PROVIDED BY KITCHEN TABLE CONSULTANTS AND CHIP'S FARM TO INSTITUTION CENTER

COSTS BY CROP & YOUR BOTTOM LINE

Workshop #3
October 2019

SELF ASSESSMENT

5 minute paper form

Please use your name

Will be kept private

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TODAY'S AGENDA

- Module 1: Cost by Crop Toolkit for Pricing for Profit
- Module 2: Benchmarking
- Lunch
- Module 3: Marketing Expert Panel Q&A

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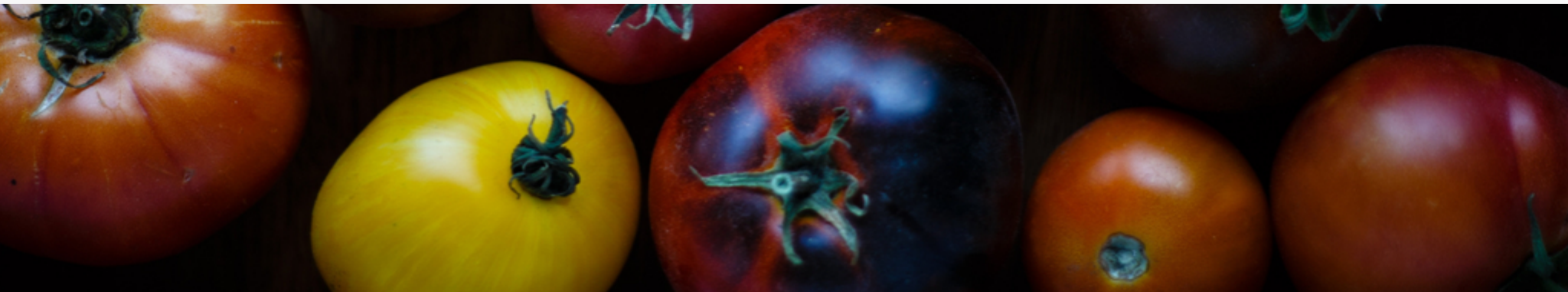
Starting up a new sales channel without understanding your crop costs is dangerous.

If you don't know that each product-price set is profitable,
you could unknowingly be losing money & reducing your personal income!



WHY DOES IT MATTER?

- Diversify channels to reduce risk
- Really good at growing a few, particular crops, impact of volume
- Justify equipment purchase for a particular crop
- Strategy for unused land
- Having the information you need to pivot strategically

MODULE 1 AGENDA

- Price vs Cost by Crop
- Margins Example
- Crop Costing Template
- Root Washing Case Study
- Crop Costing and My Budget
- Group Work
- Next Steps

How should we approach price vs cost by crop?

Farm finances are complicated.
We have COGS and all kinds of other expenses:

LABOR | ADMINISTATIVE + MARKETING | OVERHEAD | OPERATION

Start with a forecast and work backwards!

COST VS PRICE BY CROP

Review on Margins

Margin refers to the difference between your selling price and your costs for the item you are selling.

Sales - Costs of Goods Sold = Gross Profit

(Gross Profit/Sales) x 100 = Gross Margin %

What should my margin goal be?

Minimum 20% for wholesale prices.
Minimum 40% for retail prices.

This assumes your direct labor is included in COGS.

These suggestions are meant to be used as general guidelines, and the user should verify their own numbers and assumptions.

COST VS PRICE BY CROP

Wholesale vs Retail

- If wholesale, expect 20-25% margin. All of your other expenses need to come in under 20%.
- In wholesale your expenses of selling should be much lower - staff time and materials.
- Retail margins need to be higher to cover that increased effort in sales and marketing.
- Blends of wholesale and retail operations mean we need to zoom out and look at big picture.

SETTING UP THE MODEL

Start with a forecast and work backwards

Let's have a look at the whole spreadsheet before we break it down!

