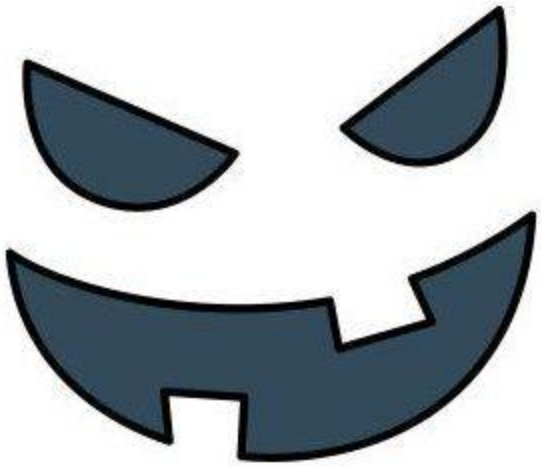
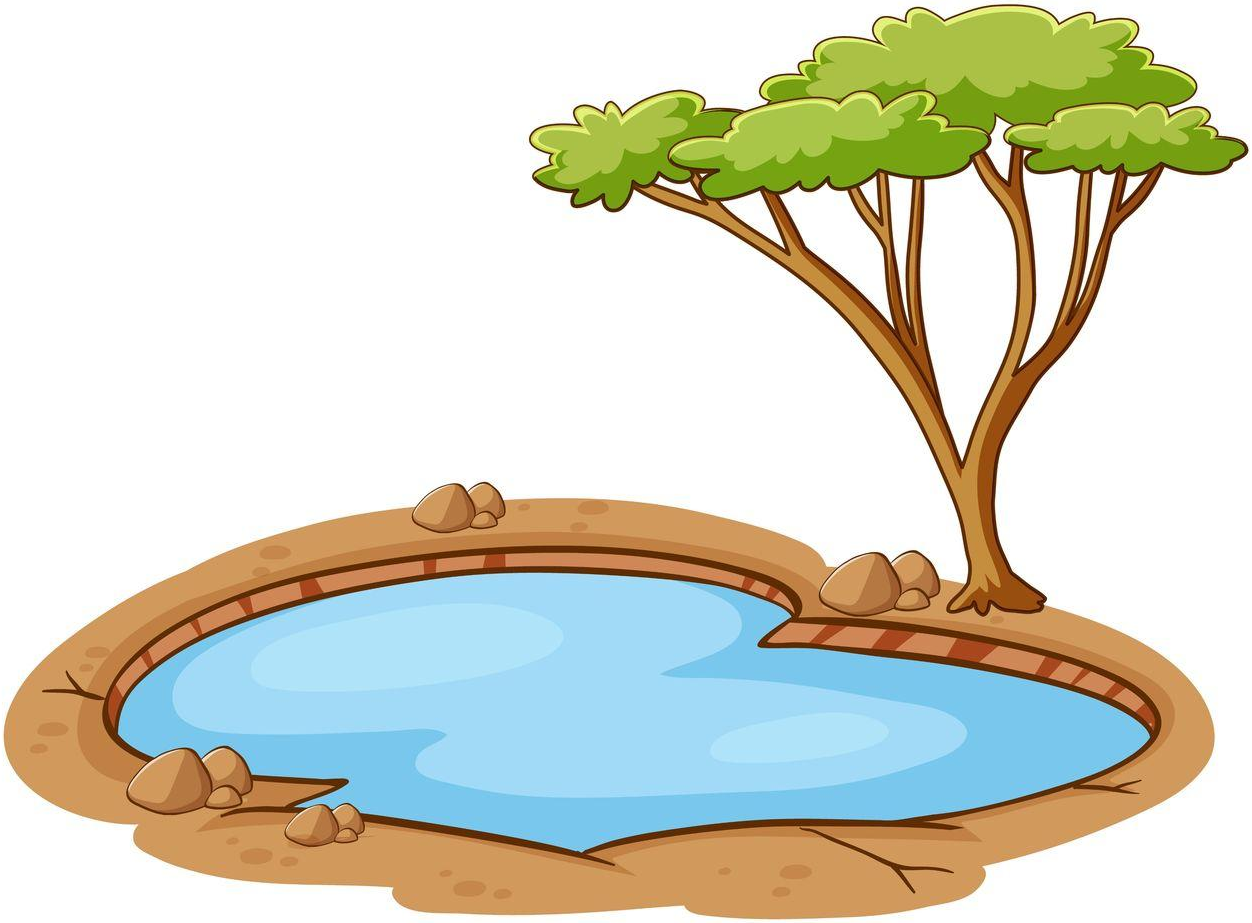
ScarySwap Yields And Farms



Introduction

ScarySwap is a decentralized exchange and staking platform created on the Fantom blockchain, an alternative EVM-compatible chain to Ethereum. ScarySwap offers a way for users to swap tokens for tokens with a zero percent fee charged on a selected range of pairs. Liquidity providers earn high yields through other pairs and with ScarySwap's automatic purchase feature.

