XRB Galaxy

YELLOW PAPER (Version 1.0)

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Tribes

There are 5 special tribes in the game and a regular tribe (New Age).

- Each tribe will be given a free starting backpack.
- Initial capacity is how much weight a backpack can carry

Tribes	Perks	Walk Speed	Initial capacity	Dungeon Characteristics
New Age	No special perks	7.00 km/hr	19.00 kg	Balanced tribe with no extra benefits
Artists	Can reserve Farm before other Tribes	7.50 km/hr	21.00 kg	Nimble and Agile, suited for people who likes evasive, fast paced gameplay
Farmer	Can buy Houses before other Tribes	7.10 km/hr	22.00 kg	A balanced physical tribe, suited for people who likes flexibility in gameplay
Intelligence	Can buy Plot B's Seeds before other Tribes	7.00 km/hr	19.00 kg	A magically gifted glass cannon, suited for people who likes high risk high reward spellcasting
Spiritual	Can reserve Land before other Tribes	7.00 km/hr	18.00 kg	A more balanced magical tribe, suited for people who likes a more casual style of spellcasting
Strength	Can buy Plot A's Seeds before other Tribes	7.00 km/hr	24.00 kg	Strong and Bulky, suited for people who likes straightforward, beat-em-up gameplay

Stamina System

All players will have a fixed stamina limit of 180 units. Stamina will deplete on all in-game actions except for sitting.

Below is the list of in-game actions that will require the use of stamina. Each actions will elicit stamina consumption as follows:

Action	Base Stamina Loss per Seconds
Running	Stamina Runs out exactly on 70 KM distance traveled
Walking	regardless of speed. Stamina consumed per second is not the same with each tribe due to difference in movement speed.
Standing	0.0167
Action	0.025

Weight and Stamina Consumption

Additionally, the stamina system will be incorporated with the **inventory system** through the relationship between **weight** and **stamina consumption**. Players will be inflicted with greater stamina consumption proportional to the weight of items held in the player inventory.

The calculation for penalized stamina consumption is as follows:

$$Net Stamina Loss = (\frac{Weight Carried}{Inventory Limit}) * 2 * Base Stamina Loss$$

 $Weight Carried = Weight of items held in the Player Inventory$

Player Inventory Limit = The maximum weight limit of Player Inventory Base Stamina Loss = Stamina consumption assuming no penalty applied

By dividing the current weight of items that the player is currently carrying in their player inventory by the weight limit of said player inventory, the percentage amount of items currently being carried in the inventory will be derived. The Player Inventory is the inventory that is directly attached to the player and does not include a backpack of any kind.

Multiplying the result by 2 will derive the penalty multiplier that will be used to multiply with Base Stamina Loss in order to amplify the stamina consumption of the player.

The implication of the formula is that the penalty applied to Base Stamina Loss is multiplicative and will cap out at 200% multiplier assuming the player filled their inventory to the maximum weight allowed.

Stamina Regeneration

Stamina can be replenished through in game actions and logging out.

Actions	Description
Usable Item	 Consuming a specific consumable will replenish stamina for a fixed amount
Sleeping on a Bed	 Replenish players to max stamina and put the sleeping feature on cooldown. Players can own a bed by having a house, and they can place one bed in each bedroom. Chairs will also provide stamina, but in smaller quantities than the bed. In addition, there will be public chairs available for free seating, but they will provide the minimum amount of stamina.
Sitting on a Bench/Chair	 Replenish players a fixed amount of stamina and put the chair on cooldown.
Logging Out	 Logging out will initiate the regeneration timer which restores stamina overtime.

The calculation for the stamina recovery timer is as follows:

Ex: Max Stamina = 180 units

Time Passed	Stamina Recovered
7 minutes	1 unit

Stamina Regeneration for In-game actions

Actions	Stamina Gain	Cooldown
Using Bed	3 hours worth of Stamina	3 hours
Using Private Chair	1 hour worth of Stamina	4 hours
Using Public Bench	35 minutes worth of Stamina	4 hours

Item

Every item in the game is categorized into either a Material or a Product. Materials are only used for crafting/converting and have no special effects. For products, they can be used and can have special effects.

Items and Products are the main staple of the in-game economy as players can freely trade them through the concessions provided in-game.

Additionally, every item in the game will have its own weight assigned. Below is the classification table of each item type, and also displays the type's detail.

Material	Product	
Raw Material (KAP20)	Final Product (KAP1155)	Unique Final Product (KAP721)
 The lowest form of items Can be crafted into Processed Material or Final Product 	Can be crafted into a unique final product	 It can be crafted into a unique final product It cannot be sold back into the game.

Item Sourcing

Material

Raw Material

Raw materials are the lowest form of any item. Some can be obtained through the act of "Gathering" and some can be obtained by "Buying" from Concessions.

In some rare cases, some can also be obtained through "Crafting" in Concessions as well.

Some raw materials can be obtained through "Farming". They are categorized as "Raw Farm Materials". Players can sell those materials at L1 Concessions.

Product

Final Product

Final products are the second highest form of any item. Final Products are crafted from Concession L2 or bought from Concession L3.

Raw Material Limitation

The threshold, "hard cap," refers to the finite limit to the availability of all raw materials within the game. It is important to note that once this limit is reached, no further instances of the raw materials will be produced.

For reference, below is a comprehensive list of all the raw materials that may manifest within the game from Release 1. Where each block is 5 seconds.

