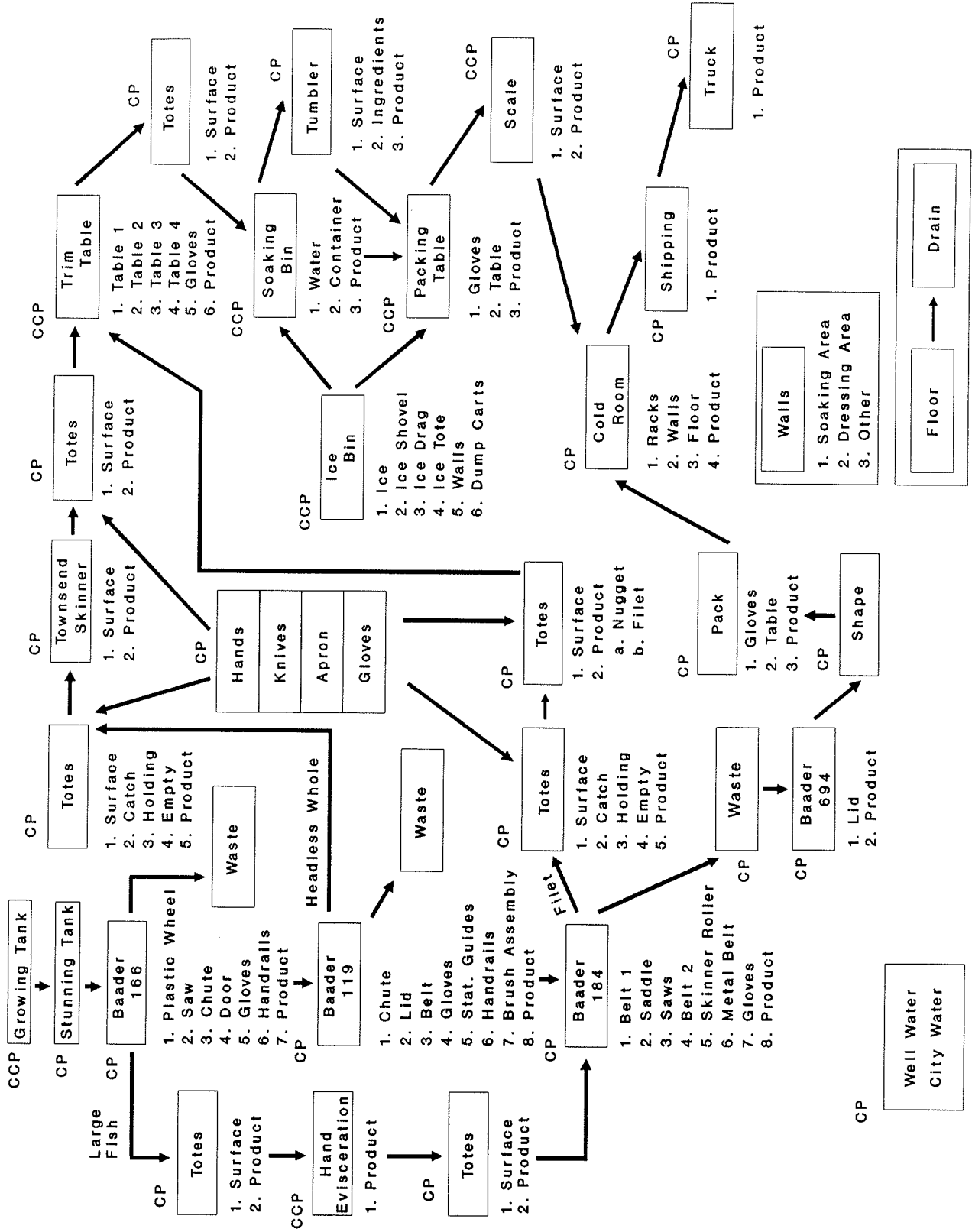


APPENDIX IV.

The Catfish Database Management Program

Developed by
The Virginia Tech Department of Food Science
Written by
Geoffrey M. Knobl

Press ← to continue.



Add Records

Edit Records

Find Records

Exit

Use the left and right arrows to choose an option and hit enter.

Add Records

Edit Records

Find Records

Exit

Micro Meat
Micro Surface
Chemical Meat
Chemical Feed
Tank Water
Well Water
Storage Area
Waste Manage
Temperature

Choose a database to add records to by using the up and down arrows.

Add Records

Edit Records

Find Records

Exit

Micro Meat
Micro Surface
Chemical Meat
Chemical Feed
Tank Water
Well Water
Storage Area
Waste Manage
Temperature

Use the up and down arrow keys to select the correct database and hit enter.

Add Records

Edit Records

Find Records

Exit

Micro Meat
Micro Surface
Chemical Meat
Chemical Feed
Tank Water
Well Water
Storage Area
Waste Manage
Temperature

Sort the database? (Y/N) Y

Use the up and down arrow keys to select the correct database and hit enter.

