African Farmer
A Farming Simulation

GAME MANAGER GUIDE
The Game Manager Guide provides information and advice on planning and running an *African Farmer* multiplayer game workshop. The document begins with an overview of the multiplayer game followed by a guide to the Game Manager interface. The document concludes with a section on planning and running the workshop.

The Multiplayer Guide provides more detailed information on playing the game and the Software Installation Guide gives step by step instructions on setting up the game server. All documents and other resources mentioned in this guide can be found on the [African Farmer website](https://africanfarmer.com).

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1. Game Overview

In *African Farmer* players are responsible for managing a household and small farm in an African village. Players must feed their household and manage the plots of land to which they have access.

Between one and three players are assigned to each household which consists of a number of adult, child and infant non-playing characters. At the outset each household will have several fields and some starting cash, the number of fields and amount of cash varying between households.

Players can trade food, crops, inputs, land and other goods and services at the market or with other players. Players must manage labour to ensure that domestic and farming tasks are carried out and must decide whether to send children to school. On the farm players must choose which crops to plant, when to plant them and decide on weeding and the use of fertilizers. They must be prepared for adverse weather and be ready to respond to crop diseases and pests. Household members need balanced diets if they are to remain healthy - individuals given poor diets are more likely to become ill and may die. The game incorporates various elements on which players must take a position, presenting them with a range of goals to be balanced:

- Agricultural – successfully manage and develop the farm.
- Health and education – provide household members with balanced diets and ensure children are educated.
- Social – increase social standing by diligently carrying out duties and helping neighbours.
- Financial – increase the net worth of your household by farming or trading.

The unpredictability of the weather, the capriciousness of crop hazards and other disruptive events conspire to create a complex environment of risk and uncertainty within which players must make both ethical and practical decisions.

2. Game Play

Game flow is built around the farming year which is divided into four seasons – Early Rains, Main Rains, Early Harvest and Late Harvest (Fig 2.1). Clicking on any game stage above will navigate to detailed information on the game stage.

Fig. 2.1 Game Flow
Each game cycle begins with a Market Trading stage, though the market remains open throughout the game. The game then moves through the season processes. After the farming work is finished for the year, food is allocated to household members and health hazards may occur, depending on the quality of diet given to household members. All characters age one year and new births may occur, ending the cycle.

2.1 Market Trading

At the market crops - maize (local, high-yield and drought tolerant varieties), beans, mixed horticulture – and other inputs - manure, NPK fertilizer, herbicide, pesticide - can be bought or sold. Spray kits, which are needed to apply sprays, are also available. Land can be bought, sold or rented. School vouchers, which are needed for children attending school, can be purchased.

After Market Trading is completed, the stage is advanced, mandatory tasks are created and a stage notification is sent to all players.

2.2 Season Processes

Players must make farm management decisions, the outcome of which will shape the fortunes of the household for the coming year. Labour must be allocated to cover domestic chores and decisions made on how to allocate labour and resources to the farm.

2.2.1 Task Allocation

Task Allocation is a key element in the game. Here players must choose how to allocate the available labour and farming resources for the coming season. The season’s weather will not be known until after these decisions have been made. Table 2.1 lists tasks by season.

Children can perform one domestic task each season or go to school; adults can complete two tasks. All domestic and most farming work equates to one task, with the exception of crop spraying which does not require labour to be allocated.

Mandatory household tasks (cooking and babysitting, if babies are in the household), are automatically created with labour assigned, though it pays to review the labour assignment as it may not be optimal for your situation. If labour is not assigned to mandatory tasks the household will incur a financial penalty.

Resource requirements are task dependent – domestic chores, weeding and crop harvesting do not require resources, but for all other tasks appropriate resources must be selected or the task will not be completed successfully.

With the exception of crop spraying, labour must be assigned for all tasks. Persons in hospital or allocated to other tasks that expend their work capacity are not available for selection. If necessary, additional labour can be obtained by arrangement with other households. Labour is assigned to another household by selecting the “Farm for Someone Else” task.

After Task Allocation, the stage is advanced, the season’s weather is checked, crop hazards calculated and mandatory tasks created for the next season. A stage notification with information on the weather, crop hazards, task completion and any financial penalties incurred is sent to all players.

2.2.2 Weather Report

The season’s weather is checked after tasks have been allocated. Poor weather will adversely affect crop health. The season’s weather is indicated by a weather icon for the season in calendar panel and included in the stage notification.