Farming Limitation

Raw Material Name (Farm)	Hard Cap (Quantity)	Price per unit (XRB)	Reward Per Blocks
Orange	1,809,900,000	0.001326	22.72
Strawberry	2,606,400,000	0.001105	32.71
Ginger	2,986,600,000	0.000884	37.49
Watermelon	2,413,300,000	0.000995	30.29
Melon	1,689,400,000	0.001989	21.20
Cherry	3,137,200,000	0.000995	39.38
Coffee Beans	1,303,200,000	0.001657	16.36
Prune	1,998,200,000	0.001381	25.08
Tomato	3,040,800,000	0.001105	38.17
Carrot	6,371,100,000	0.000829	79.97
Ground Leaves	1,665,300,000	0.001657	20.90
Pomegranate	2,895,900,000	0.000829	36.35
Apple	1,843,000,000	0.001823	23.13
Grape	2,053,500,000	0.001520	25.78
Lime	2,764,400,000	0.001215	34.70
Pineapple	3,764,700,000	0.000829	47.25
Green Apple	2,091,600,000	0.001492	26.25
Lemon	4,183,100,000	0.000746	52.51

Free Items Limitation

Free Raw Material Items stocks are checked every 60 minutes. Raw Materials will not be refilled if the stock of item is not 0 after the check.

Raw Material Name (Free)	Hard Cap (Quantity)	Price per unit (XRB)	Raw Material Per Hour
Orange	1,809,900,000	0.001326	872.88
Strawberry	2,606,400,000	0.001105	1,256.94
Ginger	2,986,600,000	0.000884	1,440.25
Watermelon	2,413,300,000	0.000995	1,163.84
Melon	1,689,400,000	0.001989	814.69
Cherry	3,137,200,000	0.000995	1,512.99
Coffee Beans	1,303,200,000	0.001657	628.47
Prune	1,998,200,000	0.001381	963.66
Tomato	3,040,800,000	0.001105	1,466.44
Carrot	6,371,100,000	0.000829	3,072.53
Ground Leaves	1,665,300,000	0.001657	803.05
Pomegranate	2,895,900,000	0.000829	1,396.60
Apple	1,843,000,000	0.001823	888.75
Grape	2,053,500,000	0.001520	990.32
Lime	2,764,400,000	0.001215	1,333.12
Pineapple	3,764,700,000	0.000829	1,815.59
Green Apple	2,091,600,000	0.001492	1,008.66
Lemon	4,183,100,000	0.000746	2,017.32
Blueberry	733,700,000	0.00005997	7,716.05
Raspberry	733,700,000	0.00005997	7,716.05
Blackberry	733,700,000	0.00005997	7,716.05
Honey	852,500,000	0.00080000	8,969.91
Golden Honey	1,347,500,000	0.0080000	14,178.24
Mad Honey	1,347,500,000	0.00080000	14,178.24
Pear	770,000,000	0.00006000	8,101.85
BitKub Mushroom	770,000,000	0.00006000	8,101.85
Mutelulu Mushroom	770,000,000	0.00006000	8,101.85
Ash Log	1,430,000,000	0.00004000	15,046.30

Maple Log	1,430,000,000	0.00004000	15,046.30
Birch Log	1,430,000,000	0.00004000	15,046.30
Ash Special Log	407,000,000	0.00020000	4,282.41
Maple Special Log	407,000,000	0.00020000	4,282.41
Birch Special Log	407,000,000	0.00020000	4,282.41
Wool Scrap	774,400,000	0.00006001	8,150.08
Linen Scrap	774,400,000	0.00006001	8,150.08
Silk Scrap	774,400,000	0.00006001	8,150.08
Cotton Scrap	774,400,000	0.00006001	8,150.08
Thin Leather	374,000,000	0.00020000	3,935.19
Raw Hide Leather	374,000,000	0.00020000	3,935.19
Raw Fur	623,700,000	0.00011993	6,558.64
Thin Fur	623,700,000	0.00011993	6,558.64
Raw Emerald	550,000,000	0.00040000	5,787.04
Raw Diamond	550,000,000	0.00040000	5,787.04
Raw Topaz	550,000,000	0.00040000	5,787.04
Raw Ruby	550,000,000	0.00040000	5,787.04
Bronze Ore	448,800,000	0.00012010	4,726.08
Silver Ore	449,900,000	0.00012469	4,729.79
Iron Ore	448,800,000	0.00012990	4,726.22
Gold Ore	447,700,000	0.00013514	4,715.93
Water	1,155,000,000	0.00006000	12,152.78
Ice	866,800,000	0.00007995	9,114.58
Salt	1,155,000,000	0.00006000	12,152.78

Raw Material System

Raw materials in the game are categorized into 2 major groups that are the building blocks of the economics within the game. They will have:

• City Tag

• A tag which identifies items' affiliation with their respective cities in the game.

Weight

• A value which indicates how much capacity the items would occupy in a bag or an inventory.

Main Source	Item Lists
	Orange, Strawberry, Ginger, Watermelon, Melon, Cherry
	Coffee Beans, Prune, Tomato, Carrot, Gourd Leaves, Pomegranate
Farm	Apple, Grape, Lime, Pineapple, Green Apple, Lemon
	Has no list of itself, but uses entries of Farm A, Farm B, and Farm C combined.
	Berries, Honeys
	Pear, Mushrooms
Free	Water, Ice, Salt
	Raw Diamonds (Gems), Metal Ores
	Scraps, Leather, Fur
	Logs, Special Logs

Raw Farm Material

Farm materials are premium materials that can be obtained via Farming System. Entries below are all from the first release with City Tag: Bitkub & Mutelulu

Item Name	Weight
Orange	0.22 kg
Strawberry	0.15 kg
Ginger	0.13 kg
Watermelon	0.16 kg
Melon	0.23 kg
Cherry	0.12 kg
Coffee Beans	0.30 kg
Prune	0.20 kg
Tomato	0.13 kg
Carrot	0.06 kg
Gourd Leaves	0.24 kg
Pomegranate	0.14 kg
Apple	0.21 kg
Grape	0.19 kg
Lime	0.14 kg
Pineapple	0.10 kg
Green Apple	0.19 kg
Lemon	0.09 kg

