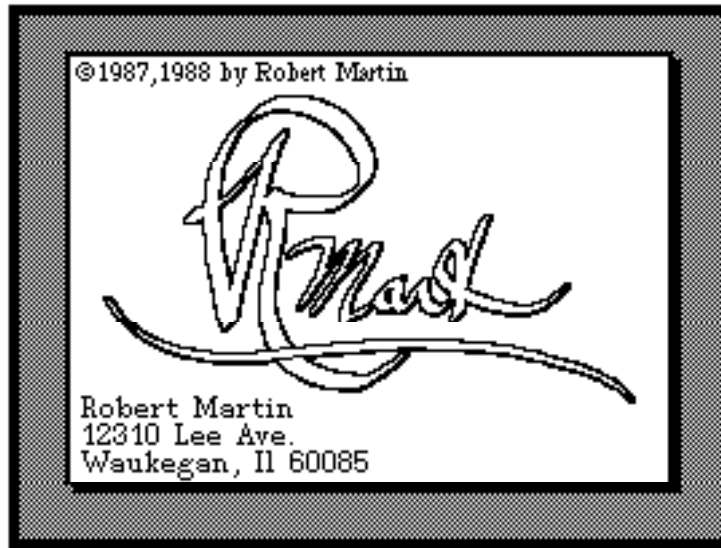


## Pharaoh



*You are the offspring of a famous noble. Your father is revered throughout the land for his financial and military prowess. He is very wealthy. But he doesn't think much of you. As far as he is concerned you are never going to amount to much. One day, in a fit of frustration, he throws you out of his house with nothing but your clothing. He has written you off as a certain failure. Is he right?*

Welcome to the game of Pharaoh. Pharaoh is a simulation game which gives you a chance to become the Pharaoh of all Egypt. (and possibly the whole world). By applying common sense and experience, you attempt to make a vast agricultural community thrive and grow. You make and break deals with other kingdoms, fight wars, manage revolts, and monitor the day to day operation of your farming communities.

You start with nothing, but the banks remember your heritage and are willing to extend you a small loan. You use the money they lend you to build the seeds of a huge empire. Over the years you expand your empire, gaining land, wealth, and power. And when your empire has reached the size and power which you deem necessary, you attempt to erect a monument of such vast enormity, that you will be remembered for thousands of years to come.

The going is never easy. There are many obstacles in your way. Famines, floods, aggressive neighbors, even terrorists. But with skillful management, and some clever strategies, you can prevail and grow. And if you do, you will become the greatest ruler of all time.

.....

Pharaoh is distributed in *unlicensed* form, and as such it is not fully functional. In this form you may use it as much as you like, or give it to whomever you please. If you decide that you wish to purchase the license and upgrade your version to the **fully functional** *licensed* version, then fill out the licence form that the program will print for you, and send it to me with a check for \$25.

Robert Martin  
12310 Lee Ave.  
Waukegan, Ill. 60085

I will then send you your special license password. When you enter this password into Pharaoh, Pharaoh permanently converts itself into a *licensed* version, personalized for you.

This licensed version may only be used in your presence, and can not be given or distributed to anyone else.

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## Overview

### Scenario

You begin the game as a disinherited noble. Your father, a man of great wealth and power, has deemed you to be a ne'er do well, and has thrown you out into the inhospitalities of the world, without a shekel to your name. But the bank knows your heritage, and is willing to extend to you a small, *unsecured*, loan.

### Object

With the money you are able to borrow from the bank, you must build a kingdom of great power. You must buy land, slaves, oxen and horses. You must hire mercenaries and overseers to guard your kingdom, and manage your slaves. You must plant your fields, and reap your harvests, and make a profit. You must grow.

And when you have grown to the size you deem enough, you invest your money, property, and strength into the construction of a vast pyramid.

Your goal is to complete this pyramid within 40 years... It's not easy.

### Obstacles

You will face many obstacles along the way towards building your pyramid. Famines, floods, wars, and rumours of wars, plagues, pestilence, and even fire from heaven.

Still, if you are careful, and clever, you can overcome these foes, and grow your kingdom to cover the planet if you wish.

## Description

### Commodities

As pharaoh, you make your kingdom grow by wisely managing the commodities that you own. You buy them, sell them, and produce them. Many of the commodities can be used as cash crops, depending on the type of business that you, as pharaoh, wish to invest in.