2.2.3 Crop Hazards

Crop hazards may occur in Main Rains for early planted crops and Early Harvest for late planted crops. Crop hazards (e.g. Bean Rust, Bacterial Blight) are crop and planting specific so there can be an advantage in diversifying crops or planting time to spread risk. Some hazards can be mitigated to an extent by spraying with pesticide, though for others there is no treatment. Players can check the potential crop loss, possible mitigation and mitigated loss in the Farm screen.
<table>
<thead>
<tr>
<th>Season</th>
<th>Task</th>
<th>Labour</th>
<th>Resources</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Rains</td>
<td>Household Chores</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory; child or adult labour.</td>
</tr>
<tr>
<td></td>
<td>Babysit</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory if babies in household; child or adult labour.</td>
</tr>
<tr>
<td></td>
<td>Attend School</td>
<td>1 Child</td>
<td>School Vouchers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sow Crop</td>
<td>1 Adult</td>
<td>Crop</td>
<td>Early planted crops.</td>
</tr>
<tr>
<td></td>
<td>Farm for Someone Else</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Choose other household from dropdown list.</td>
</tr>
<tr>
<td>Main Rains</td>
<td>Household Chores</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory; child or adult labour.</td>
</tr>
<tr>
<td></td>
<td>Babysit</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory if babies in household; child or adult labour.</td>
</tr>
<tr>
<td></td>
<td>Attend School</td>
<td>1 Child</td>
<td>School Vouchers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weed field</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Early planted crops – alternatively spray with herbicide.</td>
</tr>
<tr>
<td></td>
<td>Fertilize crop</td>
<td>1 Adult</td>
<td>Manure/NPK Fertilizer</td>
<td>Early planted crops.</td>
</tr>
<tr>
<td></td>
<td>Spray crop</td>
<td>N/A</td>
<td>Pesticide/Herbicide</td>
<td>Early planted crops.</td>
</tr>
<tr>
<td></td>
<td>Sow Crop</td>
<td>1 Adult</td>
<td>Crop</td>
<td>Late planted crops.</td>
</tr>
<tr>
<td></td>
<td>Farm for Someone Else</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Choose other household from dropdown list.</td>
</tr>
<tr>
<td>Early</td>
<td>Household Chores</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory; child or adult labour.</td>
</tr>
<tr>
<td>Harvest</td>
<td>Babysit</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory if babies in household; child or adult labour.</td>
</tr>
<tr>
<td></td>
<td>Attend School</td>
<td>1 Child</td>
<td>School Vouchers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harvest crop</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Early planted crops.</td>
</tr>
<tr>
<td></td>
<td>Weed field</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Late planted crops – alternatively spray with herbicide.</td>
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<tr>
<td></td>
<td>Fertilize crop</td>
<td>1 Adult</td>
<td>Manure/NPK Fertilizer</td>
<td>Late planted crops.</td>
</tr>
<tr>
<td></td>
<td>Spray crop</td>
<td>N/A</td>
<td>Pesticide/Herbicide</td>
<td>Late planted crops.</td>
</tr>
<tr>
<td></td>
<td>Farm for Someone Else</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Choose other household from dropdown list.</td>
</tr>
<tr>
<td>Late</td>
<td>Household Chores</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory; child or adult labour.</td>
</tr>
<tr>
<td>Harvest</td>
<td>Babysit</td>
<td>1 task</td>
<td>N/A</td>
<td>Mandatory if babies in household; child or adult labour.</td>
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<tr>
<td></td>
<td>Attend School</td>
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<td>School Vouchers</td>
<td></td>
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<tr>
<td></td>
<td>Harvest crop</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Late planted crops.</td>
</tr>
<tr>
<td></td>
<td>Farm for Someone Else</td>
<td>1 Adult</td>
<td>N/A</td>
<td>Choose other household from dropdown list.</td>
</tr>
</tbody>
</table>

Table 2.1 Tasks by Season

2.3 Food Allocation

After the late harvest has been gathered, players must allocate food for the household. Household members require a balanced diet of protein, carbohydrate and vitamins to remain healthy and individuals given poor diets are more likely to become ill and may die. Household members who become ill are sent to hospital and will remain there until medical fees are paid at the bank. While in hospital they cannot do any work but must still be allocated food.

An A-level diet requires the highest quantities of carbohydrate, protein and vitamins; B and C-level diets can be produced with smaller quantities.