Raw Free Material

Entries below are all from the first release with City Tag: Bitkub & Mutelulu

Non farm material

Item Name	Weight
Blueberry	0.0722 kg
Blackberry	0.0722 kg
Raspberry	0.0722 kg
Honey	0.0963 kg
Mad Honey	0.0963 kg
Golden Honey	0.0963 kg
Pear	0.0722 kg
Mutelulu Mushroom	0.0722 kg
Bitkub Mushroom	0.0722 kg

Miscellaneous

Item Name	Weight
Water	0.0707 kg
Ice	0.0943 kg
Salt	0.0707 kg

Wood

Item Name	Weight
Ash Log	0.0476 kg
Birch Log	0.0476 kg
Maple Log	0.0476 kg
Ash Special Log	0.2379 kg
Birch Special Log	0.2379 kg

Maple Special Log	0.2379 kg
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Minerals

Item Name	Weight
Raw Diamond	0.4503 kg
Raw Emerald	0.4503 kg
Raw Ruby	0.4503 kg
Raw Topaz	0.4503 kg
Bronze ore	0.1351 kg
Iron ore	0.1461 kg
Silver ore	0.1405 kg
Gold ore	0.1519 kg

Fiber

Item Name	Weight
Cotton Scraps	0.0722 kg
Linen Scraps	0.0722 kg
Silk Scraps	0.0722 kg
Wool Scraps	0.0722 kg
Thin Leather	0.2407 kg
Raw Hide Leather	0.2407 kg
Thin Fur	0.1444 kg
Raw Fur	0.1444 kg

Backpack

Backpacks are essential equipment to <u>increase the maximum load</u> a player can carry.

Item Name	Maximum weight Capacity increased
Backpack [1 Star]	9.16 kg
Backpack [2 Star]	18.32 kg
Backpack [3 Star]	27.48 kg
Backpack [4 Star]	45.82 kg
Backpack [5 Star]	73.28 kg
Backpack [6 Star]	119.08 kg
Backpack [7 Star]	192.36 kg
Backpack [8 Star]	311.44 kg

Farming System

The Farming System revolves around planting Seeds in Farm Plots in order to generate Farm Items.

Here are the steps to Farming

- 1. Buy Farm Plots
 - Farm Plot is a type of Land specifically used for Farming.
- 2. Buy Farm Seeds
 - Confirm whether they can be planted in the bought Farm Plot
- 3. Plant the Seeds into the Plot
 - Each Plot can only plant one type of Seed
 - Each Plot has a capacity that determines how many Seeds can be planted.
 - Seeds need time to Mature
- 4. Harvest the Farm Items from Fully Matured Seeds
 - Craft items
 - Upgrade Items (Coming Soon)
 - Sell Items

Calculating Final Reward from Farming

Final Reward from farms can be calculated with total numbers of seeds planted in the game (Staking LP), the optimal LP which yields the maximum reward (Max LP), and Max Block Reward

LP or LP Tokens can be interchanged with the term "Seeds"

Final Reward, in this sense, refers to the amount of XRB awarded to players when they validate blocks through Farming.

Constraints

- Max LP is a constant while Staking LP is a variable
- Max LP = 70 XRB / price per seed
- The number of seeds in a farm does not have a limit. However, Max Seeds value per farm will be capped at 70 XRB.

Formulas

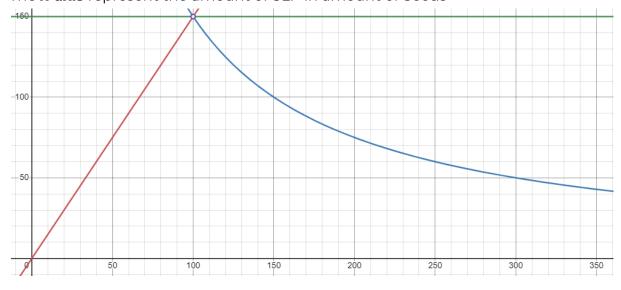
Below is a set of conditional formulas to calculate block rewards which are directly dependent on the relationship between **Max LP (MLP)** and **Staking LP (SLP)**.

If
$$SLP \leq MLP \mid Final Reward = \frac{SLP}{MLP} \bullet Block Reward$$
If $SLP > MLP \mid Final Reward = \frac{MLP}{SLP} \bullet Block Reward$

Illustration of the Formula

This graph illustrates the change in Final Reward as Staking LP (SLP) increases, where the Max LP (MLP) is set to 100 LP, and Block Reward at 150 units of the assigned item.

The **y-axis** represents the amount of Final Reward in units of the assigned item. The **x-axis** represent the amount of SLP in amount of Seeds



Terms	Explanation	Result
Staking LP < Max LP	Users planted seeds less than the ceiling limit	The final reward would increase linearly as users planted more seeds.
Staking LP > Max LP	users planted seeds in the amount that exceeded the ceiling limit	The final reward would decrease logarithmically as users planted more seeds.
Staking LP = Max LP	users planted seeds exactly equal to the ceiling limit	final reward would reach the maximum point.

Case Example

Here is a case example of users getting Block Rewards from planting Oranges.