### Wheat

This is the product of your land. Your slaves and oxen must plant wheat, fertilize the fields, cultivate and harvest the crop. Then you can use the resulting wheat as further seed, and food for your oxen, horses, and slaves. Wheat is bought and sold by the bushell.

Wheat is the most common cash crop. The traditional way to play pharaoh is to produce and sell wheat on the open market.

### Slaves

Slaves represent your primary motive force. *Slaves do the work!* It is your slaves which plant your seed, and spread your fertilizer. They feed and tend your oxen and horses. They cultivate and harvest your fields. And they build your pyramid. Without them, *nothing* can be done.

Slaves are also a common cash crop. Under the right circumstances, slaves reproduce at an alarming rate, and can therefore become a lucrative trading business.

### Oxen

As beasts of burden, oxen help the slaves immensely. Slaves can do *many* times as much work if they are assisted by oxen. But oxen eat alot, and don't reproduce quickly. You must find the best ratio of slaves to oxen.

### Horses

Horses are the vehicles for your overseers (see below). They make the overseers' jobs much easier by allowing them to get around quickly and efficiently. But does every overseer need a horse? Horses eat alot, and reproduce slowly.

### Manure

Manure is produced by your slaves and livestock in proportion to the amount of food that they eat. It is bought and sold by the ton and is the fertilizer that you spread on your fields. You must decide how much to spread on the acres that you plant each month.

### Land

Land is listed by the acre. This is where you plant your seed, and where your crops grow. Each acre of land can support the planting of only about 20 bushells of seed, and no more. How much wheat that seed will produce depends on the fertilizer, weather, and the efficiency of your slaves.

## Planting & Reaping

In order to grow wheat, you must plant it. Your land starts out *fallow*, which means that it has lain, unplanted for a month or more. You must specify the total number of acres that you intend to plant each month. Every time a new month passes, you will see the land that you planted move into the *planted* category. The month after it will move into the *growing* category. Then it will move into the *ripe* category. The next month, it will be harvested, and will move back into the *fallow* category.

You must also specify the total number of tons of manure you want the slaves to spread each month on the land you intend to plant. Too little fertilizer will cause very poor crops, but too much will completely kill the wheat. It is up to you to figure out the proper amount to spread.

June and July are the best months for planting wheat. The harvest of this crop will be the biggest. By the same token, January plantings will often be very very bad. (Make hay while the sun shines.)

## Feeding livestock

You must specify how many bushells of wheat you want to feed each of your slaves, oxen and horses each month. If you feed them too little, they will sicken and die. If you feed them too much, they can get lazy. In general, the more work you make your slaves do, the more food they will require.

Remember, the food you feed your living inventories is deducted from your store of wheat. Make sure you keep enough wheat around, both for food and for planting.

## Overseers

Overseers are the managers of your slaves, and the mercenaries which protect your grounds. They represent both your middle management, and your military. They are employees, and as such you must pay them a monthly salary in gold. (And occasionally deal with their unions.)

Without overseers to drive them on, your slaves will do little if any work. Also, if you don't have enough overseers, enemy armies will plunder and pillage you into bankruptcy.

You must carefully manage the *stress level* of your overseers. If you make unreasonable requests of them, or have exaggerated expectations of what they can drive the slaves to do, you will find that they get quite nervous about their jobs. Nervous overseers tend to take their frustrations out on the slaves, usually with a whip.

## Loans

Probably your first action in the game will be to approach the bank for a loan. The bank is an enigmatic institution (what bank isn't?) which seems to have an infinite supply of money. However it is quite stingy about loaning any of that money to you.

At first you will find that the bank trusts you for a "fairly substantial" loan. As you grow, the bank will allow you to borrow more and more money. But you will find that the bank is very concerned about your debt to asset ratio. In fact, they will foreclose on you if you let it get too bad.

## Market prices

You will notice that the prices for the various commodities change from month to month. Although this may seem like a random fluctuation, there is in fact an underlying cause. Although the market prices are indeed subject to random, month to month variations, they are also subject to the classical laws of supply and demand. If you produce a lot of a certain commodity, you will be increasing the world supply, and that will in turn cause the price to drop.

Of course to have a visible effect on the price, you will have to be dealing with fairly large quantities.

## Work

All activity on your estate requires work. There are 4 monthly work quotas which you must specify. They are: the number of acres to plant each month, The number of tons of manure to spread each month, the number of stones to add to your pyramid each month, and the amount of food to be distributed to the livestock each month. You must manage these quotas, making sure that the goals you set are both ambitious enough to assure your growth, and conservative enough to be realistic.