All food varieties provide some amount of carbohydrate, protein and vitamins though maize is the richest source of carbohydrates, beans of protein and mixed horticulture of vitamins. Food portion sizes for women and children are double that of babies and triple the size of baby portions for adult males.

Food can be allocated by using the ‘default’ allocation that is automatically created for each household as a starting point. This allocation gives each household member a C-level diet, though the food allocated is not based on the household supplies. Therefore the allocation will likely require editing to adjust the diet levels to requirements and additional food purchased at the market.
Alternatively, food can be allocated by first creating diets and then applying the diets to household members to form an allocation or by directly allocating food portions to household members. If an allocation other than the default is used, it must be explicitly selected or the default allocation will be applied.

After Food Allocation, the stage is advanced. Food allocations are applied (using available food stocks), household health checked, all characters age one year and a check is made for new births. A stage notification with information on household diet levels, illness and death, new births and any financial penalties incurred is sent to all players.

2.4 Health Hazards

The health of all household members is checked after food allocation.

Susceptibility to illness and disease varies with diet levels:

- Characters on an A-level diet are not susceptible to nutrition-related illness.
- Characters on a B-level diet have some risk of nutrition-related illness.
- Characters on a C-level diet are at significant risk of succumbing to nutrition-related illness.
- Characters on an X-level diet will die from malnutrition.

Any household illnesses or deaths are indicated in the end of cycle stage notification.

2.5 Births and Ageing

At the end of the cycle all characters age by 1 year. Infants become children at age seven and can take on domestic chores or go to school. Children become adults at thirteen and can work in the fields. All healthy females above 13 years of age have the possibility of having a child.

2.6 Farming

Drought tolerant and high yield maize varieties will produce a “local maize” harvest. Crops can be planted in Early Rains (early planting) or Main Rains (late planting). Early planted crops (planted in Early Rains) typically produce higher yields than late planted crops (planted in Main Rains).

Applying manure or NPK fertilizer in the middle growth season (in Main Rains for early planted crops and Early Harvest for late planted crops) will improve crop yields; NPK fertilizer will give a greater improvement than using manure. Hybrid crop varieties, when used with fertilizers can give the highest yields.

Poor rains or drought will significantly reduce yields.

Failure to weed fields (manually or by spraying with herbicide) will reduce yields by 40%.

Crop hazards also reduce yields.

2.7 Finance

Each household begins the game with some starting cash which can be used to buy goods at the market. A financial penalty of 10A will be incurred for each mandatory task which is not completed. If the penalty is not paid immediately, cash or goods to the value of the penalty +50% will be seized by the bank at the start of the following season. First household cash will be seized to the value of the debt. If this does not cover the full amount, household assets, then finally land will be sold to the market to cover the debt.

Characters who are ill will remain in hospital until medical expenses are paid. However players can choose not to pay medical expenses, though the characters will be unable to work but must still be allocated food.

Funeral costs of 20A are incurred when a household member dies. These costs must be paid within 1 year or goods will be seized.
3. Game Creation

Before creating a new game, a login account must be created for the Game Manager.

To create an account enter the game server URL in your web browser (e.g. 192.168.0.200/AfricanFarmer/index.html). The Login screen will be displayed (Fig 3.1).

![Fig 3.1 Login screen](image)

Click the CREATE USER button at the top left-hand corner of the screen to open the Create User screen (Fig 3.2).

![Fig 3.2 Create User screen](image)
Enter a user name and password for the Game Manager and click SUBMIT. This will return you to the login screen. Enter your newly created account details to open the Game Selection Screen (Fig 3.3).

Click CREATE NEW GAME button at the top left-hand corner of the screen to open the Create Game Screen (Fig 3.4).

Give names for the game and game village and enter the numbers of players and players per household (see Section 5.4.1 for more details). The password is optional. Click SUBMIT when all data has been entered and this will open the Game Manager interface in the Home Screen.

The Game Manager account is now associated with this game, and each time the Game Manager logs on to the server he or she will automatically join the game. The same is true for player login accounts. Players must select a game in the Game Section screen when they first log on to the server. On subsequent logins they will automatically be joined to the selected game and the interface will open in their Home Screen.
4. Game Manager User Interface

The Game Manager interface is a modified version of the player’s user interface which has been built around the key locations in the farmers’ lives – household, farm, village, market and bank. The Game Manager interface enables the Game Manager to move the game forward, communicate with players (individually or collectively), manage the market, monitor players’ progress and intervene when necessary. Function buttons in each screen give the Game Manager access to relevant functionality and information.