Staking Pools



Staking pools are the backbone of ScarySwap as they reward users for their commitment and contribution to the project. With the Staking pools we offer, anyone can commit a stake, thus increasing liquidity for trades to happen on the

decentralized exchange. In addition, ScarySwap liquidity providers receive a token called Pumpkin which is a staked version or representation of their given liquidity. This staked version assets auto-compounds itself to earn more of the tokens initially staked by liquidity providers.

Pumpkin is flexible as it is a staked version of tokens stored in staking pools and a utility token that can be used like other blockchain-based cryptocurrencies. A different model to the traditional approach used in other Automated Market Makers (AMMs) like UniSwap where liquidity pool tokens minted has no other significant use case.

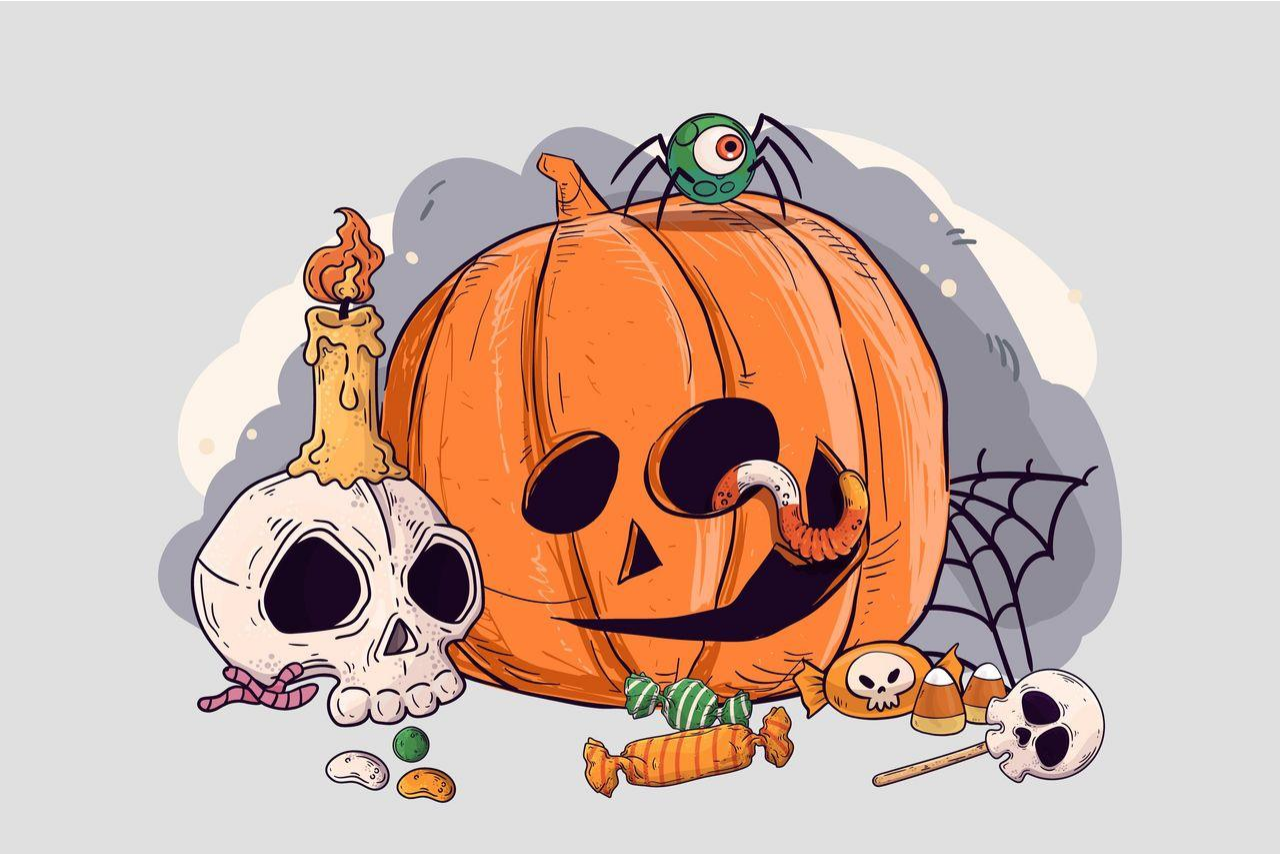
Having the Pumpkin token provided by ScarySwap allows you to enjoy the same benefits as other liquidity providers, giving you a portion of all tokens staked in the pools.