Crop Costing Budget Worksheet					
for wholesale readiness					
fill in peach cells					
don't write over grey cells					
Step 1: Fill in your crop, unit of measure, bed length and rows per bed below in the peach cells.					
Crop:	carrots				
Harvest Unit of Measure:	pounds				
Bed length (linear feet)	300				
Rows per bed	2				
Step 2: Consult your records for yield per bed, based on bed length and rows entered above.					
enter the wholesale price that you are testing with this model.					
enter a margin goal for this product - at least 20% for wholesale and 40% for retail is recommended.					
These sheets are meant to be used as general guidelines, and the user should verify their own numbers and assumptions.					
Yield per bed (see row 9)	400	pounds			
Wholesale Price per unit	$0.60	pounds			
Total Sale	$240.00				
Profit margin goal	20%				
Step 3: Enter the number of beds you plan to plant with this crop for wholesale in the peach cell below.					
				Totals:	
Projected Revenues	$240	x number of beds:	5	$1,200	
Budgeted Expenses	$192	x number of beds:	5	$960	
Budgeted Profits	$48	x number of beds:	5	$240	

SETTING UP THE MODEL

Crop, Bed Size, Yield, Price, + Margin

Step 4: Enter your cost per hour (or an average cost) for labor. Then enter your rate for taxes and benefits.

Field Labor: cost per hour	$12
Taxes and Fringe Benefits	15%
Effective labor costs per hour	$14

Step 5: Enter your costs of direct inputs per bed (rememeber your bed length and rows entered in step 1). List your costs of seeds or starts, soil ammendments, or other inputs. Use scratch paper as needed or create a new tab to organize your "other" items.

If you don't know your plant start costs in your greenhouse, use the "Starts" Tab to calculate a cost.

Seeds or Starts	$18
Soil Ammendments	$0
Other 1	$20
Other 2	$0
SUBTOTAL	$38

What could we use "other" for?

Any direct costs that can be tracked by bed.

Note your labor budget: This is the (projected revenue - direct costs - margin goal) = your remaining budget for labor

Labor Budget per bed	$154
Labor Budget in Hours, per bed	11.2

Based on a goal of the margin you set, after direct costs.

SETTING UP THE MODEL | Labor Cost + Direct Inputs

Step 6: Enter your labor plan PER BED, using the same bed size and rows entered in step 1. You are making estimates unless you have already collected data. Over the course of the season, you should refer to your estimates and aim to meet your plan.

A "feasible" budget for your wholesale price is less than or equal to your labor budget in hours per bed.

Activity	# of passes per crop (must be at least 1 to calculate)	Time (in minutes) per pass	Notes:
Bed preparation	2	20	
Seeding or transplanting	1	30	
Thinning	0	0	
Cultivating	3	15	
Hand Weeding	2	30	
Pruning	0	0	
Trellising/Tying	0	0	
Irrigation	0	0	
Weather protection	0	0	
Fertilizing (side dress or foliar)	0	0	
Pest control (scouting, application)	0	0	
Harvesting to wash shed	1	120	
Clearing/Plowing under	0	0	
Washing/Packing	1	120	
Other	0		
Other	0		
SUBTOTAL: LABOR TIME in MINUTES	10	415	
LABOR HOURS		6.9	

Over the lifespan of this crop

Best estimate

You must use a # of 1 or greater under passes to calculate. We realize that washing isn't a pass down the row, but use 1 to complete the calculation.

FORECASTING LABOR + TIME: CARROTS

Starts Cost Worksheet: crop costing input

for wholesale readiness

These sheets are meant to be used as general guidelines, and the user should verify their own numbers and assumptions.

Step 1: Fill in crop name

Crop:	Watermelon

Step 2: Fill in tray information

If your trays don't usually 100% germinate, enter a number of useable plants instead of tray size.

TRAYS

Tray Size or Useable Plants per Tray	47
# of uses per tray	3
Cost of tray	$1.00

Step 3: Fill in the cost of seed per tray, potting soil, other products.

Be sure to enter costs by TRAY.

Potting soil per tray can be calculated by measuring the soil required and comparing to your costs of bulk soil.

PRODUCTS

Seed (tray)	$0.50
Potting soil	$0.02
Other products	$0.14
Tag	$0.06

Step 4: Calcuate your Greenhouse "Rent" per tray.

Total Greenhouse costs include maintenance, utilities and other direct costs of running the GH. Use your planting plan to enter a number of trays run through the GH per YEAR.

GREENHOUSE COST

Total Greenhouse costs per year	7500
# of trays per year	3500
Greenhouse "rent" per tray	$2.14

Step 5: Calculate your labor per tray. All inputs are in reference to the crop in step 1.

FILLING & SEEDING LABOR PER TRAY

# of trays filled per hour	40
# of trays seeded per hour	15
Greenhouse Labor rate	$14.00
Taxes and Fringe Benefits	15%
Tray filling labor	$0.40
Seeding labor	$1.07

Step 6: Calculate your general labor per tray. All inputs are in reference to the ENTIRE greenhouse starts season.