Add Records

Edit Records

Find Records

Exit

Micro Meat
Micro Surface
Chemical Meat
Chemical Feed
Tank Water
Well Water
Storage Area
Waste Manage
Temperature

Edit Record: TOP

Use the up and down arrow keys to select the correct database and hit enter.

Add Records

Edit Records

Find Records

Exit

Micro Meat	
Micro Surf	COAGPOS
Chemical M	COLICNT
Chemical F	DATE1
Tank Water	ECNT
Well Water	FECNT
Storage Ar	LISPOS
Waste Mana	LOCATION
Temperatur	LOTNUM

Position: Select: — Help: F1

Add Records

Edit Records

Find Records

Exit

Micro Meat	
Micro Surf	COAGPOS
Chemical M	COLICNT
Chemical F	DATE1
Tank Water	ECNT
Well Water	FECNT
Storage Ar	LISPOS
Waste Mana	LOCATION
Temperatur	LOTNUM

LOTNUM, DATE1, COLICNT, LISPOS, LOCATION,

Position:

Select: — Help: F1

Add Records

Edit Records

Find Records

Exit

Micro Meat
Micro Surface
Chemical Meat
Chemical Feed
Tank Water
Well Water
Storage Area
Waste Manage
Temperature

DATE1> {01/01/92} .AND. STDCNT> 100
Press any key to continue...

Use the up and down arrow keys to hilight a database and press enter.

Send output to ...

CON: Console
LPT1: Parallel port 1
LPT2: Parallel port 2
COM1: Serial port 1
FILE = REPORT.TXT

Send output to Screen

Record#	DATE1	LOCATION	LOTNUM	LISPOS	COLIC
NT	STDCNT				
5	09/29/90	BAADER 194	92990		
0	1000				

Press any key to continue...

Use the up and down arrow keys to hilight a database and press enter.

Records Organize Go To ExitMeat Sample

st Number 0
Time :
Date / /

Record Number 10

Location:

Odor: Acceptable? (Y/N):	Standard Plate Count	0 organisms/g
Salmonella (+/-):	Mold/Yeast Count	0 organisms/g
Vibrio (+/-):	Coliform Count	0 organisms/g
Listeria (+/-):	Fecal coliform Count	0 organisms/g
Coag. Pos. Staph. (+/-):	E. coli Count	0 organisms/g

Edit |C:\dbase\MICRO1

|Rec EOF/9

|File |

| Num

Records Organize Go To ExiSurface Sample

Date / /
Time :

Location:

-Swab-

-Weight-

Stnd Plate	0 Or./Sq In 24 HRS	Standard Plate	0 Or./Sq In
	0 Or./Sq In 48 HRS	Coliform	0 Or./Sq In
	0 Or./Sq In 72 HRS	Fecal coliform	0 Or./Sq In
Coliform	0 Or./Sq In	E. coli.	0 Or./Sq In
Fecal coli.	0 Or./Sq In	Mold/Yeast	0 Or./Sq In
E. coli.	0 Or./Sq In		

Pathogen Sample

Salmonella: (+/-)
Vibrio: (+/-)

Coagulase Positive Staphylococcus: (+/-)
Listeria: (+/-)

Edit |C:\dbase\MICRO2

|Rec EOF/9

|File |

| Num

Records Organize Go To ExitMeat Sample
Lot Number 0
Time :
Date / /

Record Number 3

Location:

Odor: Acceptable? (Y/N)	Name	Concentration
	Pesticide:	0
Ammonia 0	Industrial Organic:	0
pH 0.0	Herbicide:	0
	Elemental:	0

Edit |C:\dbase\CHEM1 |Rec EOF/2 |File | | Num

Feed Sample

Lot Number 0
Time :
Date / /

Odor Acceptable? (Y/N)

	Name	Concentration
	Herbicide	0
	Elemental	0
	Pesticide	0
	Industrial Organic	0

Tank Water Sample

Tank Number 0
Time :
Date / /

Odor Acceptable? (Y/N)

	Name	Concentration
Herbicide		0
Elemental		0
Pesticide		0
Industrial Organic		0
Metabolic Product		0
Ammonia	0	Suspended Solids 0
BOD	0	COD 0
Dissolved Oxygen	0	Temperature 0 C
pH	0.0	

Records Organize Go To EWell Water Sample

Date / /
Time :
Location
pH 0.0
Chloride 0 mg/l
Standard Plate Count 0 Org./Sq.In.
Coliform Count 0 Org./Sq.In.