The Proof-Of-Stake (POS) model used by Fantom conveniently allows ScarySwap to create multiple high-yield staking pools underneath it. Proof-Of-Stake allows owners of its native cryptocurrency to earn rewards for verifying transactions on the Blockchain. POS is an event that must happen in order for the Blockchain to be free of illegitimate transactions. This is considered the first level of staking. ScarySwap's staking model sits on the second level with Pumpkin as its utility token. This particular model focuses on making swap transactions possible through staking pools. You can find these staking pools on our official website: https://app.scaryswap.com/#/stake.

What are the benefits of these staking pools?

- Constant liquidity for traders.
- Zero fee trades.
- No external hardware or maintenance needed from liquidity providers to join the staking pools.
- Dynamic Annual Percentage Yields (APYs) for liquidity providers and Pumpkin holders.
- Automatic purchase of Pumpkins with fees collected after staking, claiming and unstaking tokens.
- Low inflation rate of Pumpkins.

Yields



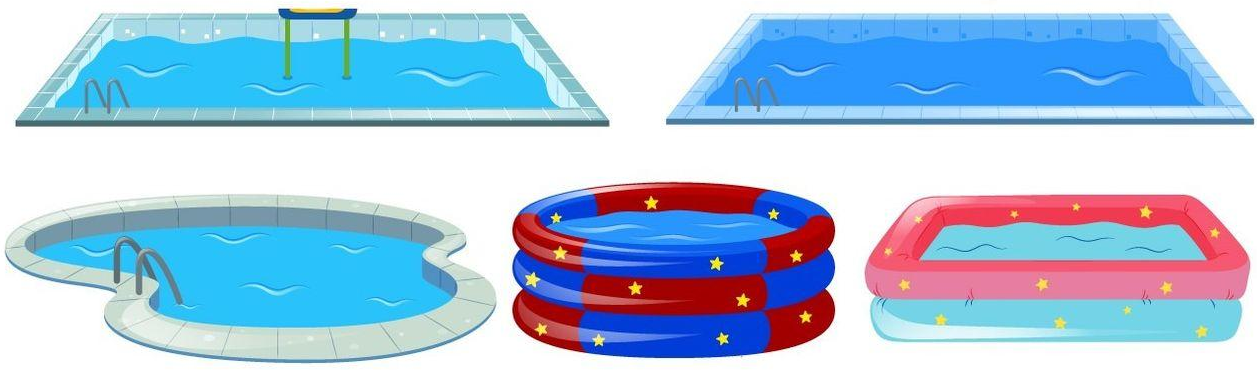
ScarySwap has the most sustainable APY pools for Liquidity providers to earn high yields without running out of inventory. The APY pools are dynamic to prevent unnecessary Pumpkins inflation in circulation. The percentage of earned yields starts at a certain rate and adjusts as more tokens are added to the staking pool.

Due to the smart contract structure of the different pools, the staked token will not be the liquidity pool (LP) token most of the time. This is because the pools are made up of a pair of two tokens. One of these two tokens is returned as the LP token. When users stake one of the two tokens into the staking pool, the staked token is returned as the LP token if it matches the LP token. If the staked token does not match, the pool automatically converts the staked token to the token that matches the LP token.

Dynamic APY pools reward liquidity providers according to the number of tokens they have staked in the pools. This creates fairness amongst all liquidity providers and controls the inflation rate of Pumpkins. When a liquidity provider stakes more tokens into a staking pool, a higher APY percentage is estimated.

Projects using other types of APY pools usually run into an inventory problem, leading them to drastically cut the percentage yields of liquidity providers. We use dynamic APY pools as a better approach to avoid this problem.