GENERAL GREENHOUSE LABOR

Hours per week of general labor in GH	18
# of weeks of labor in GH for starts season	6
Total cost of general labor in GH for starts	$1,738.80
Greenhouse labor, per tray	$0.50

Step 7: Review your results

SUBTOTALS

Tray Cost per plant	$0.01
Product Cost per plant	$0.0153
Rent per plant	$0.05
Labor per plant	$0.04
Cost of Starts, per plant	**$0.11**

SETTING UP THE MODEL | Direct Inputs: Transplants

Step 7: Review your crop cost analysis below. Here you can experiment with the projected return on the number of beds. Fill in the peach cell below for # of beds.

Summary Crop Cost Analysis			
# of beds in crop plan	5		
Projected total yield	2000	pounds	
Income	$1,200	% of labor budget:	
Direct Costs	$190	30%	
Labor	$442.75	70%	
Margin	**$567.25**		
Margin %	**47%**	**VS. Margin Goal:**	**20%**
Cost per unit:	$0.32		

From the price and yields you entered above

Compare this to your desired margin and decide if it's worth the effort

The time you projected multiplied by your effective labor cost multiplied by # of beds

SUMMARY COST ANALYSIS

Step 8: Use this section to experiment with a variable such as equipment purchase. This shows you a different scenario's outcome.
Best practice is to create a new tab and copy this entire sheet - then experiment with the opportunity in a new tab to protect your data.
Compare your results between tabs to see if you want to pursue the opportunity!
Fill in the peach cell below for the name of the opportunity, and the cost for the growing cycle.
Results will show you the effective impact on your margin for the period of time that you incur the cost of the opportunity.
Be sure to adjust your labor or input numbers above to show the impact of the purchase.

Opportunity Assessment Scenario:	*finance root washer purchase, $2105 per year for 2 years, with 25% assigned to carrots.*	
Other Costs	$526.25	root washer payment
Other Costs	$0.00	
Margin	**$41.00**	
Margin %	**3%**	
Cost per pound:	$0.58	

These sheets are meant to be used as general guidelines, and the user should verify their own numbers and assumptions.

Impact on margin during debt payment

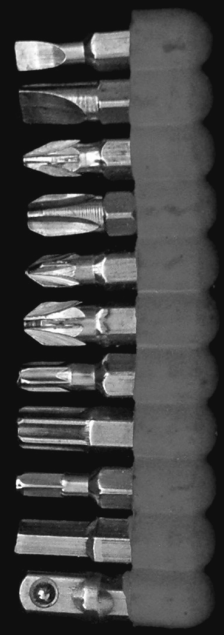
Remember that labor could be reduced greatly by this purchase

OPPORTUNITY ASSESSMENT

What if your crop isn't profitable enough?

- Create a new tab in the sheet or “save as”
- Try again with different data
- Let’s discuss an example

TWEAKING YOUR MODEL



Let's say we want to reduce labor in the washing stage and spend $4000 on a root washer. We borrow the money from a family member and are paying it back over 2 years with 5% interest. ($175.49/month or $2105.88/year)

How many crops will I use this for? Create a % use plan to assign cost.

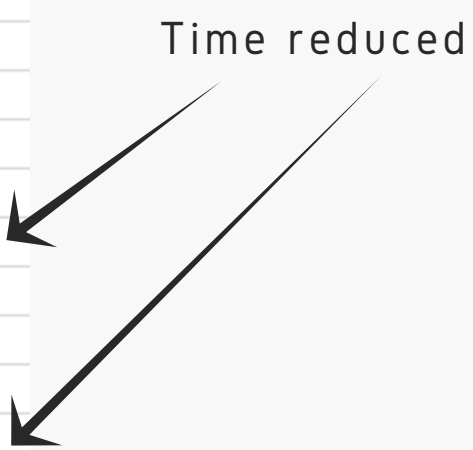
- Ex: 25% carrots ($526/year), 25% beets ($526/year), 50% potatoes ($1054/year).
- Project how much time you will save (ex: 50% of washing time).
- Consider that crop yield over the whole year (# of beds).
- Re-run the model. Put your repayment cost in "other" under summary analysis. Play with # of beds.

