

CROP MANAGEMENT
COMPUTERIZED PLANNING

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How profitable is your present crop operation? What would happen to your profits if you shifted to more corn? More beans? Tried double-cropping? What changes would you need to make to best handle another eighty acres? Which of your present machinery items is most seriously affecting your timeliness? WHERE ARE THE REALLY BIG OPPORTUNITIES FOR YOU?

This computer crop budget is designed to help you find better answers to your many management questions. By using this budget you can see the impact of how a change in one factor "ripples through" the entire business. The computer is fantastically fast and accurate in measuring changes based on your answers to input form questions.

Everyone recognizes the value of timely planting. Yet no one has enough equipment to plant his crop in one day. What is the trade-off between crop yield losses and extra machinery costs, or maybe extra parttime labor hired in for a second shift, or maybe a switch to a different crop on the last acres planted, or maybe sharing work with a neighbor?

You supply ALL the basic numbers (you may use some of "Our Plan" figures, if they look O.K. for your farm). The computer does the arithmetic and comes up with the best possible farm plan - based on your data - and our ability to realistically direct the computer to solve the problem via a linear programming approach.

The Ohio Crop Budget uses information on your corn, corn silage, soybean and wheat production situation to suggest a "good" corn/soybean/wheat cropping plan for your farm. This is a cropping plan. It does not take direct account of weather variability, price variability or machinery breakdown. The plan will not be realized in any one year, but will approximate expectations: hence, it should be useful to you in suggesting long run planning adjustment.

The budget has been designed to solve the problem of how much corn/wheat and/or soybeans you should produce considering relative labor and machinery scarcities at land preparation, planting and harvesting times. In addition to your own resources the model allows land rental, hiring of season labor and custom combining work to be "hired in" or "sold out". Corn and soybeans may be sold "wet" or "dry" and an allowance is made to grow your present acreage of corn silage. In addition, you may consider double crop soybeans after wheat.

The budget is a "long term" or "pre-season" planning budget, and not a day-to-day operating plan. Its main objective is to formulate a working plan based on various expectations you have when you plan ahead. These include expected planting and harvesting rates, expected number of working days per week during a particular time period, expected prices and costs, etc. In practice we know, of course, that you will have an above or below average season, and actual planting and/or harvesting patterns will deviate somewhat from those planned. In spite of this, it is expected that the budget will be found very useful as a relatively quick way of preparing detailed and high-profit farm plans.

This program can be used for a crop-livestock farm as well as a specialized corn/soybean farm. If planning for a mixed enterprise, it is essential to remember that labor availability and machinery field hours represent time availability for corn/corn silage/soybean/wheat production only. These times are presumably less than the corresponding times available for all farm work.

During the past seven years 3500 farmers have attended workshops where they have learned how to drive this new machine - the computer - across the fields of their own farms. It is their testimonials regarding the successful changes in farming they have made which make us believe that the computer model is a useful tool that more crop farmers should use.

QUESTIONS OHIO FARMERS HAVE ANSWERED USING THE CROP COMPUTER PROGRAM:

A. With Present Machinery, Labor and Land

- What am I now making from my crop operation, and how can I make more?
- What acreage of corn, soybeans, and wheat should I be growing?
- Should I be growing some wheat-soybean double crop?
- At about what date should I shift from corn planting to soybean planting?
- How many soybeans should I raise if the price were to increase 50¢ per bushel? If nitrogen costs should decline 25 percent?
- Could I increase income by doing custom work for others?
- Should I hire in a custom combine for some of my work?
- Where are my present labor bottlenecks?
- What would be the value of adding one more hour per day of field time during May? October?

B. With a Change in Machinery

- Where should I invest my next \$10,000 - \$25,000 - \$50,000 in machinery?
- How is profit affected by a different sized combine, tractor, planter?
- To be more specific, what would the next larger size really cost me?
- Does a machinery change affect the best combination of crops?
- Would a shift to a different tillage system likely increase or decrease net return?

C. With a Change in Labor

- Can I afford to pay \$4 - \$6 - \$10 per hour for part-time labor at critical periods?
- How would a second shift at planting or harvest affect profits?
- Which is more profitable: Hire extra labor and run my present equipment longer hours, buy larger equipment, or hire custom work?
- Perhaps I should work off farm and farm part-time. How would this affect my cropping program and profits?

D. With A Change in Land Size

- With extremely high asking prices for land, could I afford to buy it? Cash rent it?
- If I can somehow get some additional acres, what changes if any should I make in my machinery?
- With high cash rental rates, should I rent out some of my land?

How Can You Use The Model?

Contact your County Extension Agent. He will help you get the input forms to use individually or he may suggest that enroll in a workshop that is being planned.