Types Of APY Pools



There are two main types of APY models used in farming/staking pools. The APY pools may be centralized and controlled by a staking pool owner or decentralized and controlled by all participants of the pool. They are as follows:

1. **Fixed APY**

In this model, the APY of a staked asset remains slightly the same, and it allows liquidity providers to always know the exact reward they will be given. Projects usually have this type of APY model on a controlled staking pool or vault in some cases where the assets are locked for a certain period of time to incentivize users. The time period is usually determined through a calculated means or the amount of inventory currently available to reward liquidity providers who wish to claim their assets. An advantage this might have is liquidity providers know the exact APY rewards they expect to receive at all times. However, in most cases, the owner of the staking pool has to pool to carry out other important tasks besides swap transactions like lending staked tokens to other users for other tokens. Because of this, the assets of liquidity providers are not fluid or in sync with the overall infrastructure leading to an inventory problem for liquidity providers when they claim their rewards from the staking pool. Therefore, the owner of the staking pool usually cuts the APY percentage to a sustainable number in order to incentivize new liquidity providers.

2. **Dynamic APY**

The dynamic APY model depends on a few things: staked liquidity tokens, the volume of transactions, transaction fees, and price. The dynamic APY model is purely a decentralized means for rewards to be calculated through the fundamental concepts and added features like automatic token purchases with accumulated fee rewards. The reward rate adjusts accordingly when more tokens are staked into the pool.

All liquidity providers earn high yields for their commitment to the project's infrastructure. The yield distributed to liquidity providers depends on the number of tokens each liquidity provider staked into the staking pool. This makes token inventory more fluid for liquidity providers and regular users who perform swap transactions. Dynamic APY pools are flexible staking pools with high and sustainable yields.

How ScarySwap uses dynamic APY pools

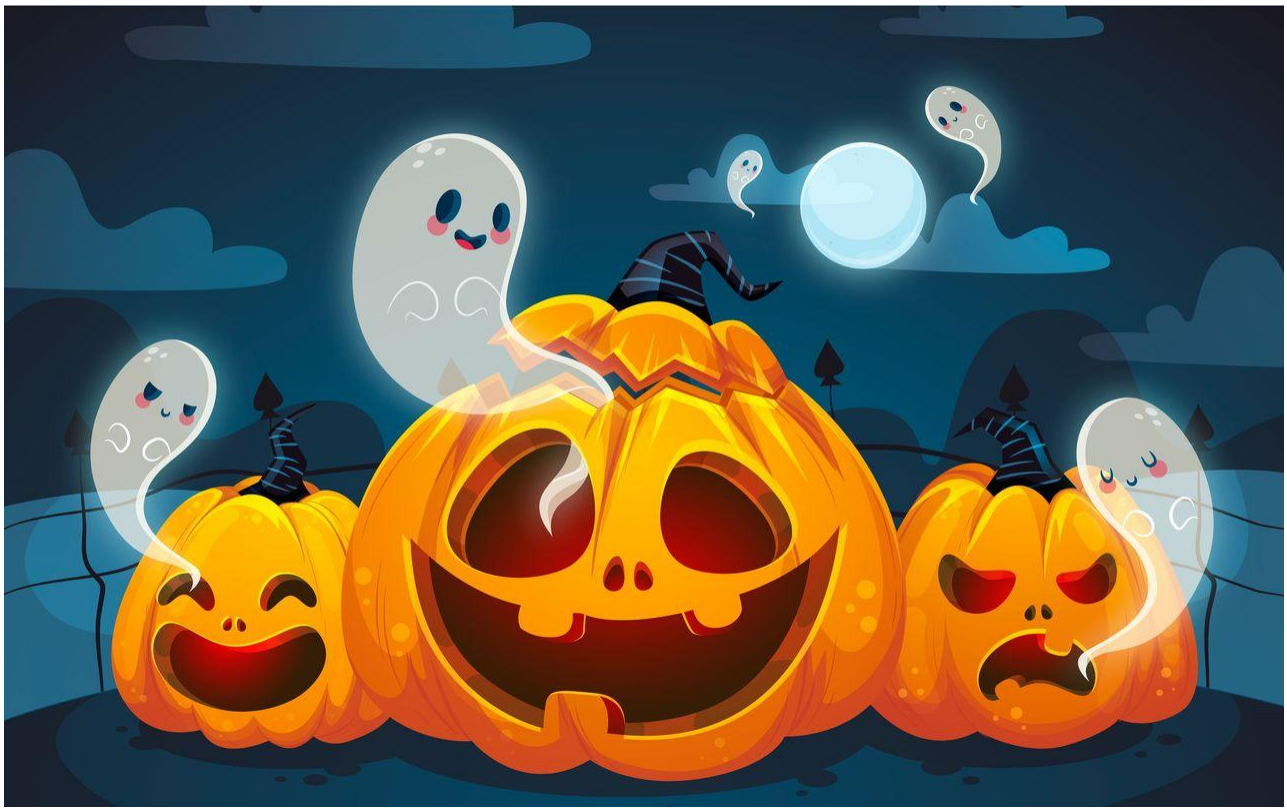
ScarySwap uses dynamic APY pools along with additional features called automatic Pumpkin purchases and Booster Vaults to ensure liquidity providers have the

highest yield while more tokens are being staked by other users of the decentralized exchange. The rewards are given in Pumpkin tokens which can be traded for other tokens across multiple exchanges.