Edit |C:\dbase\WELL1 |Rec EOF/1 |File | | Num

Storage Area

Date: / /

Packaging Materials

1. Properly Covered: Acceptable? Y/N
2. Nothing Stacked on Packaging Materials: Acceptable? Y/N
3. General Sanitation: Acceptable? Y/N

Records Organize Go To Waste Management File

Time :
Date / /

Record Number: 2

Location:

		Temperature	0 (F)
	pH	Flow Rate	0.000 (gl/hr)
MBAS Surfactants	0.0	Solid Waste	0.000 tons or lbs
	0	FOG	0 (mg/l)
	COD	BOD	0 (mg/l)
Total Susp Solids	0 (mg/l)	Alkalinity	0 (mg/l)
Volatile Acids	0 (mg/l)	Volatile Susp Solids	0 (mg/l)
Nitrate/trite as N	0 (mg/l)	MLVSS	0 (mg/l)
	MLSS	Total Kjeldahl Nitro	0 (mg/l)
Carbon Dioxide	0 (mg/l)	Ammonia	0 (mg/l)
Hydrogen Sulfite	0 (mg/l)	Sulfate	0 (mg/l)
Methane	0 (mg/l)	Total Phosphorus	0 (mg/l)
Orthophosphate as P	0 (mg/l)	Chloride	0 (mg/l)
Conductivity	0.0 s	Fecal coliform	0 (org/ml)
Total Plate	0 (org/ml)	E. coli	0 (org/ml)
Tot Coliform	0 (org/ml)		

Edit |C:\dbase\WASTE1

|Rec EOF/1

|File |

| Num

Temperature Sample

Sample Number: 0

Time: :

Date: / /

Location:

Temperature: 0 F

APPENDIX V.

WHAT'S IN A BUSINESS PLAN?

1. Executive Summary
2. Business Summary
 - A. The Industry
 - B. The Company
 - C. The Products or Services
3. Market Research and Analysis
 - A. Customers
 - B. Market Size and Trends
 - C. Competition
 - D. Sales
 - E. Estimated Market Share
 - F. Ongoing Market Evaluation
4. Research, Design and Development Plans
 - A. Development Status And Tasks
 - B. Product Improvement and New Products
 - C. Problems and Risk
 - D. Costs
5. Marketing Plan
 - A. Overall Marketing Strategy
 - B. Sales Plan
 - C. Pricing
 - D. Service, Guarantees, Warranties
 - E. Advertising and Promotion
6. Operations Plan
 - A. Geographic Location
 - B. Facilities, Construction and Improvements
 - C. Strategic Plans
 - D. Labor Force
 - E. Quality Control
7. Management
 - A. Organizational Chart and Description
 - B. Key Management Personnel
 - C. Ownership and Management Compensation
 - D. Board of Directors
 - E. Management Training
 - F. Management Support Services

8. Start-up and On-line Schedule
9. Risks, Problems and Potential Outcomes
10. Community Benefits
 - A. Community Development
 - B. Economic Development
11. The Financial Plan
 - A. Profit and Loss Forecast
 - B. Proforma Cash Flow Analysis
 - C. Proforma Balance Sheets
 - D. Proforma Income Statements
 - E. Start-up Balance Sheet
 - F. Breakeven Analysis and Chart
 - G. Sensitivity Analysis
 - H. Cost Control Plan
12. Proposed Company Offering
 - A. Desired Financing
 - B. Capitalization
 - C. Use of Funds
 - D. Securities Offering (If applicable)

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KEEPING RECORDS (*)

Why Keep Records?

Record keeping is not a glamorous part of the financial management system. It is, however, the very foundation that other financial planning and analysis tools are built on. A good records system allows the manager to keep track of the business, to stay on top of performance issues, so that competitive strategies may be formulated. There is really no other way to keep track of a business--managerial instinct is often quite good, but not as good as managerial instinct with timely financial information. The records make diagnosis of business strengths and weaknesses easier and they help facilitate the comparison of one enterprise to another.

Good records will also help make the annual date with the Internal Revenue Service a bit less painful. The IRS requires documentation in support of annual tax applications, but not necessarily in the form of a formal records system. A manager can get by without the formal "books"; however, when preparing the tax forms, most managers find life much less frustrating with good records to depend on. If unfortunate enough to face the dreaded audit, an organized records system makes defense of the tax statement quite a bit easier.

Reliable records facilitate preparation of necessary documentation to report to internal and external parties that have a vested interest in the business. This same documentation, built from records and other projected information, is used to obtain necessary credit for continued operations.

Records to Keep

Financial. Financial records are the ones that usually come to mind when records are the topic. These records consist of:

- o sales (revenues)
- o expenses
- o capital expenditures (purchases of equipment, facilities, etc., normally characterized by a use life of longer than a single production season--they are not "expendables")
- o records of debt (proceeds, interest and principal payback)

* Portions of these materials were developed from "Farm Business Records" by R. K. Reynolds, and J. W. Pease, Farm Management Specialists, VPI&SU.

The importance of financial records cannot be stressed enough--they make all kinds of analysis and planning possible so that the manager can help alleviate some of the risk of doing business by eliminating that part of the unknown which records can reveal.