Your overseers are paid to make sure that the quotas you have specified get met. If they fail to meet these quotas, they get nervous about their jobs and will beat the slaves. This will increase the motivation of the slaves and they will work even harder. But beatings take a health toll.

It is possible to get the overseers to the point that they are beating the slaves to great excess. This will cause the slaves to do a tremendous amount of work for a month or two, while they sicken and suddenly die on you. It is very easy for this to get out of control, and you must watch it very closely.

When your slaves fail to get all their work done, it is assumed that they did all the work proportionally. i.e. if they did 90% of the required work, then they only planted 90% of the wheat, harvested 90% of the crops, fed 90% of the wheat to the oxen, etc...

## Running the simulation

The game consists of a set of *one month turns*. At the beginning of each month, you buy and sell commodities, hire or fire overseers, and adjust planting, spreading, and feeding quotas. Then you *run* for a month.

The simulation then figures out what happened that month, and displays the results on the screen.

## Events

Most months are uneventful. Your slaves reap, sow, and have babies. Your oxen and horses produce lots of manure. And your land grows wheat. But every once in awhile, something happens to disturb the serenity of the scene.

There are all kinds of events that can occur. Acts of God, acts of mobs, plagues, wars, uprisings, etc. Each event will challenge the security of your estate and the wisdom of your strategies. Never trust your life to the status-quo.

## Contracts

There are contracts being offered by other kings in the area. These contracts fall *outside* of the usual laws of supply and demand. So even if you would not be able to buy 1000 acres from the market, you can contract to buy them from a neighboring king.

Sometimes these contracts can be real bargains, and sometimes they are horrible rip-offs. You must be the judge. Also, there are penalties involved. If you fail to meet your contracts, you will be assessed a percentage of the value of the contract each month until your commitment is fulfilled.

In general, contracts are an interesting way to make money, and to influence the market prices. It is possible to procure large amounts of a commodity from a neighboring king, and then dump it into your economy, creating a glut...

## Your Neighbors

### Who are they

Like all good pharaohs, you have some neighbors. These are people just like you, trying to run their estates. You have 4 such neighbors. You will get to know their distinctive faces and voices (if you have voice turned on).

During the course of any particular game, the personalities of these players remains constant. But at the beginning of each new game they are shuffled. It therefore becomes one of the puzzles of the game to figure out which face belongs to which personality.

### *The Good Guy*

The good guy is pretty reliable. He always tries to give you good advice. If he sees that your slaves are underfed, he will tell you that they look bad. If he notices that your crops are poor, he will suggest that you spread more manure.

### *The Bad Guy*

The bad guy is working against you all the time. Practically all the advice he gives you is bad. He will tell you how wonderful your slaves look, just before they keel over and die from overwork. He will commend you on your great standing at the bank, just as they foreclose.

### *The Villiage Idiot*

This guy's advice is completely undependable. Sometimes it's right, and sometimes it's wrong. There is no telling.

### *The Banker*

The banker is the stooge that the bank sends around to bother you about making loan payments. The more worried the bank is, the more often he comes.

## Idle messages

You neighbors will try to wake you up if you go to sleep while playing the game. Any time there is a period of significant inactivity, these helpful little guys will barge right in with encouraging little slogans or pep talks.

## Chats

Sometimes your neighbors just *pop in* for a talk. It is these particular chats which often contain advice or hints as to your status. But remember, don't believe everything they tell you. One of those guys is an idiot, and the other is out to get you.

## Building the pyramid

You build the pyramid by setting the monthly stone quota. This specifies the number of stones to be laid per month. The slaves lay the stones, and the activity requires work. Just how many slaves it takes to lay stones is a variable you will have to discover.

Pyramid stones are cubes of granite 6 feet on a side. They are carved from a nearby quarry and carted to the pyramid site. From there they must be fitted into the pyramid structure itself. It takes alot of work and equipment to do all this. Work is provided by the slaves, and the cost is automatically deducted from your treasury. Make sure you keep a close eye on these variables, they can easily surprise you.

As the pyramid grows, you will see it grow on the screen. Peice by peice you will see it being assembled.



## What you can't see, **can** hurt you.

There are quite a few invisible processes which go on behind the screen. It is not possible to directly observe the state of these processes, so it must be inferred. It is very important to keep close track of them, because if they get out of control you can rapidly lose the game.