Assume that:

The Max LP = 20,000 seeds (Max LP is calculated using max supply from farming per year)

The Block reward of Orange = 2 Oranges per Block

If a simulation was run on 3 cases:

- 1. Users planted 10,000 Seeds
- 2. Users planted 20,000 Seeds
- 3. Users planted 30,000 Seeds

The Final Block reward in each cases would be:

1. Final Reward =
$$\frac{SLP}{MLP}$$
 • $Block\ Reward$

$$= \frac{10,000}{20,000}$$
 • $2\ Oranges = 1\ Orange$
2. Final Reward = $\frac{SLP}{MLP}$ • $Block\ Reward$

$$= \frac{20,000}{20,000}$$
 • $2\ Oranges = 2\ Oranges$
3. Final Reward = $\frac{MLP}{SLP}$ • $Block\ Reward$

$$= \frac{20,000}{30,000}$$
 • $2\ Oranges = 1.33\ Oranges$

These farms can be built in 3 locations

Below is the table assigning a limited supply of Farm Plots to these locations:

	Plot A	Plot B	Plot C	_	Total per Zone
Location 1	11,280	9,394	7,508	9,394	37,575
Location 2	2,284	2,284	2,284	11,372	18,225
Location 3	11,749	13,635	15,521	4,545	45,450
Total per Plot	25,313	25,313	25,313	25,311	101,250

Concession

Concession is an in-game provision by the core system that allows players to own shops that can buy/sell/craft items at their own discretion.

Concessions are classified into three types: (Layer 1, Layer 2, and Layer 3)

Layer 1 (L1) Concession

Layer I concessions mainly revolve around the transactions of Raw Materials.

In a Layer 1 concession, players can:

1. Buy and Sell certain Raw Materials

For the concession owners, there will be an additional option to adjust the amount of tax customers have to pay when they buy items from this concession. The price of each item sold in the concession will be adjusted using the following equation.

```
Concession Tax: minimum is 1% and maximum is 100% Selling\ Price = (1 + Concession's\ tax(\%) + Town's\ tax(\%)) * Base\ Item\ Selling\ Price
```

The amount of profit concession owner can make is as follow:

```
Profit = (Concession's tax(\%) * Base item selling price) * 70\%
```

Layer 2 (L2) Concession

Layer 2 concessions mainly revolve around the act of "Crafting".

In a Layer 2 concession, players can:

- 1. Craft Processed Materials using certain materials
- 2. Craft Final Products using certain items
- 3. Craft Unique Final Products using certain items

```
Concession Tax: minimum is 1% and maximum is 100% Crafting\ fee = (1 + Concession's\ tax(\%) + Town's\ tax(\%)) * Base\ Crafting\ fee
```

The calculation for the owner's profit is shown as follow:

```
Profit = ((1 + Concession's tax(\%)) * Base Crafting fee) * 70\%
```

Layer 3 (L3) Concession

Layer 3 concessions mainly revolve around the transactions of items players would, otherwise, obtain by crafting in L2 concessions.

In a Layer 3 concession, players can:

- 1. Buy and Sell certain Processed Materials
- 2. Buy and Sell certain Final Products

In layer 3, The concession owners also have the option to adjust the tax.

```
Concession Tax: minimum is 1% and maximum is 100% Selling\ Price = (1 + Concession's\ tax(\%) + Town's\ tax(\%)) * (2 * Base\ Item\ Selling\ Price)
```

The profit concession owner can make will be calculate as follows:

```
Profit = (Concession's tax(\%) * 2 * Base item selling price) * 70\%
```

Concession Catalog

Provided below is the list of items classified by categories that each layer of concessions would provide in-game.

Concession L1

Name	Detail
The Tropical Temptations	Buyable/Sellable Raw Materials > Orange > Strawberry > Ginger > Watermelon > Melon > Cherry
The Root Cellar	Buyable/Sellable Raw Materials Coffee beans Prune Tomato Carrot Gourd Leaves Pomegranate
The Fruit Barrel	Buyable/Sellable Raw Materials > Apple > Grape > Lime > Pineapple > Green Apple > Lemon
Berry Heaven	Buyable/Sellable Raw Materials > Blueberry > Raspberry > Blackberry > Honey > Golden Honey > Mad Honey
The Fungal Frontier	Buyable/Sellable Raw Materials > Pear > Mushroom Bitkub > Mushroom Mutelulu
The Pocket Mart	Buyable/Sellable Raw Materials > Water > Ice > Salt

The Sawmill Outlet	Buyable/Sellable Raw Materials > Ash Log > Maple Log > Birch Log > Ash Special Log > Maple Special Log > Birch Special Log
The Leather Connection	Buyable/Sellable Raw Materials > Wool Scrap > Linen Scrap > Silk Scrap > Cotton Scrap > Thin Leather > Raw Hide Leather > Raw Fur > Thin Fur
The Timepiece Treasury	Buyable/Sellable Raw Materials Raw Emerald Raw Diamond Raw Topaz Raw Ruby Bronze Ore Silver Ore Cold Ore

Concession L2

Name	Detail
Fresh Squeeze	Craft these Items: > Orange Juice > Strawberry Juice > Ginger Juice > Watermelon Juice > Melon Juice > Cherry Juice
Nature's Nectar	Craft these Items: ➤ Coffee beans Juice ➤ Prune Juice ➤ Tomato Juice ➤ Carrot Juice ➤ Gourd Leaves Juice ➤ Pomegranate Juice
The Refresher	Craft these Items:

	 Apple Juice Grape Juice Lime Juice Pineapple Juice Green Apple Juice Lemon Juice
The Culinary Corner	Craft these Items: > Blueberry Juice > Raspberry Juice > Blackberry Juice > Honey Juice > Golden Honey Juice > Mad Honey Juice > Pear Juice > Fried Mushroom Bitkub > Fried Mushroom Mutelulu
The Lumberjack's Lodge	Craft these Items: Ash Lumber Maple Lumber Birch Lumber Ash Special Lumber Maple Lumber Birch Lumber Furniture
The Art of Leather	Craft these Items: Cotton Thread Linen Thread Silk Thread Wool Thread Processed Thin Leather Processed Hide Leather Processed Fur Processed Thin Fur Backpack
The Gemstone Giggle	Craft these items: > Emerald > Diamond > Topaz > Ruby > Bronze Ingot > Silver Ingot > Iron Ingot > Gold Ingot > Tools & Armors