Production. Production records include purchase of inventory items and their use history, itemization of losses (mortality of fish, for example), and records of equipment and facility maintenance. These records impart information on their own to the manager. (Does regular maintenance on a piece of equipment appear to lessen down time, for example?) They also supplement the financial records and augment the analysis and planning process.

Documentation of Records. It is an excellent idea to keep as much documentation of records as possible. Three uses for this documentation include substantiating claims to the IRS, allowing a method to check and correct record errors and a method of keeping track of the bookkeeper's honesty. Keep all receipts for purchases, purchase contracts, sales receipts, cancelled check stubs, credit contracts, tax statements (Federal Income Tax Reports, State Income Tax Reports, FICA and FIT Employee Withholding Tax Reports and Deposits, Sales Tax, Property tax documents), all leases, notes signed for others, receipts for items traded (bartered), titles and deeds, and statements of ownership. Devise a filing system that allows directed access to items. Keep a separate set of files for current versus older items to facilitate location of necessary documentation.

RECORDS EXERCISE

Step 1

All the events that took place in K. G. Watter's fish farm in the month of May are listed in Table 2. Decide which of the four categories each event belongs to and indicate in the designated column. (Categories are indicated in Table 1.)

Table 1

<u>Categories</u>	<u>Examples</u>
Sales	Revenues from sale of products
Expenses	Expenditures for services, supplies, payments for utilities, feed, etc.
Capital	Purchases of equipment, construction of facilities, facility improvements, other durable assets
Debt	Proceeds from loans, debt and principal payments on loans

Step 2

Next, go to the sample expense and income sheets and record each item. (Please note: the events listed are simplified in order to save time. Your enterprise may have numerous entries per day. Records are based on actual events in the enterprise.)

TABLE 2

<u>DATE</u>	<u>EVENT</u>	<u>CATEGORY</u>
May 1	Pond Sales \$ 9.90	_____
May 4	Bought Fingerlings \$ 2240	_____
May 7	Pond Sales \$ 24.20	_____
May 8	Received proceeds from operating loan \$ 3800	_____
May 10	Paid Utilities \$ 22.00	_____
May 14	Purchased Supplies \$ 38.00	_____
May 20	Pond Sales \$ 13.20	_____
May 24	Purchased Medicine for fish \$ 25.00	_____
May 28	Pond Sales \$ 13.70	_____

Step 3

In the sample record expense and income sheets, subtotal each column representing a record at the bottom to "close out the month" so that we may use these subtotals later to make a cash flow statement.

DATE	CK. NO.	DESCRIPTION LIST ITEM AND TO WHOM PAID	AMOUNT PAID OUT	QUANTITY HRS., LBS., BU., ETC.	LABOR	REPAIRS		INTEREST	CASH RENT	FEED	SEEDS PLANTS
						MACH. & EQUIP.	BLDGs. & OTHER				
1			\$		\$	\$	\$	\$	\$	\$	\$
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
TOTALS			\$		\$	\$	\$	\$	\$	\$	\$

Cols. 1

EXPENSES

ENTERPRISE OR PROFIT CENTER (OPTIONAL)

	FERT. & LIME	MACH. HIRE	SUPPLIES SM. TOOLS	BREEDING FEES	VET. & MEDICINE	GAS, OIL, & FUEL	STORAGE W/ HOUSE	TAXES	INSUR- ANCE	ELECT. & TELEF.	FREIGHT TRUCKING			
1	\$		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$

INCOME FROM LIVESTOCK

DATE	DESCRIPTION ITEM AND FROM WHOM	AMT. RECEIVED	NO. OF HEAD	QUANTITY LBS., ETC.	LIVESTOCK PRODUCTS			SALES OF RAISED MARKET LIVESTOCK			
1		\$			\$			\$			\$
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
TOTALS		\$			\$			\$			\$

Cols. 53

54

55

56

57

58

59

SPECIAL FARM EXPENSES

FORM 3

DATE	CK. NO.	DESCRIPTION ITEM AND FROM WHOM	QUANTITY — LBS., HD., AC., ETC.	DEPRECIABLE ASSETS*				ITEMS FOR RESALE			LAND and OTHER
				MACH. EQUIP.	FENCES, BLDGS.	DAIRY, BREEDING, AND WORKSTOCK					
1			\$	\$	\$	\$	\$	\$	\$	\$	\$
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
		TOTALS	\$	\$	\$	\$	\$	\$	\$	\$	\$

Cols. 23 24 25 26 27 28 29 30

*Remember to transfer these purchases (Cols. 23 thru 27) to Part II, Farm Inventory, Publication 416-018.

Cash Versus Accrual Financial Records

Two methods of financial accounting, cash and accrual, are acceptable by the Internal Revenue Service for farming operations, including fish farming.