### Health

The health of all your livestock is monitored. If they are overworked, underfed, or mistreated, their health is adversely affected. If a sick slave or horse is left to recuperate, with little work to do, and plenty of food to eat, it will heal quite rapidly.

Bad health affects work output, reproduction rate, and the final selling price (the buyers aren't dummies).

### Stress

When work gets done on time, the overseers feel confident in their jobs. But when the work schedule starts to slip, they get nervous. This will cause them to beat the slaves, which has the rewarding effect of getting them to do more work.

It is very important to manage the stress level of your overseers, otherwise they will quickly kill all your slaves. This is very tricky to manage, since there is no direct indicator of their stress. (except for an occasional chat from a neighbor.)

Just remember, whenever a month goes by where all the work did not get done, the overseers will be a bit nervous that month. If two or three such months go by, then the overseers will be that much more nervous. The more nervous they are, the more they will mistreat the slaves, and the sicker the slaves will become. It takes several good productive months for overseers to completely relax and regain their composure.

### Economy

There are interesting processes underlying the market prices. Behind the scenes there are other estate owners producing and consuming a global supply of commodities.

When you become a major producer of a commodity, you start to compete with these other producers. An oversupply will result, and the price will begin to fall. Now it's a race. The longer you can maintain your production in the face of falling prices, the more of your competition you will displace, until you have carved yourself out a nice little niche.

Once global production has been offset by the amount you are now producing, the price will stabilize at the new lower rate.

On the other hand, if you become a major consumer of a certain commodity, you will add to the demand for the commodity. This will result in an under-supply, and the price will begin to rise. Rising prices attract new competitors to the arena, and they will begin to produce more and more of the commodity until your demand has been satisfied. Then the price will stabilize at its new higher level.

The market can only bear so much stress. If you attempt to sell a large enough quantity of a commodity, the market will refuse to take it. The same goes for attempting to buy too much, the market can run out.

The only cue you have to these economic factors of supply, demand, and current global production capacity, is the price of the commodity, and the comments made by the market keepers when you try to buy or sell. If you are good, you will be able to predict fluctuations, and finally even control them to your benefit.

## **Credit rating**

The bank has a varying opinion of your ability to repay any outstanding debts. As long as you make frequent payments, the bank will love you. But if you forget to pay for a few months, or worse: run out of money at the end of a month, the bank will change its opinion.

This all has to do with your credit rating. You can never see your credit rating, but it is there.

If your credit rating is high, then the bank will feel good about giving you big loans, and will allow relatively severe debt to asset ratios. But if your credit rating is poor, they will charge you outlandish interest rates, and refuse to give you even tiny little loans. They will also yell at you an awful lot, and may even close you down if your debt gets too out of line.

## Operation

### License

The *unlicensed* version of the pharaoh game is quite playable, but is lacking in a few nice features. For example, it won't let you save your game. Nor will it allow you to select the skill level at which you want to play. And finally it will send you cute little advertisements after your first 30 minutes of play.

A license is obtainable from Robert Martin. Simply start up the game and select the "**Print License Form...**" item from the "**File**" menu.

A license form will be printed on whatever printer you have connected. Fill in this form and send it to Robert Martin, 12310 Lee ave. Waukegan, Ill 60085.

Once licensed, you will be able to save your game, and select the difficulty level. Also, the cute little commercials will go away.

### Startup

Plug in the pharaoh disk, and double click on the **Pharaoh.** icon. You will have to endure my wonderful opening comments, etc.

If you have a license, you will be asked to select your skill level. Otherwise you will receive a little message telling you that you are currently unlicensed and will be forced to play at the easiest level.

After all this you will see the pharaoh screen. Note the positions of all the various commodities and parameters on the screen.

### The Screen

The pharaoh screen is divided into sections. Each section displays the data for a certain category of information. The sections are surrounded by rectangles and titled. They are composed of groups of *cells*. The cells may hold data, or they may hold labels. Many of the cells are sensitive to mouse clicks. Below is a description of each of the sections on the Pharaoh screen.

#### Date

Date	
Year	5
Month	August

Each game of Pharaoh starts in January of the year 1. The date section keeps track of the current date. None of these cells will respond to the mouse.