The Home screen is shown in Fig 4.1 with the key UI elements labelled.

The Calendar, positioned across the top of the screen, indicates the year, season and weather. The game stage bar shows the current stage in the game cycle.

The Screen Title displays the screen name.

The Navigation Buttons move the player between the top-level screens:

- Home
- Farm
- Village
- Market
- Bank

The Function Buttons enable you to complete screen-specific functions.

The Information Panel displays data relevant to your current location and activity.

The Comms Panel allows communication with other players.

The News Ticker displays market and other community news.

Table 4.1 lists the functions and information accessible from the various Game Manager screens.
<table>
<thead>
<tr>
<th>Screen</th>
<th>Functions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>OVERVIEW</td>
<td>Display status information on households</td>
</tr>
<tr>
<td></td>
<td>SET TICKER</td>
<td>Control display of messages on the news ticker</td>
</tr>
<tr>
<td></td>
<td>PROGRESS</td>
<td>Show progress of households during task and food allocation stages</td>
</tr>
<tr>
<td></td>
<td>NEW STAGE</td>
<td>Move game forward to next stage</td>
</tr>
<tr>
<td></td>
<td>END GAME</td>
<td>End Game.</td>
</tr>
<tr>
<td>Farm</td>
<td>N/A</td>
<td>View individual household’s farm (accessed via the village screen)</td>
</tr>
<tr>
<td>Village</td>
<td>OVERVIEW</td>
<td>View information on village and households (click huts)</td>
</tr>
<tr>
<td></td>
<td>GIVE</td>
<td>Transfer assets to households</td>
</tr>
<tr>
<td></td>
<td>RESURRECT</td>
<td>Restore players to life and clear’s</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>Click on hut entrance to enter a household’s home and farm screens</td>
</tr>
<tr>
<td>Market</td>
<td>MARKET</td>
<td>List Market Stocks and Prices</td>
</tr>
<tr>
<td></td>
<td>EDIT</td>
<td>Update Market stocks and/or prices</td>
</tr>
<tr>
<td>Bank</td>
<td>OVERVIEW</td>
<td>Gives summary financial status of all households</td>
</tr>
<tr>
<td></td>
<td>BILLS</td>
<td>Lists summary of paid and unpaid bills for all households</td>
</tr>
</tbody>
</table>

Table 4.1 Game screen Functions

4.1 Home Screen

From this screen the Game Manager can monitor the status of all households, monitor progress in task and food allocation, control the new ticker, change the game stage and end the end game.

When the screen is opened or the OVERVIEW button selected, the Information Panel displays status information on all households (Fig. 4.2).

![Home screen](image)

Fig. 4.2 Home screen (OVERVIEW)

Columns indicate the status of the key areas of each household’s life – home, farm, village, market and bank. A green coloured block indicates everything is OK, amber suggests that a problem may be brewing and red that a significant problem has developed. The Game Manager can use other monitoring tools to further investigate problems and intervene if necessary.
Selecting the SET TICKER button displays the News Management screen that controls the news ticker (Fig 4.3). This is used to display messages to all players. The message to be displayed is typed in the MESSAGE box and the expiry time set by selecting the appropriate EXPIRES radio button and (if message is to expire) DURATION field and INTERVAL radio button (days, hours or minutes). If EXPIRES is set to “No” the message will display continuously until replaced by another message.

![Fig. 4.3 Home screen (SET TICKER)](image)

Selecting the NEW STAGE button displays the Stage Management screen where the Game Manager can move the game forward to the next stage (Fig 4.4). The current and next stages are shown in the stage boxes. Clicking the CHANGE button initiates the stage change. The screen will revert to the OVERVIEW view, the appropriate stage transition processes will run and a stage notification sent to all players.

![Fig. 4.4 Home screen (NEW STAGE)](image)
During the Task Allocation and Food Allocation stages the progress of households in completing the stage task can be monitored by selecting the PROGRESS button.

Fig. 4.5 Home screen (PROGRESS - Task Allocation)

Fig. 4.6 Home screen (PROGRESS - Food Allocation)
Task Allocation Status (Fig 4.5) displays each household with columns indicating number of fields, occupants (household size) and allocated tasks. If the number of tasks allocated (taking into account domestic chores) is less than available fields and free labour remains, this would suggest task allocation is not yet completed for a household (or possibly there is a problem in understanding).