Cash Records

In general, farmers have chosen to use cash accounting because of tax advantages and simplicity in keeping cash records. With cash accounting, income is reported in the year the money is actually received and expenses are deducted in the year they are paid. If a fish farmer determined in December that a significant tax liability would be incurred, the fish farmer would have several options under the cash method. The farmer could purchase and pay for feed or other supplies for the following year. The Internal Revenue Service places limits on the amount of "prepaid expenses" which can be deducted in the current tax year. No more than 50 percent of total expenses, which include depreciation, should be prepaid across tax years. Another option to reduce taxable income in the current year would be to ask a customer to delay a payment for fish until January 1 or later. Unfortunately, cash records alone are very deceptive and provide the operator with no real means of evaluating financial performance. Cash accounting record books are widely available from Cooperative Extension, FmHA Offices, or Farm Credit Offices. Several cash accounting computer record programs are also available.

Accrual Records

Accrual records, while not allowing for income tax flexibility, do provide more management information to the user. With accrual accounting, income is recorded when the fish farmer has the right to receive it. Thus, if fish are delivered to a customer on December 31, 1989; the income is reported in 1989 even though payment may not have been received until 1990. Likewise expenses are deducted when actually consumed by the operation, not when payment was made. Due to these requirements, accrual records provide for a more accurate description of the profitability of the aquaculture enterprise.

To assist in comparing cash and accrual records, two examples will be discussed:

- A. 500 lbs. of catfish are sold on December 14, 1989 to XYZ Corporation for their annual meeting. XYZ is sent a bill for \$1,000 with the fish. On January 6, 1990 you receive a check from XYZ for the fish.

CASH METHOD - The fish are reported as income when the check is received (1990). This distorts the fact that the income was actually earned in 1989.

ACCRUAL METHOD - A journal entry is made on 12/14/89 to debit accounts receivable, and credit catfish on hand. The income is taxable in 1989. The fact that on 1/6/90 cash is debited and A/R credited only reflects that an open account has been paid.

- B. K. G. Watters, a fish farmer, is a little short on cash in the fall of 1989. He charges three tons of fish feed at a feed store on 9/30/89 for \$1,005. The account is not paid until January 5, 1990. On December 31, 1989, he has one ton of feed left worth \$335.

CASH METHOD - The feed expense is deducted in 1990 when the account is paid.

ACCRUAL METHOD - Since only two tons of the feed were consumed in 1989, only \$670 is deducted as feed expense. The fact that the account was not paid until 1990 has no impact.

Keep Two Sets of Records?

Fish farmers may find advantages in both the cash and accrual methods. Fortunately, this does not usually mean keeping two independent sets of records. For tax reporting purposes, cash accounting may be used throughout the year. Then on each January 1, an inventory of farm assets and liabilities is taken for management purposes. The resulting "balance sheet" can then be used with the cash records to roughly convert the books to accrual accounting for use by management. Particular emphasis should be placed on supply inventories, prepaid expenses, accounts payable, and outstanding debt obligations. Equipment values can be adjusted from year to year to reflect loss in value due to wear or tax depreciation used to compute the loss in value. Land values should not be changed from year to year unless improvements have been made, timber has been sold, or to reflect purchases and sales. While changes in value caused by land inflation or deflation is important, it should not generally be included to evaluate the financial progress being made by a business.

Assets values which increase from one year to the next have a positive impact on the bottom line when adjusting cash records. Liabilities which increase from year to year have a negative impact on the cash accounting result.

Whole Farm and Enterprise Accounting

Whole farm accounting systems represent the entire business, without attempting to identify precisely what parts of the business incur particular expenses or generate income. In a whole farm accounting system, for example, no attempt is made to determine which enterprise of the farm business has incurred hired labor expenses. Instead, this information is recorded only as a 'farm expense', and cannot be desegregated for analysis of enterprise expenditures. Alternatively, dividing the farm into separate accounting enterprises requires distributing receipts and expenses so that the profitability of each enterprise can be examined. Complete enterprise accounting is called cost accounting, but most farm businesses who wish to keep enterprise accounts follow what can be called partial enterprise accounting. These businesses generally keep detailed records on only the major enterprises of the farm. The most benefit from enterprise accounting will be derived from separating totally unique enterprises. For example: a cash grain, catfish, and hog farm combination will benefit greatly from having three sets of enterprise records for management to use. In addition, keeping corn, soybeans, and wheat enterprises is useful. However, separating direct expenses and allocating overhead becomes more difficult. Detailed enterprise accounting requires considerably more production and financial records. The benefits of enterprise accounts in planning are considerable, especially for major enterprise categories. Many available computer programs ease the task of keeping enterprise records as compared to hand-kept records.

Manual and Computer Records Systems

Keeping farm records by hand can be a time-consuming, tedious task. Manual systems offer the advantage of flexibility in that structure and procedure of the system can be adapted to the desires and requirements of the individual farm business. No rules need to be followed (except Uncle Sam's), and such a system costs very little to establish compared with computerized systems.