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## Gold

Gold		
Cur Gold	Δ%	Old Gold
17998564	374.5	3793271

This section shows how much gold you currently have, how much you had last month, and the percentage change. Clicking in these cells will allow you to borrow or repay a loan.

## Loan

Loan	
Loan	0.0000
int %	0.5000
Cred lmt	5000000

This section shows you how much you owe the bank, how much interest you are paying per month, and your current credit limit. Clicking in these cells will allow you to borrow or repay money.

## Commodities

Commodities			
	Current	Δ%	Old
Wheat	400000	0.0000	400000
Manure	14325	13.36	12638
Slaves	6919	15.32	6000
Horses	635	5.833	600
Oxen	2110	5.500	2000

The *commodities* section shows what you currently own, what you owned last month, and the percentage change (delta %).

Clicking in the *current* cells allows you to buy or sell the selected commodity.

## Land

Land				
Fallow	Planted	Growing	Ripe	Total
416.5	200.0	160.0	160.0	936.5

This section shows the state of your land. When you purchase land, it goes into the *fallow* category. Selling land is also normally done from the *fallow* category.

When you plant land, it moves from the *fallow* category to the *planted* category. The next month it will move to the *growing* category. The month after that it will be *ripe*. And the month after that it will be harvested and will return to the *fallow* category.

Clicking in these cells allows you to *sell* land in the *planted*, *growing*, or *ripe* categories. If you do this, you will lose any crops that had been growing on them.

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## Prices

Prices	
Wheat	40.02
Manure	70.88
Slaves	1646
Horses	281.4
Oxen	245.3
Land	1918

The *prices* section shows you the current market prices for commodities. These prices represent how much you must pay if you want to purchase, and the *maximum* you will receive if you want to sell. The selling price of a commodity can be less than the market price if the quality of the merchandise is low. (i.e. diseased horses).

Clicking in these cells allows you to buy or sell the selected commodity.

## Feed Rates

Feed Rates	
Slaves	9.500
Oxen	85.00
Horses	70.00

These cells show how much you are feeding your living inventories per individual per month. The example shows that each slave is being given 9.5 bushells of wheat per month.

If you wish to change any of these feed rates, simply click in the box you wish to adjust.

## Spread & Plant

Spread & Plant	
Manure	Land
1000	200.0

This category shows you how many acres of land you are planting, and how many tons of manure you are spreading. The example shows that 200 acres are to be planted next month, and 1000 tons of manure should be spread on those 200 acres.

Clicking in these cells will allow you to change the selected item.

Overseers

Overseers	
Overseers	600
Salary	688.3

This section shows you how many overseers are currently in your employ, and how much per month you are paying each of them. Clicking in these cells will allow you to hire or fire.


Pending Contracts

Pending Contracts	
Cort of Grunthos will SELL 3496 acres for 9311203 in 21 months.	
Emperor Falthazzar will SELL 4549091 bushells for 2.1e+08 in 30 months.	
Regent Karada del N will BUY 799385 bushells for 37821844 in 26 months.	

This section shows you the contracts you are committed to. The mouse does not function in this section.

Pyramid

Pyramid	
Stone Quota	Stones
60	857
	Height
	62.00



This section shows you how you are doing with your pyramid. It displays a picture of the pyramid and tells you how many stones are in it, how high it is, and how many stones per month you are ordering your overseers to add to it. Clicking in the *quota* cell will allow you to adjust this number.

Mouse Operation

### 12/24/24

The game can be driven almost entirely by the mouse. In order to adjust a parameter, simply click on its current value. i.e., to buy wheat, click on the current amount of wheat.

In fact, your first operation will be to procure a loan. To do so, simply click on the word **Loan**.

You may click on quite a number of different items on the screen to achieve your ends. Try clicking around and seeing the effects. Sometimes there will be no effect at all, and other times it will pull up nice little dialog boxes asking you for something.

### Keyboard operation

You can almost entirely run the pharaoh game from the keyboard. Each function can be activated by a single keystroke:

l	Buy/sell land
o	Buy/sell oxen
w	Buy/sell wheat
h	Buy/sell horses
s	Buy/sell slaves
m	Buy/sell manure
L	Loan
O	Feed Oxen
S	Feed Slaves
H	Feed horses
p	Set number of acres to plant
f	Set number of tons of manure to spread
q	Set pyramid stone quota
g	Hire/fire overseers(guards)
r	Run for a month.

