The best way to determine this number is to talk with a local land trust or public agency that purchases easements. Read NYFC's <u>A Farmer's Guide to</u> <u>Working with Land Trusts</u> to learn more.

If we add a conservation easement worth 30% of the property value in Year 3...



...the farmer's monthly payment drops significantly after Year 10. Their income from the easement sale allowed them to pay back the loan that the easement was applied to sooner.



Note the impact that selling a conservation easement would have on our farmer's total costs. The easement was sold for \$120,000 in Scenario 1 and \$82,470 in Scenario 2, but those calculate to reductions of \$134,072 and \$92,140, respectively, in total costs. Since the farmer used revenue from the easement sale to pay off their loan faster, it greatly reduces the interest they expected to pay.



Now that you know how the Land Access Affordability Calculator works, put it to use! Try toggling other inputs, such as interest rates or amortization periods (the length of a loan payback), to learn more about how these financing terms can affect your bottom line. Calculate your debt-to-income ratio for the last year (total debt divided by total income—remember you can consider your current rent payments for your home and farm to be debts) to determine if your idea of a "pretty good" ratio matches ours.

Every farmer's land access story is unique. We designed the Land Access Affordability Calculator so that you can make a more informed approach to financing a property purchase. Please try out the tool for yourself at **https://findingfarmland.youngfarmers.org** and tell us about your experience.

Remember to rate the tool using the field displayed below, and reach out to Michael Durante, our Land Access Program Associate, at **findingfarmland@youngfarmers.org** with your feedback.

After using this calculator, how prepared do you feel to make a sound financial decision when accessing land?

More prepared	Same as before	Less prepared	l don't know