The dynamic APYs fluctuate depending on the staked amount of tokens but never go below the original APY determined by the source pool. A "source" button can be found under each pool that redirects to the original pool where the APY rewards come from.

ScarySwap is built with yield optimization features that seek the maximum sustainable APY reward for tokens staked in its inventory.

Yield Optimization



Yield optimization is the use of automated services to efficiently auto-compound APY rewards from staking pools. With ScarySwap being a yield optimizer, a higher

yield is distributed to users. This is achieved by saving users the additional fees they would be charged when manually compounding their rewards. All yield optimizations on ScarySwap happen on-chain.

The use of yield optimization is especially beneficial to smaller liquidity providers that want to compound their rewards without paying gas fees. The price of the gas fee may be higher than the amount of yield to be manually compounded. An unprofitable model we do not want any liquidity provider to face. ScarySwap takes all accumulated yields across all of its staking pools, and auto compounds them regularly on behalf of all liquidity providers.

Here are two yield optimization scenarios to fully understand how higher yields and zero compounding fees from users are derived:

Scenario #1 (Manual compounding)

- User acquires on of the supported tokens of the pool.
- User approves the single token to be spent by a pool with the approve function of the token's smart contract.
- Tokens are deposited into the pool through a function call of the DEX's smart contract.
- Staking begins.
- A representation of user's staked asset is minted and sent to the address of the user.
- While the staking pool earns its yields, the user can decide to allow the yields continue to be earned at the current APY rate or withdraw the earned yields and stake the yields again for a higher reward.
- A gas fee is charged and used to purchase native token when the user decides to withdraw yields.
- A gas fee is charged when the user approves the yields to be spent by the pool.
- A gas fee is charged when the user stakes the earned yields back into the staking pool.
- User has to continuously repeat this manual compounding process and ensure that the total gas fee paid is lower than the yields earned in order to maintain profitability.

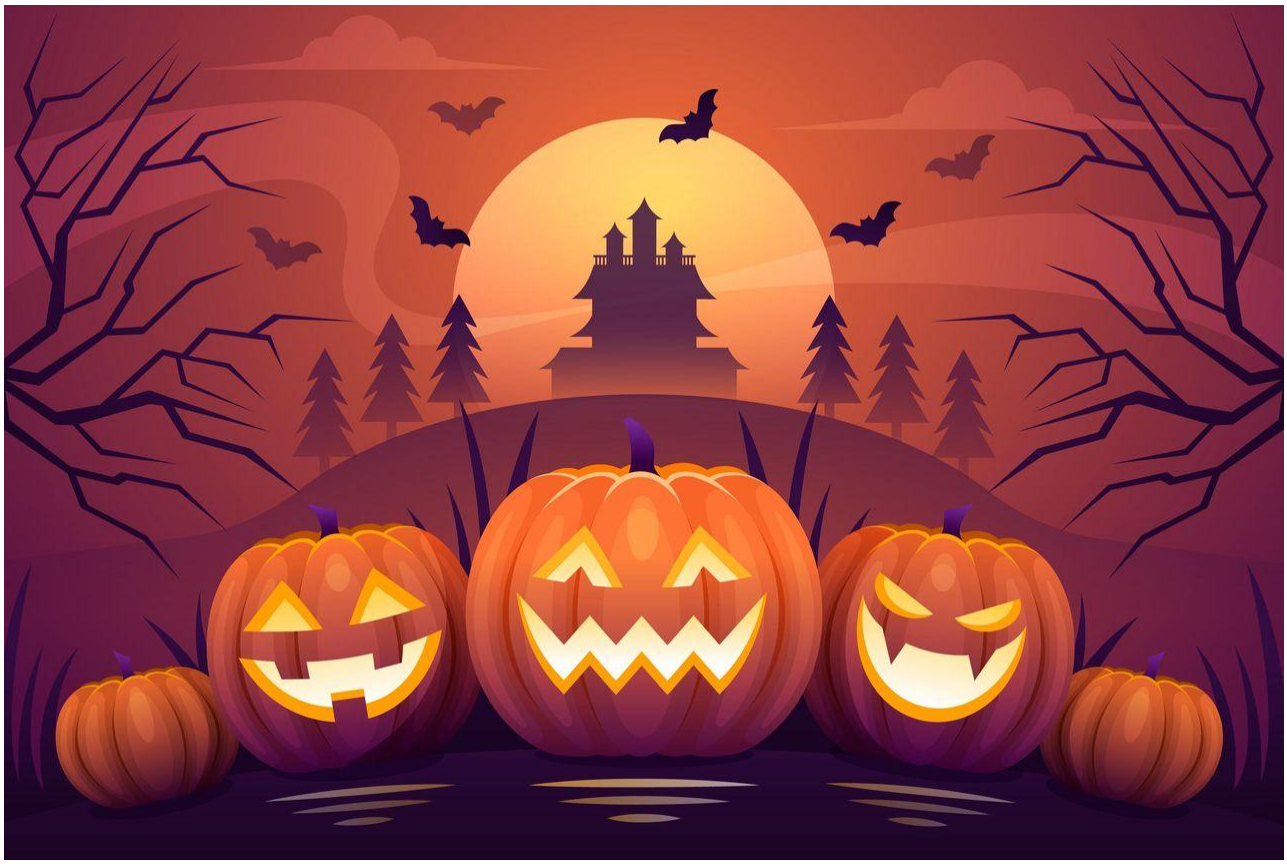
Scenario #2 (Yield optimization/auto-compounding)