### Buying & Selling

When you select a commodity to buy or sell, an appropriate dialog box will appear on the screen. You must select the function you want by clicking in the appropriate *radio-button*, or type the respective character: b=buy, s=sell, k=keep, a=acquire. Then enter the appropriate amount and click **OK**.

Keep and Acquire currently have the same meaning. They mean that you want the system to buy or sell whatever is necessary so that when the transaction is over you will own the specified amount. i.e., If you think you need 534 slaves total, then *acquire* 534.

## Hiring&firing

When you select the overseer's function, you must specify whether you want to hire, fire or obtain overseers. You do this by clicking on the appropriate *radio-button*, or by typing the appropriate character:

h=hire, f=fire, o=obtain.

*Obtain* means that you wish to hire or fire the appropriate number in order to get your current head count to the specified number.

## Contracts

To parouse the currently offered contracts, simply select the **Contracts** menu. If you see one you like, simply select it the way you would select any other menu item. You will be asked to confirm your commitment, and then the contract will appear in your list of pending contracts.

**There is no way to escape from a contract once you have committed it.**

## Voice

The game will work with **MacinTalk** if it is installed. Simply make sure that *Pharaoh*, and *Macintalk* are both located in the same folder together.

•At least some versions of MacinTalk will crash if used with a MAC II, but V1.31 works with MAC II, SE, Mac+, etc.

## Skill Levels

If you have payed for a license for Pharaoh, and have entered the license password, then you will be able to select the skill level at which you want to play. There are 3 such levels:

**EASY:** at the easiest level, you win by building a pyramid 100 ft. tall. The bank never reduce your credit limit lower than 5,000,000 gold pieces, and the market prices start out in your overwhelming favor. This does not mean that the easy level is easy to play. It should take you some time to get the hang of how to win. But winning is possible if you develop the proper business strategy, and are careful.

At this level, your wheat production will most likely never get high enough to have serious economic effects. So the price of wheat will for the most part remain out of your control. For this reason, you probably not have to rely on external contracts to build your pyramid

**MODERATE:** At the moderate level, your pyramid must get to 300 ft. The bank can reduce your credit rating all the way to 500,000, and the market prices start out weak at best. Great care must be taken at this level, it is very easy to get the business out of balance.

Towards the end of the game, you will be probably find that you have to make a transition in the way you do business. Your wheat production will be so high, that the price of wheat will come crashing down and make your farming business unprofitable. You can solve this problem by dealing in other commodities, or relying on external contracts.



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**HARD:** At the hardest level, you must complete a pyramid of 1000 ft. *This is hard!*. The bank may deign to give you a piddling 50,000 gold peices, and the market prices are decidedly poor. The rule of this game is flexibility and changability. You will no doubt be forced to change the composition of your business several times. You production levels and purchasing powers will have to get so high that they can exert overwhelming effects on the local economy. You will be able to exert vast control over the market prices. The hard part is keeping your business in balance, and keeping the bank happy.

## Hints

- Be aware of the workload of your slaves. It depends upon alot of factors. Among them are:
  - The amount of livestock you have
  - The amount of land you are planting
  - The amount of fertilizer you are spreading
  - The number of pyramid stones you are laying
  - Random events such as wars, revolts, and the like.
  - The amount of wheat that needs harvesting

You will know if your slaves are not meeting their workload quota if they fail to plant everything you asked for, and you know you had enough land and wheat for the planting. In this case, the slaves work will be spread evenly over all their activities. If they only managed to plant half the wheat you demanded, then they were only able to feed the livestock half their food, were only able to harvest half the wheat, and only able to lay half the pyramid stones...

If your slaves are working fine through the winter, spring, and summer, but fail to meet quota during the fall, it may be that the fall harvests of the summer plantings, (the really big harvests) are too much for the slaves.

- Watch the prices. Especially watch the price of your cash crop. If you see it falling rapidly, you are probably overproducing. The demand for products in your local economy increases with time. If you produce at a rate which is in excess of this demand, then the price will plummet as the inventories grow.

If this happens to you, then consider changing your cash crop, or selling outside your local economy. Don't let the prices get out of control, you may find that you have devalued the worth of your estate to the point that the bank will not be able to find sufficient collateral for a loan.

## Summary

Well, thats it. Enjoy playing Pharaoh. If you have any questions, hints, bug reports, or just plain good ideas, then drop me a line.

A handwritten signature in a cursive script that reads "Robert Martin". The ink is a dark gray color.

Robert Martin