ROOT WASHER CASE STUDY

Labor Budget & Activities

all estimates should be per bed (see row 9 above)

Activity	# of passes per crop (must be at least 1 to calculate)	Time (in minutes) per pass
Bed preparation	2	20
Seeding or transplanting	1	30
Thinning	0	0
Cultivating	3	15
Hand Weeding	2	30
Pruning	0	0
Trellising/Tying	0	0
Fertilizing (side dress or foliar)	0	0
Pest control (scouting, application)	0	0
Harvesting to wash shed	1	120
Clearing/Plowing under	0	0
Washing/Packing	1	90
Other	0	
Other	0	
SUBTOTAL LABOR TIME	10	385
		6.4



ROOT WASHER CASE STUDY

Summary Crop Cost Analysis		
Analysis is per bed (see row 9 above) - enter # of beds below		
# of beds in crop plan	5	
Projected total yield	2000	pounds
Income	$1,200	
Direct Costs	$190	
Labor	$442.75	
Other Costs	$526.00	root washer payment
Other Costs		*item*
Margin	**$41.25**	
Margin %	**3%**	

Margin reduced for 2 years until paid off.

Summary Crop Cost Analysis		
Analysis is per bed (see row 9 above) - enter # of beds below		
# of beds in crop plan	15	
Projected total yield	6000	pounds
Income	$3,600	
Direct Costs	$570	
Labor	$1,328.25	
Other Costs	$526.00	root washer payment
Other Costs		*item*
Margin	**$1,175.75**	
Margin %	**33%**	

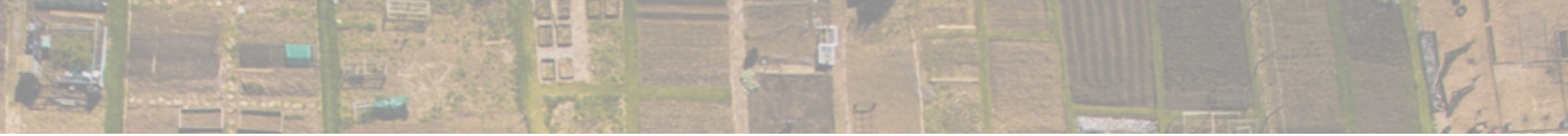
What happens with a bigger crop?

Can I sell 6000 pounds of carrots?

ROOT WASHER CASE STUDY

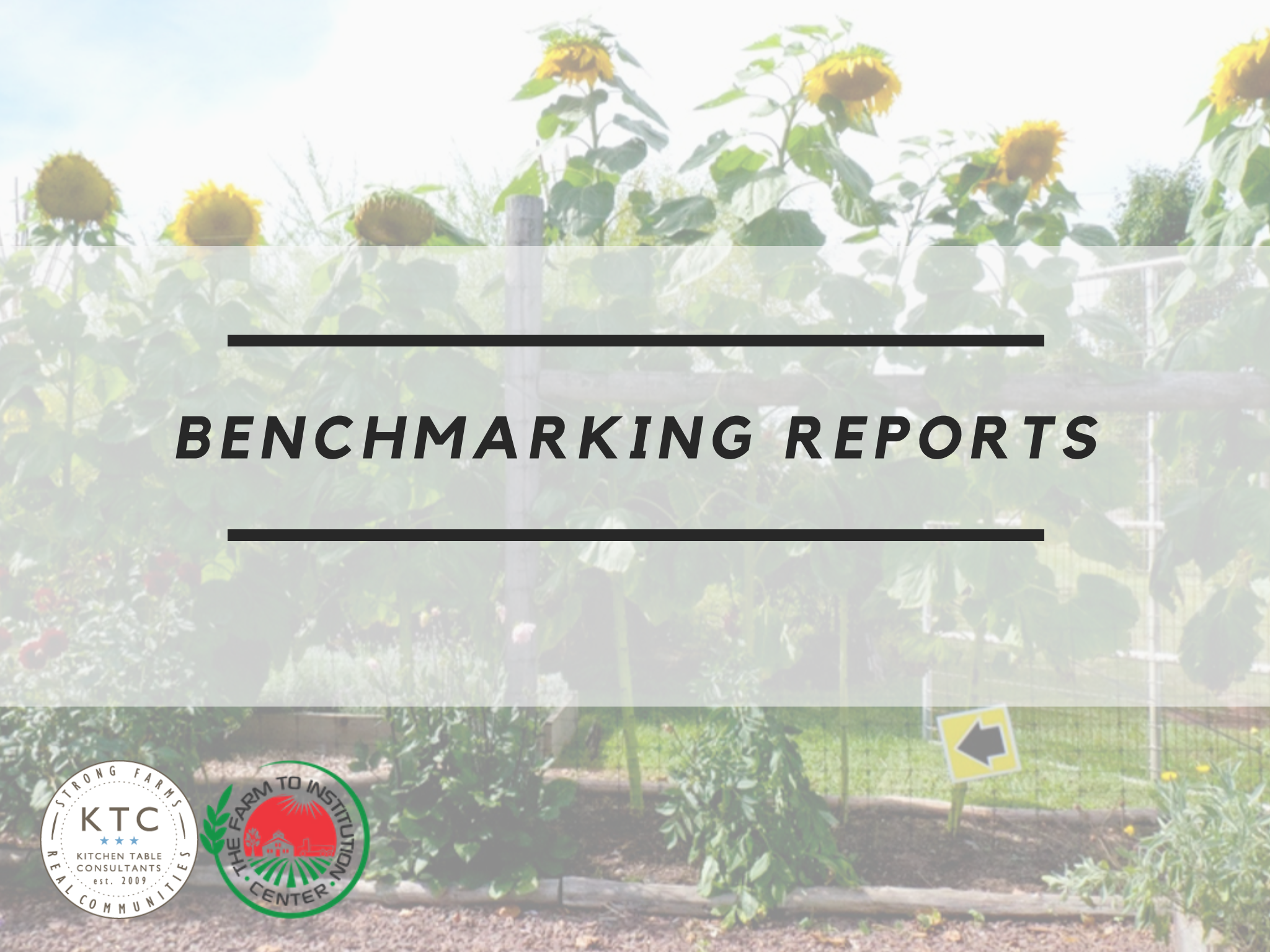
After this exercise we should have a good idea of whether we can take a certain crop to market without going broke!