Food Allocation Status (Fig 4.6) displays each household with columns indicating occupants (household size), allocated diets and whether the household has sufficient food to fulfil the allocation. An indication of insufficient stocks is often a sign that food allocation has not been completed. High proportions of X-level diets may indicate a household with serious financial problems.

4.2 Village Screen

From the village screen, the Game Manager can access a particular household’s home and farm screens, give assets to a household or (in extremis) “resurrect” a player who has died from illness or malnutrition. When the screen is opened or the OVERVIEW button selected, the huts of all households are displayed with the household names shown below each hut (Fig. 4.7). Clicking on a hut will show public information on the household, including household composition and size of farm.

Clicking on the doorway space of any hut moves the Game Manager into a monitoring mode and navigates to that household’s home screen where the detailed information on the household and household members can be obtained. If the FARM navigation button is then selected, the Game Manager can access the household’s farm screen to check on the status of planted crops. While in this monitoring mode the Game Manager is not visible to players. Clicking any other navigation button will revert to normal mode.

Select the GIVE button to transfer cash or goods to a household (Fig 4.8). This can be used to help households in serious difficulties or as an intervention to increase the purchasing options for a poor household (possibly in the guise of a “money order from a cousin working in town”). Note that the transfer does not reduce affect market stocks, except when the asset is land.

Select the RESURRECT button to restore a deceased player to life (Fig 4.9). To resurrect a player select the household and player name from the dropdown lists and click RESURRECT. This action will also cancel the funeral expenses associated with that player’s death.
Fig 4.8 Village screen (GIVE)

Fig 4.9 Village screen (RESURRECT)
4.3 Market Screen

The Market screen displays Market Stocks and prices (Fig. 4.10). Stocks and prices can be changed by selecting the asset and clicking the EDIT button.

Fig 4.10 Market screen

4.4 Bank Screen

The financial status of households can be monitored at the bank screen. When the screen is opened or the OVERVIEW button selected each household’s cash, the cash value of its assets and the number of unpaid bills is displayed (Fig 4.11).

Fig 4.11 Bank screen (OVERVIEW)
Clicking the BILLS button gives details on the paid and unpaid bills of each household (Fig 4.1).  

**Fig 4.12 Bank screen (BILLS)**

5. **Running a Game Workshop**

This section gives a step by step guide to planning and running a game workshop. All the resources mentioned in this section can be obtained from the [African Farmer website](http://example.com).

5.1 **Is African Farmer Right for You?**

*African Farmer* simulates the complex and uncertain environment in which the farmers try to make a living. Traditional teaching methods can often bypass our cultural and social biases, leaving our prejudices and emotional responses to issues dormant. *African Farmer* is a simulation game designed to engage participants emotionally, bringing often unrecognised assumptions and attitudes into play.

The initial target audiences for *African Farmer* were Food & Agricultural Policy students and professionals working in universities, institutes, NGOs, Development Organisations and other International Agencies, though the game can also be played by non-specialists.

The multiplayer game requires between 12 and 30 players and a typical workshop will run for approximately five hours. You will need two people to run the workshop (a Workshop Leader and a Game Manager) and a venue that can comfortably accommodate everyone involved in the workshop.

The *African Farmer* Walkthrough PowerPoint show gives further information that may help you decide on the suitability of the game for your teaching requirements. If the multiplayer game is not suitable, the single player game might be appropriate – details can be found on the [African Farmer website](http://example.com).

It is important to remember that *African Farmer* is one element in a learning process. The learning experience of the game must be grounded and deepened in activities and study outside the game.

The workshop training video should be viewed as a companion resource to this guide.
5.2 Planning

- Find a suitable venue:
  - The room should be large enough to comfortably accommodate participants with space to move around.
  - If at all possible, avoid a venue with fixed desks and chairs – you want players to sit together in households and easily see and access all other players.
  - Ensure that there are adequate power outlets for your needs. In addition to power for the server PC and presentation laptop, power will be needed for the players’ laptops as they will be running for four hours or more.
  - A projector and screen will be required for presenting.
  - A whiteboard could be helpful during the debriefing.