Concession L3

Name	Detail
Revitalizing Water	Buy and Sell these items: > Orange Juice > Strawberry Juice > Ginger Juice > Watermelon Juice > Melon Juice > Cherry Juice
Coffee House	Buy and Sell these items: > Coffee beans Juice > Prune Juice > Tomato Juice > Carrot Juice > Gourd Leaves Juice > Pomegranate Juice
Natural Refreshment	Buy and Sell these items: > Apple Juice > Grape Juice > Lime Juice > Pineapple Juice > Green Apple Juice > Lemon Juice
The Hungry Bear	Buy and Sell these items: > Blueberry Juice > Raspberry Juice > Blackberry Juice > Honey Juice > Golden Honey Juice > Mad Honey Juice > Pear Juice > Fried Mushroom Bitkub > Fried Mushroom Mutelulu
Wobbling Woodcraft	Buy and Sell these items: > Ash Log > Maple Log > Birch Log > Ash Special Log > Maple Log > Birch Log > Birch Log
The Chicken Walk	Buy and Sell these items: ➤ Cotton Thread ➤ Linen Thread ➤ Silk Thread

	 Wool Thread Processed Thin Leather Processed Hide Leather Processed Fur Processed Thin Fur Backpack
The Retro Relics	Buy and Sell these items: > Emerald > Diamond > Topaz > Ruby > Bronze Ingot > Silver Ingot > Iron Ingot > Gold Ingot > Tools & Armors

Crafting Recipe

Crafting items can only be done at the Concession: Crafting Shop (L2). There can be multiple ways to craft certain items. There will be different crafting shops for each type of raw material.

Consumable Recipe

Once consumed they provide players with either an instant effect, or a limited duration buff. These benefits can come in forms of Stamina, Stats boosts that help with dungeon runs, and/or other benefits.

Drinking an orange juice will replenish stamina

	Crafting Recipe				
Product Name	Ingredients	Crafting fee (XRB)	Selling Price (XRB)	Stamina Gain	
Orange Juice	• 5 Orange	0.03	0.11859	38	
Strawberry Juice	• 13 Strawberry	0.03	0.12490	54	
Ginger Juice	• 13 Ginger	0.03	0.10900	54	
Watermelon Juice	• 13 Watermelon	0.03	0.12242	49	
Melon Juice	• 7 Melon	0.03	0.13642	39	
Cherry Juice	• 17 Cherrie	0.02	0.06200	78	
Coffee beans Juice	• 7 Coffee Beans	0.03	0.10088	32	
Prune Juice	• 10 Prune	0.03	0.13638	46	
Tomato Juice	• 13 Tomato	0.03	0.12949	65	
Carrot Juice	• 30 Carrot	0.06	0.23378	162	
Gourd Leaves Juice	• 7 Gourd Leave	0.03	0.10310	41	
Pomegranate Juice	• 13 Pomegranate	0.02	0.09250	45	
Apple Juice	• 10 Apple	0.04	0.16008	49	
Grape Juice	• 10 Grape	0.04	0.14354	49	

Lime Juice	• 13 Lime	0.04	0.14567	67
Pineapple Juice	• 17 Pineapple	0.03	0.12201	76
Green Apple Juice	• 10 Green Apple	0.03	0.13008	46
Lemon Juice	• 20 Lemon	0.04	0.13875	95
Blueberry Juice	• 35 Blueberry	0.0003	0.13625	22
Raspberry Juice	• 35 Raspberry	0.0003	0.10167	17
Blackberry Juice	• 35 Blackberry	0.0003	0.08984	15
Honey Juice	• 41 Honey	0.0004	0.15137	25
Golden Honey Juice	64 Golden honey	0.0002	0.16200	27
Mad Honey Juice	• 43 Mad honey	0.0002	0.16200	27
Pear Juice	• 43 Pear	0.00061	0.00231	13
Fried Bitkub Mushroom	43 Bitkub Mushroom	0.0006	0.00231	13
Fried Mutelulu Mushroom	43 Mutelulu Mushroom	0.0006	0.00231	13

Multiple Recipe for Crafting 1 Item

Having many ways to craft an item allows more accessibility to that item while preventing it from being monopolized by a more experienced player.

Tools Recipe

Can be used to gather resources in the resources zone. They have limited durability and can influence drop rates of better quality depending on the rarity of the Tools. Rarer tools help farming Rare Resource faster.

Tools are ranked in rarity: common , uncommon, rare, epic, legendary (best)

Tools Name	Crafting Recipe				
	Ingredients	Crafting Fee (XRB)	Selling Price (XRB)		
Axe[Common]	16 Pear3 Wool Scrap4 Ashlogs1 Bronze Ingot	0.00009	0.00121		
Axe[Uncommon]	1 Orange4 RawFur13 Ash Special Log4 Iron Ingot	0.0004	0.00930		
Axe[Rare]	1 Strawberry1 Thin Leather9 Ash Lumber2 Silver Ingot	0.001	0.01464		
Axe[Epic]	2 Ginger3 Processed Fur24 Ash Lumber6 Gold Ingot	0.004	0.04230		
Axe[Legendary]	 6 Watermelon 11 Processed Hide Leather 62 Ash Special Lumber 11 Diamond 	0.03	0.11510		
Pickaxe[Common]	1 Lime3 Wool Scrap22 Birch Log5 Bronze Ingot	0.00008	0.00241		
Pickaxe[Uncommon]	2 Prune4 Thin Fur65 Birch Special Log16 Iron Ingot	0.0006	0.05303		
Pickaxe[Rare]	3 Tomato1 Raw Hide Leather46 Birch Lumber9 Silver Ingot	0.001	0.10088		