- User acquires on of the supported tokens of the pool.
- User approves the single token to be spent by a pool with the approve function of the token's smart contract.
- Tokens are deposited into the pool through a function call of the DEX's smart contract.
- Staking begins.
- A representation of user's staked asset is minted and sent to the address of the user.
- While the staking pool earns its yields, the pool auto-compounds itself and covers all gas fees.
- User spends no fees for auto-compounding.

Benefits of Yield Optimization

- Users do not need to manually monitor the profitability of staked tokens in the pool.
- Low barrier to entry for smaller liquidity providers.
- Increase in expected yields.
- Sufficient liquidity inventory.
- Automatic purchases of native token therefore reducing the supply. These are considered buybacks of minted tokens currently in circulation.

Automatic Purchases



ScarySwap has an automatic Pumpkin purchase feature that happens when liquidity providers stake, un-stake and claim their rewards. Liquidity providers pay a fee at each of these events, which are used to buyback Pumpkins from circulation.

The fees charged are staked into the pools and Booster Vaults for current liquidity providers to benefit from.

Automatic purchases also help with the tokenomics of Pumpkins and ensure that the inflation rate is sustainable. As a result, the circulating supply of Pumpkins is cut, leading to a shift in the supply/demand graph. Automatic purchases are one of the driving factors that cause ScarySwap's high and sustainable yields because while the total supply increases, the circulating supply reduces.

Total supply

Total supply is the total number of minted tokens of a Blockchain project. It includes all newly minted tokens that are available to its ecosystem and reserved tokens used for other purposes. Some Blockchain projects burn reserved tokens to reduce the overall supply or stake reserved tokens into their respective staking pools.

While total supply can be important for inventory, it carries little to no effect on the price, demand or market capitalization of its native token. This is because the price of the native token is not calculated with the total supply. Instead, it is calculated with the circulating supply. The formula for this calculation is provided in the circulating supply section below.

Circulating supply

Circulating supply is the number of minted tokens of a Blockchain project available for public trade with other token assets. It does not include reserved tokens.

The circulating supply of a native token is determined by two factors:

1. Price
2. Market capitalization

It is calculated with this formula:

$$\frac{\text{Market Capitalization}}{\text{Token Price}} = \text{Circulating Supply.}$$

The reduction in circulating supply and increase in market capitalization leads to an increase in token price:

$$\frac{\text{Market Capitalization}}{\text{Circulating Supply}} = \text{Token Price.}$$

With these concepts in mind, the automatic purchase feature of ScarySwap remains essential as it adds to yields and reduces the number of Pumpkins in circulation.

Benefits of automatic Pumpkin purchases

The benefits are as follows:

- Reduction in circulating supply.
- Added incentives.
- Price appreciation.

Pumpkin use-cases

Pumpkin is the native token of ScarySwap and is designed to be a beneficial asset for all holders. Here are a few of the innovative things that can be done with Pumpkin tokens:

- Swap with other assets.
- Passive yields.
- Redemption of initially staked tokens.