Computerized systems include mail-in services available from universities, farmer's organizations or private individuals. This type of service usually requires that the family send cancelled checks and deposit records to a central facility to be processed or code entries and then send them to be processed. Summaries are usually returned monthly and completed tax schedules are generated at the end of the year. Cost of these services usually begins at approximately \$200 with additional charges depending upon services provided and volume of transactions. Besides the cash expenditure for services, there is a cost in terms of time in learning such a system. Some systems have rigid procedures for recording and summarizing accounts which may not satisfy the needs of a

particular farm business. In addition, slow turnaround from the time data is sent to the service until summaries are returned is sometimes a problem with mail-in services.

Personal computer accounting systems have also been adopted by some farm businesses. There is usually considerable flexibility in designing the records system with personal computer accounting software. Summaries and analysis can be obtained whenever needed by the farm family. However, the farm family should not underestimate the cost of establishing a computerized system on the farm nor the time necessary to learn and use such a system. Generally, a suitable set of computer equipment and software necessary for a farm accounting system will cost at least \$2,000. The time necessary to learn such a system can extend from a few months to forever, depending upon the logic of the system and the patience of the individual. The time required to enter transactions is generally about the same as for a manual system and errors associated with addition are reduced. However, data entry errors could actually increase with a computerized system. In general, larger and more complex farm businesses, or farm businesses which want more detailed information on farm enterprises should consider computerized systems.

Personal computers, with the addition of more software, can also be used as a decision aid. Projections can be made on the computer to enhance decision making for both individual production decisions and factors affecting the entire operation. Spreadsheet programs are frequently used in this manner. With a computer, a great deal of time is saved if projections need to be modified as compared to the manual method.

Proprietor's History

Mr. and Mrs. K. G. Watters started farming as sole proprietors when K. G.'s father retired from farming in 1968. They farm 1050 acres of cash grain in Eastern Virginia. Mr. and Mrs. Watters have been fairly successful in the cash grain enterprise, although it has had its ups and downs. The Watters had tried several diversification enterprises over the years including vegetables and hogs. They had grown vegetables at a profit, but found it increasingly difficult to find good part-time labor, so they sold their vegetable equipment. The Watters stated, "We never really enjoyed working with the hogs and the neighbors always complained about the smell, so we got rid of them in 1986 when hog prices were looking too good to last."

When the Watters started growing vegetables in 1975, they installed a 4.6 acre pond for irrigation. Since vegetables were no longer grown on the farm, they retained the travelling gun and used it to irrigate corn and registered soybean seed crops.

The Watters had always been outgoing and socially active as a family. As the children reached adulthood, Peg found herself with more free time. As she had always felt an integral part of the farm unit, it was natural for the Watters to look for new enterprises that would more fully allow her to use her talents. The Watters' farm, as is, has them in fairly stable financial condition, so immediate or large cash flow from a new venture was not a primary motive. The Watters found that when things became routine around the farm, they tended to become restless and bored. The couple knew they wanted to remain in some kind of food business and would like it to be fairly "future" oriented. They felt their children would want to take over the farm one day just as K. G. had. With this in mind, they pondered what new business would "fit the bill."

INTRODUCTION TO GOAL-DIRECTED MANAGEMENT

Goals are personal statements which indicate the wishes or aspirations of the individual and/or family. A family's personal and business goals will change as its situation changes and will be directed at more than just profit maximization. Business goals are used as a means to achieve personal goals. Some goals may be in conflict with other goals. These conflicts need to be addressed and both personal and business goals should be put in some order of priority.

Often it appears that management decisions are made in the absence of clearly defined goals. Goals should provide direction for management decisions which guide the operations of the firm or family to the achievement of these goals. Every business and every family has to decide how to use its scarce or limited resources. This scarcity results in the inability to meet all goals at one time, which leads to conflicts.

Goal conflicts are a common occurrence within most families. Individual family members struggle with the conflict between their own short-term and long-term goals. Similarly, there are conflicts among different family members' goals. In order to deal with those conflicts, it is useful to keep in mind that people are more effective in their work if they enjoy their work and management responsibilities. Family members are more likely to work with goal-directed management if they participate in a goal identification and priority-setting process, rather than having the goals thrust upon them with no opportunity for input. One must keep in mind that there is a close relationship between the farm business unit and the farm family (i.e., family farms are characterized by a combination of production and consumption units). Goal conflicts need not all be resolved. Diverse goals can lead to a certain creative tension so long as things do not get out of hand.

Assessment of Knowledge, Skills, and Other Resources

In order to set goals upon which business decisions will be based, it is necessary to assess the knowledge, skills, and other resources which the family possesses or controls. Conversely, the decision makers need to be aware of areas in which essential knowledge, skills, and resources are lacking.

(A) What are the Watters good at?

1. _____
2. _____

3. _____

4. _____

(B) What are the Watters not good at (or prefer to avoid)?