Pickaxe[Epic]	 7 Pomegranate 3 Processed Thin Fur 12 Birch Lumber 22 Gold Ingot 	0.004	0.26324
Pickaxe[Legendary]	 19 Coffee Beans 11 Processed Thin Leather 314 Birch Special Lumber 44 Diamond 	0.01	0.71466
Shear[Common]	1 Cotton Scrap6 Maple Log	0.00005	0.00040
Shear[Uncommon]	1 Green Apple3 Cotton Scrap2 Maple Special Log	0.0002	0.00884
Shear[Rare]	1 Apple1 Honey4 Cotton Thread5 Maple Lumber	0.0003	0.00986
Shear[Epic]	1 Apple1 Honey4 Cotton Thread5 Maple Lumber	0.0007	0.03696
Shear[Legendary]	9 Lemon2 Golden Honey30 Cotton Thread3 Maple Special Lumber	0.007	0.11305
Bucket[Common]	8 Bronze Ore	0.00008	0.00127
Bucket[Uncommon]	• 12 Bronze Ore	0.0002	0.00408
Bucket[Rare]	• 12 Bronze Ingot	0.0003	0.00743
Bucket[Epic]	• 14 Bronze Ingot	0.0011	0.02029
Bucket[Legendary]	• 69 Diamond	0.005	0.07553

Backpack Recipe

Increases the amount of weight a player can carry before receiving a weight penalty on stamina loss.

Backpacks are ranked in stars from 1 (worst) to 8 (best).

	Crafting Recipe			
Backpack Name	Ingredients	Crafting fee (XRB)	Selling Price (XRB)	
Backpack [1 star]	2 Blueberry1 Mutelulu Mushroom19 Thin Fur18 Ash Log	0.0004	1	
Backpack [2 star]	 14 Strawberry 6 Raspberry 2 Mutelulu Mushroom 56 Raw Fur 54 Birch Log Backpack [1 star] 	0.49	1.4	
Backpack [3 star]	 43 Pomegranate 15 Blackberry 5 Mutelulu Mushroom 13 Thin Leather 48 Maple Log 1 Backpack [2 star] 	0.686	1.8	
Backpack [4 star]	 27 Lemon 46 Honey 14 Mutelulu Mushroom 34 Raw Hide Leather 126 Ash Lumber 1 Backpack [3 star] 	0.882	2.6	
Backpack [5 star]	 63 Pineapple 19 Golden Honey 36 Mutelulu Mushroom 146 Processed Thin Fur 331 Maple Lumber 1 Backpack [4 star] 	1.274	3.6	
Backpack [6 star]	 82 Prune 30 Mad Honey 58 Mutelulu Mushroom 237 Processed Fur 536 Birch Lumber 	1.764	5	

	• 1 Backpack [5 star]		
Backpack [7 star]	 159 Orange 49 Golden Honey 94 Mutelulu Mushroom 230 Processed Thin Leather 370 Birch Special Lumber 1 Backpack [6 star] 	2.45	7
Backpack [8 star]	 735 Carrot 129 Mad Honey 246 Mutelulu	3.43	10

Armor Recipe

Armors are stats providers for Dungeons and have no effect in the overworld. Some Armors however can provide speed boosts.

Tools are ranked in rarity: common, uncommon, rare, epic, legendary (best)

	Crafting Recipe			
Armor Name	Ingredients	Crafting fee (XRB)	Selling Price (XRB)	Status
Helmet [Common]	10 Thin Fur11 Ash Log6 Iron Ore	0.0002	0.0007	+10 Defense
Helmet [Uncommon]	24 Thin Leather6 Ash Special Log18 Iron Ingot	0.002	0.00844	+14 Defense
Helmet [Rare]	 10 Processed Thin Fur 46 Ash Lumber 29 Iron Ingot 	0.003	0.01359	+22 Defense
Helmet [Epic]	 16 Processed Thin Leather 32 Ash Special Lumber 76 Diamond 	0.03	0.11523	+32 Defense
Helmet [Legendary]	 42 Processed Thin Leather 44 Ash Special Lumber 200 Diamond 	0.08	0.30323	+48 Defense
Body [Common]	10 Raw Fur11 Ash Log6 Gold Ore	0.0002	0.00574	+30 Defense
Body [Uncommon]	40 Raw Hide Leather6 Ash Special Log18 Gold Ingot	0.002	0.01751	+35 Defense
Body [Rare]	10 Processed Fur46 Ash Lumber29 Gold Ingot	0.004	0.02321	+45 Defense

Body [Epic]	16 Processed Hide Leather			
	32 Ash Special Lumber76 Diamond	0.03	0.20921	+57 Defense
Body [Legendary]	 42 Processed Hide Leather 44 Ash Special Lumber 200 Diamond 	0.08	0.38522	+77 Defense
Legging [Common]	10 Raw Fur11 Ash Log6 Silver Ore	0.0002	0.00518	+23 Defense
Legging [Uncommon]	 24 Raw Hide Leather 6 Ash Special Log 18 Silver Ingot 	0.002	0.01601	+27 Defense
Legging [Rare]	10 Processed Fur46 Ash Lumber29 Silver Ingot	0.003	0.02066	+35 Defense
Legging [Epic]	 16 Processed Hide Leather 32 Ash Special Lumber 76 Diamond 	0.03	0.15109	+ 45 Defense
Legging [Legendary]	 42 Processed Hide Leather 44 Ash Special Lumber 200 Diamond 	0.08	0.38522	+61 Defense
Hand [Common]	10 Thin Fur11 Ash Log6 Bronze Ore	0.0002	0.00492	+6 Defense
Hand [Uncommon]	24 Thin Leather6 Ash Special Log18 Bronze Ingot	0.002	0.01530	+9 Defense
Hand [Rare]	 10 Processed Thin Fur 46 Ash Lumber 29 Bronze Ingot 	0.004	0.02190	+15 Defense
Hand [Epic]	• 16 Processed Thin	0.03	0.15109	+23 Defense