- Ensure you have access to the required equipment:
  - A PC or laptop to run game server - a decently powered desktop or powerful laptop with (say) 4GB or more RAM will do.
  - Wireless router to provide networking (unless networking provided by venue)
  - PC or laptop to run presentation and game demonstration.
  - As required - extension power strips, cables and gaffer tape to secure loose cables.
  - Cards or paper for household names and player login names.
  - Copies of the multiplayer Handy Guide for all participants.
  - If available, several spare laptops with power cables. These can useful if any participants have trouble with their own equipment.

- Think about food and refreshments: Running a game with 3 cycles will take around 5 hours, including the introduction and debrief, so you need to think about food and refreshments for participants. It will be ideal if you can provide a buffet in the room where the game will be played (assuming there is sufficient space), as you won’t lose much time and players will largely stay “in game” throughout the workshop.

- It takes two people to run a game workshop – a Game Manager who runs the game and a Workshop Leader to introduce the game, assist the Game Manager in running the game and offer help to participants if they have difficulties during game play. The debriefing session at the end of the game can be run by either person.

5.3 Preparation

Beforehand:

- Book venue and make any catering arrangements.
- Give participants details of the venue, date and time. Tell them to bring a laptop that can connect to a wireless network. Tell them to remember power adaptors as their laptops will need to run for 4 hours or more.
- Setup the Game server and wireless router: Install and configure software as described in the Software Installation Guide. Configure wireless router with a Wi-Fi network for the game.
- Prepare the Game Overview presentation – you can edit the Game Overview PowerPoint slideshow which can be downloaded from the website. Remember to update the network information slide with the correct data for your network.

On the day, allow at least one hour setup the venue:

- Setup the game server and wireless router somewhere at the side of the room. If the game server has been setup and left running the previous day or earlier, restart SmartFoxServer.
- Hook up the presentation computer to the projector. Connect it to the wireless network.
- (Loosely) arrange the tables and chairs facing the screen. Put copies of the Handy Guide on each table.
- Create a demo game and logins for use in Game Overview Presentation. It’s best to delay creating the workshop game until all participants have arrived and you know the final numbers. Using the NEW STAGE function in the Home Screen, move the game on from “Pre-game - Introductions” to “Early Rains - Market Trading”.

5.4 The Game Workshop [approx. 5¼ hours]

If coffee and tea can be made available as participants it can help create a relaxed and friendly atmosphere.

5.4.1 Create Game

When all participants have arrived and the final numbers are known, the Game Manager creates the game and logins for the workshop (see Section 3 for details). This can be done while the Game Overview Presentation is being made.

- Choose the number of households to allow two or three players per household. Aim for at least six households and avoid single-player households: the need to discuss and justify household decisions to other players deepens engagement and improves learning.
- Keep login names simple (probably best to use a simple sequence e.g. a1, b1...) and make the passwords the same as the login names. Write down each household name and all login names on separate pieces of paper or card.
- You may wish to login each player for the first time and select the workshop game you have created, to avoid any confusion with the demo game you have created for the overview presentation.
- Before participants login for the first time, move the game on from “Pre-game - Introductions” to “Early Rains - Market Trading” using the NEW STAGE function in the Home Screen.

5.4.2 Game Overview Presentation [approx. 45 minutes]

- Introduce workshop leaders and give participants health and safety information.
- Ask participants to introduce themselves.
- Give participants an overview of the game (do not give out connection information at this point).
- Quickly run through a game cycle using a login to the demo game previously created by the Game Manager (the Game Manager will need to help with this):
  - Give an overview of the User interface.
  - Introduce them to the Comms Panel, though emphasise that they should feel free to move around the room and talk with other households.
  - Emphasise the importance of weeding in the middle growth season.
  - Make clear that persons who are ill cannot work though need to be allocated food and that funeral costs are incurred when a household member dies (this discourages the strategic killing off of unproductive family members).
  - DO NOT TELL PARTICIPANTS HOW MANY GAME CYCLES YOU INTEND TO RUN. Some players may choose to ‘game the system’ if they know in advance how many cycles will be played.
- Finally, give participants access information for the Wi-Fi network and game server (network name, password and URL).
- The Game Manager should distribute login information to all players. Players in the same household should sit together. The household name cards should be clearly displayed by each household.
- Check all participants can login successfully and access the game interface. Make sure everyone has access to power for their laptops and tape down cables as required.