1. _____

2. _____

(C) What resources are abundant or available to the Watters?

1. _____

2. _____

3. _____

(D) What resources are in short supply?

1. _____

2. _____

Goal Identification

Goal identification involves deciding where you want to go, how you are going to get there, and when you expect to arrive. As you make these decisions, keep in mind that long-term goals should be believable. Also, short-term goals must be realistic in the context to the time allotted for their accomplishment. Identify goals specifically as short- or long-term goals and link the two. Each short-term goal should contribute to a long-term goal.

What are the goals of the Watters family?

(A) Long-term goals

1. _____

2. _____

(B) Short-term goals

1. _____

2. _____

3. _____

Are these goals consistent with one another? Which short-term goals relate to which long-term goals? Which short-term goals are unrelated to long-term goals? Answering these questions is the beginning of priority setting.

Priority Setting

Once goals are identified and linked, they should be prioritized in some form. The following questions are important in priority setting:

- A. Which goals are most important for the well-being of the family?
- B. Which goals are most important for the well-being of the farm?
- C. Which short-term goals will aid achievement of long-term goals?
- D. Which short-term goals will impede long-term goal achievement (or are irrelevant to long-term goals)?
- E. Which goals are so important that they will supersede all others?

Developing a Goal-Directed Management Plan

High priority goals help define allocation of management time. In developing a management plan, use the following approach:

1. Develop a list of enterprises and activities which you are considering carrying out next year. They should include both farm and family activities;

those to be carried out for profit and those to be carried out because you attach a positive social or moral value to them.

2. For each activity and enterprise, develop information in order to fill out the following kind of form. (Remodeling a kitchen is used as an example here):
 - a. Activity: Remodeling kitchen
 - b. Timing: December and January
 - c. Effort or labor: 2 persons for 3 weeks each.
 - d. Who will perform the labor? Mr. Watters and hired carpenter
 - e. Investment and source: \$10,000 with \$5,000 borrowed from the credit union.
 - f. Management skills: get advice from extension housing specialist on design; carpenter will implement.

3. Combine all the activity and enterprise lists paying particular attention to labor allocation (b and c) and monetary commitments (e). Determine if there is adequate capital to cover what you would like to do, and if the amount and timing of family labor required is realistic for the job. (In the afternoon we will look at the labor allocation required for crop enterprises and for the new aquaculture enterprise to see if there are any labor bottlenecks).

AQUACULTURE VENTURE

Description of Venture

K. G. has always enjoyed fishing, and had stocked his irrigation pond with fish. An old army buddy from Alabama was visiting in the fall of 1987. Mrs. Watters was fascinated by the cultured catfish industry the friend spoke of in the South. Wondering if their Virginia farm might support that kind of operation, the Watters contacted their extension agent for available information.

Finding that Virginia was still in a start-up phase for aquaculture, the Watters became even more intrigued with the idea. They already had an irrigation pond that they felt would give them a low cost way of trying the business to see if they would like it as much as they imagined. In the winter and spring of 1988, the Watters built a small dock for the pond at a cost of \$ 250. They also bought a 14-foot aluminum boat with an electric motor for \$ 975. During the winter, K. G. built fish cages for the pond. In late April, they bought 5000 catfish fingerlings, costing \$ 1325. In May, they installed an aerator in the pond. About 4000 fish died the first year, but the Watters found that many first timers had the same type of bad experience. They sold 1700 one-pound fish in the fall for \$ 2.75 a pound, dressed out. It was Peg's idea to dress the fish. "I know all too well how much nicer it is not to have to face dressing the fish at dinner time," she said. Most sales were to organizations. K. G. is a long time member of the Ruritan club and they purchased a large amount of fish from him for a fish fry at the end of 1988. It was estimated that the ending inventory in 1988 was approximately 2900 fish.

In 1989, 8000 fingerlings were purchased. The Watters began selling fish directly out of the pond, in the round, to individuals for \$ 1.10 per pound. Since the pond was located more than a mile from the house, K. G. tried to take care of these customers only when he fed the fish every day. However, Peg would make a special trip to the pond for large orders. Dressed sales to organizations increased somewhat in 1989. For these sales, Mr. and Mrs. Watters would dress the fish themselves. Says K. G., "Peg (Mrs. Watters) is so organized that even when we have large orders that have to be dressed quickly, we start out on the batch knowing that there won't be any problem getting the job done. She runs a tight shop." At the end of 1989, sales to organizations were approximately half of the total, with the remainder in pond-side sales. Sales were more than double the previous year with about 3600 fish sold. At the end of 1989, 6500 fish were still in the pond.