	Leather 32 Ash Special Lumber 76 Diamond			
Hand [Legendary]	 42 Processed Thin Leather 44 Ash Special Lumber 200 Diamond 	0.08	0.38522	+35 Defense
Shoe [Common]	6 Thin Fur11 Ash Log6 Iron Ore	0.0002	0.00545	+5 Defense
Shoe [Uncommon]	24 Thin Leather10 Ash Special Log18 Iron Ingot	0.002	0.01676	+8 Defense
Shoe [Rare]	 10 Processed Thin Fur 46 Ash Lumber 29 Iron Ingot 	0.004	0.02190	+14 Defense
Shoe [Epic]	 16 Processed Thin Leather 32 Ash Special Lumber 76 Diamond 	0.03	0.15109	+22 Defense
Shoe [Legendary]	 42 Processed Thin Leather 44 Ash Special Lumber 200 Diamond 	0.08	0.38522	+34 Defense

Furniture recipe

Furniture can help restore stamina (Bed, Chair, Sofa), are used to store items (Low/High Cabinet), or can be luxurious goods.

	Crafting Recipe			
Furniture Name	Ingredients	Crafting fee (XRB)	Selling Price (XRB)	
Bed	 81 Watermelon Juice 168 Carrot Juice 81 Pineapple Juice 25 Golden Honey 25 Mad Honey 4 Pear 83 Maple Lumber 790 Maple Special Lumber 80 Processed Thin Fur 	298.6	300	
Chair	 166 Ginger Juice 66 Tomato Juice 73 Lime Juice 20 Golden Honey 20 Mad Honey 3 Pear 720 Birch Special Lumber 14 Processed Hide Leather 51 Processed Fur 	73.5	75	
Sofa	 36 Melon Juice 36 Gourd Leaves Juice 117 Green Apple Juice 14 Golden Honey 14 Mad Honey 3 Pear 50 Ash Lumber 425 Ash Special Lumber 46 Processed Leather 	73.5	75	

Seat	 32 Cherry Juice 32 Pomegranate Juice 32 Lemon Juice 7 Golden Honey 7 Mad Honey 40 Pear 50 Birch Special Lumber 185 Ash Special Lumber 23 Processed Hide Leather 	74.6	75
Sink	 2 Honey 1 Bitkub	0.0006	0.001
Normal table	 12 Coffee 2 Honey 1 Bitkub Mushroom 10 Ash Log 3 Processed Thin Fur 	0.0006	0.09
Carpet	 2 Honey 1 Bitkub Mushroom 10 Ash Log 3 Processed Leather 	0.0006	0.001
Cabinet Low	 35 Orange 28 Prune 40 Grape Juice 18 Honey 5 Bitkub Mushroom 22 Ash Lumber 33 Ash Special Lumber 20 Processed Hide Leather 15 Silver Ingot 	9.3	10
Cabinet High	37 Strawberry13 Coffee Beans40 Apple Juice	9.4	10

	 18 Honey 5 Bitkub Mushroom 22 Birch Lumber 33 Ash Special Lumber 20 Processed Hide Leather 15 Gold Ingot 		
Toilet	 7 Raspberry 1 Mutelulu	0.0006	0.002
TV	 12 Prune 7 Blueberry 1 Mutelulu Mushroom 10 Birch Log 3 Cotton Thread 3 Bronze Ingot 	0.0006	0.0006
Flower vase	 7 Blueberry 1 Mutelulu	0.0006	0.002
Floor	5 Orange3 Blackberry10 Ash Log3 Wool Thread3 Diamond	0.0006	0.03
Partition	7 Strawberry3 Blackberry10 Ash Log3 Linen Thread3 Ruby	0.0006	0.03
Showcase	 3 Blackberry 10 Birch Log 3 Silk Thread 3 Iron Ingot	0.0006	0.001
Small table	 12 Coffee 3 Blackberry 1 Bitkub Mushroom 		0.09

	10 Ash Log3 Processed Hide Leather3 Gold Ingot		
Painting	 3 Blackberry 10 Birch Log 3 Cotton Thread	0.0006	0.001

Cosmetics Recipe

Cosmetics do not provide buffs but obtaining specific cosmetics can be challenging. Getting most cosmetics involves randomization.

	Crafting Recipe			
Cosmetics Name	Ingredients	Crafting fee (XRB)	Selling Price (XRB)	
Random Tattoo	 1 Mutelulu Mushroom 6 Ice 5 Maple Log 1 Wool Scrap 1 Raw Topaz 	0.0001	0.00455	
Watch	 1 Mutelulu Mushroom 6 Salt 8 Maple Special Log 1 Linen Scrap 1 Raw Emerald 	0.0001	0.00661	
Mask	 1 Blueberry 1 Pear 6 Water 5 Ash Log 1 Linen Scrap 1 Silver Ore 	0.00008	0.00217	
Glasses	 1 Blueberry 1 Pear 6 Water 5 Ash Log 5 Processed Leather 1 Raw Diamond 	0.00008	0.00338	
Bracelet	• 1 Blackberry	0.00008	0.00305	

