

Rooster Wars

\$GWIT Reward System

ROI Stability

The goal of Rooster Wars' economy is to create a thrilling play-to-earn game that focuses on relatively stable earnings for all players in the game. The average ROI for a player, β , is around 30 days, assuming the price of $\$GWIT \geq \0.02 (IDO starting price).

The reason for a relatively longer ROI period is to achieve stability, by reducing, or even preventing, pump and dump schemes in the market, the game safeguards players' earning potential from the game years after its launch.

The game promotes close-to-equal opportunities for all its players: early-birds and newcomers. The mechanism prevents early players to achieve returns (ROI) too soon then dump their tokens on the market forcing the next batch of players to hold their bags and hope for the price to go back up. Nevertheless, early supporters (players) of the game will enjoy greater rewards while the game develops and achieve relatively stable growth.

Cooperation Incentives

The usual case for NFT games is that token holders and players are incentivized to front-run each other by being the first to sell at a higher price. This usually leads to a dump before rewards are given out or immediately after.

To further ensure the price growth and stability of $\$GWIT$ as well as player's earning potential, the team devised a model in which holders of $\$GWIT$ token and players of the Rooster Wars game, which earn $\$GWIT$ tokens are both incentivized to keep the price of $\$GWIT$ high, enable steady price increases, and avoid massive price dumps.

Incentive Cycle: More Holders – Price Increases – Fewer Tokens rewarded to Players, but Value is greater (Benefits Players) – Fewer tokens to be dumped in Market – Benefits holders

Rewards Distribution

The parameter A_R represents the number of $\$GWIT$ tokens given to players from the game reward pool. This variable will be fixed until certain price conditions are met to foster fairness wherein early players enjoy the usual benefits of being the first ones to play while incentivizing new and potential players to participate and earn rewards as well.

As of writing this paper, the game has three (3) ways to earn rewards from the game reward pool. Hence, we allocate A_R into three sections: PVP rewards, Adventure rewards, and Season rewards. These sections are represented by α_1 , α_2 , and α_3 , respectively.

$$A_R = \alpha_1 + \alpha_2 + \alpha_3$$

PVP Rewards

PVP accounts for 80% of total rewards. The formula for PVP rewards, α_1 is calculated monthly to avoid early conversion fees and for simplicity.

$$\alpha_1 = 5N\lambda \frac{\theta}{P_R(1 - \chi)}$$

where N is the number of Roosters in the game, 5 is the number of \$Gallonium a Rooster produces daily, P_R is the current price of \$GWIT token, λ , represents a specific number of days where a Rooster generates \$Gallonium, in this case, the team uses the number of days within a month for simplicity, and a discount factor, $\chi = 12\%$, to allow players to earn more when P_R increases.

In addition, P_R would have a minimum value of \$0.02 as an anti-dump feature, therefore $P_R \in [0.02, \infty)$. The parameter θ pertains to the price of \$Gallonium in USD value calculated as:

$$\theta = \frac{P_E}{5\beta}$$

where β is the average number of days a player achieves ROI, 5 is the amount of \$Gallonium a Rooster produces daily, and P_E represents the price of an egg during the egg sale and thus the initial investment of a player. To clarify, \$Gallonium can only be converted to \$GWIT and the parameter θ is solely used for calculation purposes

Adventure Rewards

The formula for Adventure and Season rewards are much alike, the only difference is the values of δ , within the formula. $\delta \in (0, 1)$, represent the weight of a specific reward in A_R . PVP mode accounts for 80% of total rewards meaning $\delta_1 = 0.8$. On the other hand, δ_2 and δ_3 represents Adventure and Season rewards, with values 0.15 and 0.05, respectively. The formula for Adventure rewards is

$$\alpha_2 = \frac{(nP_E/\delta_1)\delta_2}{P_R}$$

where $n \in [1, N]$ is the number of Roosters a player owns. Using n makes the formula independent of the total Number of Roosters, N . Hence, assuming that P_R is fixed at \$0.02, each Rooster, n , can have 187.5 \$GWIT tokens upon completing Adventure mode.

Season Rewards

Season rewards are divided into two (2) namely, Challenger Tier rewards and Top 10 players-rewards, represented by σ_1 and σ_2 , respectively, where $\sigma_1 + \sigma_2 = 1$. The current values are $\sigma_1 = 0.9$ and $\sigma_2 = 0.1$. Season rewards formula is

$$\alpha_3 = \frac{(NP_E/\delta_1)\delta_3}{P_R}$$

Aside from the values of δ_3 , the formula also differs from adventure rewards since it is dependent on N . Challenger Tier rewards (left) and Top 10 players-rewards (right) are as follows

$$\sigma_1 \alpha_3$$

$$\sigma_1 \alpha_3$$