Future Plans

In early January, the Watters realized they should organize their thoughts about the future direction of their catfish farm. Experience from their other farm enterprises told them that one good place to start would be to project the financials for the aquaculture enterprise. They had kept cash accounting records of the enterprise, and though enormous profits weren't really expected, they had not even seen the profits they had envisioned. In addition to borrowed money for the boat, dock, cages and other equipment, operating money had to be borrowed from L.N.B. (Last National Bank). Of the \$ 6200 in operating funds borrowed, only \$ 1000 could be paid back by the end of 1989. Two scheduled payments of \$ 1065 each were made to L.N.B. as installments on the equipment loan.

K. G. was tired of feeding 6500 fish by boat in the winter in all the cages. They wanted to find a way to sell more fish (less fish in inventory over winter) so that all the fish could be consolidated in a few cages. The Watters thought of many possibilities for the catfish enterprise while coming up with an idea for consolidating the remaining fish. Not being a status quo couple, the Watters decided to do a little business planning.

CASH FLOW STATEMENTS

Historical Cash Flow Statements

A cash flow statement shows how cash moves into and out of a business. A typical cash flow statement has four sections: 1) a revenue section, which represents the marketing aspect of a business, 2) a general expense section, which represents the production aspect of a business, 3) a capital investment section and 4) a debt section. Cash flow statements for historical documentation and evaluation normally have at least the last twelve months documented monthly, with other time periods documented annually. A cash flow statement is only part of a comprehensive financial analysis system, and supplements the balance sheet and income statement in representing the complete financial picture (see Cash Flow Exercise, page 25).

The historical cash flow statement can be used to evaluate whether a business (or enterprise) is generating sufficient cash flow to keep itself liquid. An enterprise cash flow statement can show the owner/manager how much operating cash was needed either in the form of outside loans (debt) or inside loans ("borrowing" from other business enterprises.) The owner can also apply revenue/expense ratios to compare enterprise efficiency to similar outside businesses. This type of analysis can give the manager information needed to clearly focus on enterprise problems and devise ways of improving performance.

Developing historical cash flow statements. Historical or actual cash flow statements are relatively painless to develop if a good set of financial records has been kept during the year. An actual cash flow statement is a summation of the actual cash journal entries, usually on a monthly basis. If a record book is used, the user should always start recording transactions for each new month on a new page. The bottom of journal pages can then be used for totaling each expense category individually. For example, the feed expense column would be totaled within the current month and the number recorded at the bottom of the page. If this is done on a monthly basis, developing the actual cash flow statement involves copying the numbers by category from the bottom of journal pages to the cash flow statement. Most computerized record systems will generate a cash flow statement directly from the cash journal, and give the user a monthly cash flow printout for the year to date.

K. G. Watters historical cash flow statement. A historical cash flow statement results from a compilation and organization of the enterprise records. Actual sales receipt figures are put into the category (pond side, organizational, etc.) in the appropriate time period. Added to these are any other sources of cash coming into the business; in Watter's case, we add the proceeds from loans when they are received. (It is appropriate to note here that the

location of information about loans/debt often shows up at other places on the cash flow statement, often being combined with the lower debt section on our example spreadsheet.) After we explain all the sources of cash into the business, we go on to the second section of the cash flow statement.

In the second section, actual information is entered for expenditures. Historical records are put in for all expenses (for example, labor, utilities, repairs, insurance, fish feed, fingerlings, etc.). Once all expenses are recorded, then these are subtotaled.

The third category of information for the cash flow statement is expenditures for capital items. These are normally equipment, buildings and other items that normally have a life span longer than one production cycle. (These are the items that show depreciation credits on your tax returns.) Items for the Watters venture include a boat, dock, aerator and cages. Other items that would fit this category would include buildings, farm vehicles and other equipment. These items are again subtotaled to be used later in the spreadsheet.

The last category includes repayment of debt or loans that are outstanding. You could have monthly, quarterly, biannual or annual entries depending on your debt structure and terms. Include actual payments to be made "against" your loans. These items are then subtotaled.

Then, total the most important line of the cash flow statement, the ending cash position. This line adds together all cash inflows (sales, loan proceeds) and subtracts all expenses, capital expenditures and debt repayments. In our example, we subtract our subtotals of expenses, capital expenditures, and debt repaid from our subtotal of sources of cash. The remainder is the net cash position for the time period.

K. G. Watters historical cash flow statement shows a partial year start-up summary for operations in 1988 and a full year statement for 1989. Watters needed an operating loan of \$ 2400 and an equipment loan for \$ 3995 in 1988. For 1989, an additional operating loan was needed for \$3800. To keep things simple for our case presentation, we assumed that he borrowed the money from Last National Bank (LNB), the private financial institution in his community that handles most of Watters accounts. It is very likely that a farmer with other enterprises might "borrow" this money from other enterprises on the farm.

Watters focused his effort on two marketing avenues for the first full year of operations. Approximately 50% of the business was in Pond Side Sales (where Mr. or Mrs. Watters simply took orders for specific amounts of fish and delivered them packaged, in the round, at the pond side) and the remainder in sales to