	• 1 Pear		
	6 Water5 Ash Log5 Processed Leather1 Raw Topaz		
Earring	 1 Raspberry 1 Bitkub Mushroom 6 Ice 5 Ash Log 5 Processed Fur 1 Bronze Ore 	0.0001	0.00208
Hairpin	 1 Raspberry 1 Bitkub Mushroom 6 Ice 7 Ash Special Log 5 Processed Leather 1 Bronze Ore 	1 Bitkub Mushroom 6 Ice 7 Ash Special Log 5 Processed Leather	
Hat	 1 Raspberry 1 Bitkub Mushroom 6 Ice 7 Ash Special Log 5 Processed Leather 1 Silver Ore 	0.0002	0.00558
Random eyes	 1 Blackberry 5 Mutelulu Mushroom 1 Ice 15 Salt 7 Ash Special Log 20 Processed Leather 4 Raw Emerald 	0.0002	0.02631
Random eye brows	 1 Blackberry 5 Pear 3 Water 5 Birch Log 7 Maple Special Log 20 Processed Hide Leather 4 Raw Topaz 	5 Pear 3 Water 5 Birch Log 7 Maple Special Log 20 Processed Hide Leather	
Random mouth	 1 Blackberry 5 Bitkub Mushroom 2 Salt 7 Maple Special Log 20 Silk Thread 4 Raw Ruby 		0.02740

Random Nose	 1 Blueberry 5 Pear 3 Ice 7 Ash Special Log 20 Processed Hide Leather 5 Bronze Ingot 		0.02562
Random Ear	 1 Raspberry 5 Bitkub Mushroom 2 Salt 7 Maple Special Log 10 Linen Thread 10 Processed Thin Fur 5 Silver Ore 	0.0002	0.02525
Random Hair 1	 1 Honey 2 Golden Honey 5 Pear 5 Bitkub Mushroom 3 Water 3 Ice 12 Maple Log 7 Birch Special Log 20 Cotton Thread 	0.0002	0.05553
Random hair 2	 1 Honey 3 Mad honey 10 Mutelulu Mushroom 4 Salt 10 Birch Log 7 Ash Special Log 7 Birch Special Log 15 Wool Thread 35 Processed Fur 	0.0002	0.05701

Processed Material Recipe

Processed materials are higher forms of materials crafted from its raw material counterparts. Players can use them to craft more items.

Currently, there will be no concession that sells processed material, therefore they are not buyable.

Duadwat Nama	Crafting Recipe			
Product Name	Ingredients Crafting fee (XRB) Selling Price (XRB)			

Bronze Ingot	• 3 Bronze Ore	0.00002	0.00023
Iron Ingot	• 3 Iron Ore	0.00002	0.00024
Silver Ingot	• 3 Silver Ore	0.00002	0.00026
Gold Ingot	• 3 Gold Ore	0.00002	0.00027
Diamond	4 Raw Diamond	0.00005	0.00078
Ruby	• 4 Raw Ruby	0.00005	0.00078
Topaz	• 4 Raw Topaz	0.00005	0.00078
Emerald	4 Raw Emerald	0.00005	0.00078
Cotton Thread	• 10 Cotton Scrap	0.00004	0.00060
Linen Thread	• 10 Linen Scrap	0.00004	0.00060
Silk Thread	• 10 Silk Scrap	0.00004	0.00060
Wool Thread	• 10 Wool Scrap	0.00004	0.00060
Processed Thin Leather	• 7 Thin Leather	0.00006	0.00091
Processed Hide Leather	• 7 Raw Hide Leather	0.00006	0.00091
Processed Fur	• 7 Raw Fur	0.00004	0.00054
Processed Thin Fur	• 7 Thin Fur	0.00004	0.00054
Ash Lumber	• 3 Ash Log	0.000005	0.00008
Maple Lumber	• 3 Maple Log	0.000006	0.00008
Birch Lumber	• 3 Birch Log	0.000005	0.00008
Ash Special Lumber	• 3 Ash Special Log	0.00002	0.00031
Maple Special Lumber	3 Maple Special Log	0.00002	0.00031
Birch Special Lumber	3 Birch Special Log	0.00002	0.00031

Gathering by Tools

Gathering the Nodes

Each node will be assigned with Health Point, or HP for short, that can be depleted through the act of "Gathering" by using Tools.

Each rarity of Tools will have an assigned attack damage which will directly deduct the node's HP by the exact amount per action. Additionally, using a tool that fits the type of node will apply a certain multiplier bonus as well (i.e. using Axe on a Tree node)

Here are a few formulas which may help elicit understanding of the concept:

Node's HP after a gathering action

= Node's current HP - (Tool's Attack * Tool's Multiplier)

Number of Actions needed to collect the node

= Node's current HP / (Tool's Attack * Tool's Multiplier)

Rule

- 1. Better rarity tools give better chances at getting better items.
- 2. All Nodes & has chance to drop farm items.

Below is the list of tools for all rarities:

	Status			Node Specific		
Tools Name	Attack Damage	Durability	Node	Drop Items		
Axe[Common]	4	803		Ash Log		
Axe[Uncommon]	8	3,613		Maple Log Birch Log		
Axe[Rare]	15	8,391	Trees	Ash Special Log		
Axe[Epic]	40	16,513		Maple LogBirch Log		
Axe[Legendary]	40	30,320				
Pickaxe[Common]	4	657		Raw Diamond		
Pickaxe[Uncommon]	8	1,882		Raw EmeraldRaw Ruby		
Pickaxe[Rare]	15	3,464	Mineral Stone	Raw TopazBronze Ore		
Pickaxe[Epic]	40	5,516		Iron OreSilver Ore		
Pickaxe[Legendary]	128	7,722		Gold Ore		
Shear[Common]	4	849		BlueberryBlackberry		
Shear[Uncommon]	8	2,235	Bush	RaspberryHoney		
Shear[Rare]	15	3,704		Mad HoneyGolden Honey		
Shear[Epic]	40	6,108		Cotton ScrapsLinen Scraps		
Shear[Legendary]	128	8,990	Animal	 Silk Scraps Wool Scraps Thin Leather Raw Hide Leather Thin Fur Raw Fur 		
Bucket[Common]	4	699				
Bucket[Uncommon]	8	2198		Water		
Bucket[Rare]	15	3626	Misc	Salt Ice		
Bucket[Epic]	40	6469		■ ICE		
Bucket[Legendary]	128	8216				