5.4.3 Play African Farmer [approx. 3½ hours]

The Workshop Leader and Game Manager work together to run the game. Each group of participants will be different and a flexible approach will be needed to gain the maximum benefit from the game. You should aim to play 3 cycles, or 4 if you have the time, as it is important to allow time for player’s initial strategies to be tested within the game environment and modified strategies to be adopted. However it is essential that adequate time is left for the debriefing session.

The first cycle will take much longer than subsequent cycles, as everything is new for the players. Give them the time and help they need. Once players are familiar with the interface and game cycle, pressure can be added by limiting the time available for each game stage.

While the game is running the Workshop Leader should move among players, checking progress and giving help when needed. Players may also need some encouragement to interact and trade with other households.

The Game Manager, in consultation with the Workshop Leader, decides when to move the game on to the next stage. The monitoring tools built into the Game Manager interface can help with this but also don’t hesitate to ask the players if they’re ready to move on. However you will often need to apply pressure as some players will take all day to make a decision, if given the chance.
As the game progresses, keep a regular check on households that are struggling. Although failure and death are part of the reality of farming life, you may want to intervene to prevent households from being wiped out, except perhaps towards the end of the workshop. Prompting players to ask other households for help may be a useful first step. An intervention targeted at an individual household could involve sending them a message informing them that a cousin in town has sent them a money order and giving them the cash (using the GIVE function in the Village Screen). A intervention aimed at all households (if, for example, a run of bad weather has adversely affected all households) could be to reduce the market prices of (e.g.) high yield and drought tolerant maize or fertilizers send a message on the news ticker informing everyone of a government subsidy on these goods. Also cash could be given to all households under the guise of a bribe from a corrupt politician.

A Game Manager’s view of the game cycle (starting from Market Trading) runs as follows:

   - Monitor households assets in the Bank Screen – if a household’s assets are not increasing, they’re not buying anything.
   - When trading is completed, move the game forward from “Early Rains - Market Trading” to “Early Rains - Task Allocation” using the NEW STAGE function in the Home Screen. This creates the mandatory tasks for the season and sends a stage notification with information on the weather to all players.

2. Early Rains Task Allocation: Players allocate tasks for Early Rains.
   - Tell players this is the time to plant early planning crops and that labour must remain allocated for household tasks.
   - Monitor task allocation progress using the PROGRESS function in the Home Screen.
   - When task allocation is completed, move the game forward from “Early Rains - Task Allocation” to “Main Rains - Task Allocation” using the NEW STAGE function in the Home Screen. This checks the weather, checks crop hazards for early planted crops and creates the mandatory tasks for the season. A stage notification with information on the weather, crop hazards, task completion and any financial penalties incurred is sent to all players.

   - Tell players this is the time to plant late planning crops and for weeding and fertilizing early planted crops. Tell them to check early planted crops for hazards – remind them they’ll need a spray kit to spray herbicide or pesticide.
   - Monitor task allocation progress using the PROGRESS function in the Home Screen.
   - When task allocation is completed, move the game forward from “Main Rains - Task Allocation” to “Early Harvest - Task Allocation” using the NEW STAGE function in the Home Screen. This checks the weather, checks crop hazards for late planted crops and creates the mandatory tasks for the season. A stage notification with information on the weather, crop hazards, task completion and any financial penalties incurred is sent to all players.

   - Tell players this is the time to harvest early planted crops, for weeding and fertilizing late planted crops. Tell them to check late planted crops for hazards – remind them they’ll need a spray kit to spray herbicide or pesticide.
   - Monitor task allocation progress using the PROGRESS function in the Home Screen.
   - When task allocation is completed, move the game forward from “Early Harvest - Task Allocation” to “Late Harvest - Task Allocation” using the NEW STAGE function in the Home Screen. This checks the weather and crop hazards and creates the mandatory tasks for the season. A stage notification with information on the weather, crop hazards, task completion and any financial penalties incurred is sent to all players.

5. Late Harvest Task Allocation: Players allocate tasks for Late Harvest.
   - Tell players this is the time to harvest late planted crops – if no household has late planted crops you can immediately proceed to the next stage.
   - Monitor task allocation progress using the PROGRESS function in the Home Screen.
   - When task allocation is completed, move the game forward from “Late Harvest - Task Allocation” to “Late Harvest - Food Allocation” using the NEW STAGE function in the Home Screen. This checks the weather and sends a stage notification with information on the weather, task completion and any financial penalties incurred to all players.