Let's work in small groups to try out a few crops!



NEXT STEPS

- Try this out on a couple of crops you're planning for 2020.
- See if you can figure out what crop is most profitable at which price point.
- Talk to us - use a sounding board before you make any big changes!



BENCHMARKING REPORTS

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BENCHMARKING SUMMARY

- Everyone is spending more time in the office - is that time of year, or a reflection of your growth?
- Check in with your personal report - how have your goals shifted?
- Can you now forecast a seasonality to certain expenses with your personal report?
- Discussion: What 1-2 big "ah-ha!" discoveries are you gleaning from this report?

SALES

- Look at your projected sales for the rest of 2019. Do you know how you are going to reach that number?
  - units?
  - commitments?
  - activities?
  - what's the risk outcome of NOT making it?

- Discussion: Why are your new end-of-year projections higher or lower than they were back in March? What changed?

COSTS OF GOODS SOLD

- We have a lot of variation!
  - Discussion: what goes into COGS on your farm?
  - How much of your COGS expense was up front earlier in the year or tagged on to the end of last year?
- Remember this is the first big metric of potential profitability.

EXPENSES: OPERATING

- Opex above 15-20% for smaller farms. It is killing you guys.
  - What size do you need to be for this to shift?
  - Create projections/future budgets, see if you can find a sweet spot to plan for.

- Discussion: What are you including in OpEx?

RATIOS:
SALES PER ACRE

- From San Diego County Report:
  - Veggies and Vine Crops: 33K
  - Tomatoes: 46K
  - Strawberries: 62K
  - Avocado: 8K
  - Lemons: 21K
  - Herbs/Spices: 55K
- "Rise of high profit micro farm"
  - "Average" CSA farm: 40K
  - JM Fortier: 100K
- Discussion: What's your limiting factor...yield or price or markets in general? The ability to acquire labor?

LUNCH & NETWORKING

Panel Discussion--Marketing Experts

Catt White - San Diego Markets

Stepheni Norton - W.D. Dickinson

Steven Cornett - Nature's Always Right

Mai Nguyen - Farmer Mai

NEXT STEPS

1. Schedule your Nov & Dec sessions to work on your budget & crop costs.
2. Mark your calendar for the next workshop - let's confirm now for Feb. date.
3. Be ready for end of year bench marking in early January.
4. Use your December session to finalize your budget.
5. January surveys are required so schedule with me for help :)

REMINDER

Turn in your self assessment survey to Dane before you leave