6. Food Allocation: Players allocate food to their households.
   - Tell players it is time to feed their households. Harvested crops can be sold and food purchased from the market.
• Remind them that people on poor diets are more likely to become ill and may die, and that anyone on an X-level diet will certainly die. Tell them to check they have sufficient food stocks to cover the allocation. Remind them that if they use an allocation other than the default it must be explicitly selected or the default allocation will be applied.
• Remind them that they’ll need to hold back crops for planting in the next cycle.
• Monitor food allocation progress using the PROGRESS function in the Home Screen.
• Double check the financial status of households – if a household is in dire straits some kind of intervention may be appropriate.
• When food allocation is completed, move the game forward from “Late Harvest - Food Allocation” to “Early Rains - Market Trading” using the NEW STAGE function in the Home Screen. This applies allocations (using available food stocks), checks health, ages all characters one year and checks for new births. A stage notification with information on household diet levels, illness and death, new births and any financial penalties incurred is sent to all players.

Steps 1-6 are repeated for each game cycle. At the end of the final cycle (or during the cycle if time has run out) the game is ended by navigating to the NEW STAGE function in the Home Screen and clicking the END GAME function. This sends a final notification to all players giving a summary of their household’s financial status.

5.4.4 The Debriefing Session [approx. 1 hour]

The debriefing session is an essential element of the game workshop - it is here that experience can become learning. The main aim of the African Farmer Game is to bring alive to participants what life is like for small farmers living in a complex and risk-prone environment. The simulation demonstrates the complexity of decision-making even in a simplified model of an agricultural society and helps sensitise students and professionals to the impact of dynamic agrarian change from the farmer’s point of view. The role of the facilitator is to help participants share and reflect on all aspects of the game and to make links to other knowledge and the reality of African farmers’ lives. To this end, here are some ideas for to guide the discussion:

1) Start with overall impressions of the experience:
   • Did they enjoy the experience?
   • What were the stand-out moments or aspects of the game?
   • Any difficulties or confusions (interface, game flow...)?

2) Focus on priorities and strategies:
   • What were their priorities – education, nutrition, finance? How did they decide?
   • Did priorities conflict with one another?
   • What farming strategies did players adopt at the start of the game – diversification (growing a wide-range of crops, some for home-consumption, some for market), intensification (using ‘Green Revolution’ technologies – hybrid seeds, inorganic fertilisers, etc.), commercialisation (growing crops for the market and buying in food from other sources), other? Why did they choose these?
   • Explore the differences between the strategies sought by different household members. Was there a gender-dimension to these differences (e.g. did the male and female heads of household agree or disagree at the start)? Whose strategy was pursued in the end – and why was this chosen?
   • Explore the differences between the strategies adopted by different households. What was the result of these differences – in terms of income, agricultural performance, nutritional status, health and well-being, social status? Was there any difference in approach between female-headed households vs. male-headed households?
   • Did the strategies change as game progressed? If so, why did these change and what was the outcome?
   • If playing the game again, what might players do differently?

3) Focus on difficulties:
   • Were there particular pressures to be overcome – labour, land, cash, time shortages or environmental stresses (e.g. drought, debilitating illness)?
   • Did they encounter any particular shocks – pest infestation, sudden loss of household member, flood, etc.?
   • What approaches did players take to deal with these problems? Were these approaches successful?

4) Focus on learning:
   • What surprised you?
   • What do you think you’ve learned from the experience?
• Has playing the game changed your views in any way?
• How does this tie in with coursework/what we’ve been studying?

5) Focus on the game experience:
• What was most helpful or least helpful?
• What could be improved?
• Are there additional features that you would like to see added to the game?

5.4.5 Troubleshooting

This section lists a few guidelines for clearing technical problems that players may occasionally encounter problems during game play.

• Data or information not updating: if information is not updated on a player’s screen (e.g. a change in assets not being reflected in the home information panel), simply navigating to another screen and then back to the original screen will often clear the problem as this forces a refresh of all the screen data from the server.

• Task data selected from dropdown menus is not visible: this problem seems to be linked to the browser cache. Logout and clear the browser cache:
  o Firefox: Select History->Clear Recent History
  o Chrome: Settings->History->Clear Browsing Data
  o Internet Explorer: Tools->Internet Options->General Tab. Click “Delete…” button on Browsing History

• Problems logging in to the server: Check that username and password have been correctly entered. Check that CAPS LOCK is off.