# **PancakeBunny Docs**

**Bunny** 

**2021**년 **12**월 **21**일

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## CHƯƠNG 1

## Compound Yields with Bunny

팬케이크 버니 팀은 디파이 유저들에게 바이낸스 스마트체인 (Binance Smart Chain, BSC)을 통해 복리 수익을 쉽게 그리고 자동적으로 실현할 수 있도록 함으로써, 디파이 생태계의 발전에 헌신을 다하고 있습니다. 디파이 산업의 발전, 특히 Yield Aggregator들의 붐은 2020년에 더욱 두드러졌습니다. Yearn Finance는 Compound, DyDx, Curve 등과 같이 존재하는 디파이 프로토콜들을 사용하는 투자법으로, 이자 농사의 활성화는 이더리움 네트워크를 이용한 다양한 일드 애그리게이터 프로젝트들의 발전으로 이어졌습니다. 팬케이크 버니 팀의 목표는 이러한 뜨거운 관심과 변화를 바이낸스 스마트 체인 생태계의 발전으로 확산하는 것입니다.

## CHƯƠNG 2

### 팬케이크버니와 함께하는, 수익률 최적화 전략

바이낸스 스마트체인을 이용한 이자 농사(Yield Farming)의 가장 큰 장점은 낮은 가스 수수료 (gas fee)입니다. 낮은 가스 수수료는 중소기업들과 보통 사람들이 쉽게 디파이 생태계에 들어서고, 적은 자본금으로도 상당한 수익률을 거둘 수 있도록 합니다. 자동화를 통해, 버니는 개인 복리투자의 혜택을 어떠한 부수적인 절차 없이도 누릴 수 있도록 합니다. 버니는 가장 최적화된 이자 지급 주기를 계산하고, 자동적으로 고객의 토큰들로 스마트계약을 통해 복리 이자를 창출합니다.

버니는 BSC를 이용하는 다른 일드 애그리게이터들과 같이, 이자 농사에서 가장 두드러진 플랫폼인 팬케이크 스왑 (Pancake Swap)을 이용합니다. 버니는 혁신적인 수익률 최적화 전략들을 만들기 위해 지속적으로 매진하고 있습니다. 현재 저희는 BUNNY, CAKE, BUNNY-BNB, CAKE-BNB BUSD-BNB, USDT-BNB, DAI-BNB, USDC-BNB, VAI-BUSD, USDT-BUSD 풀들을 보유하고 있습니다. 더 나아가, 팬케이크 버니에서는 고금리 맥시마이저 볼트 또한 출시하였으며 높은 이율로 투자 성과를 실현 시켜드리고 있습니다. 이러한 전략들을 통해 고객들이 특정 풀들에서 수익을 실현시킬 수 있도록 한후, 그 실현된 수익들을 자동적으로 CAKE 컴파운딩 풀(compounding pool)에서 복리 이자를 창출시켜, 원금을 보호하면서 고객들에게 더 큰 수익을 안겨줍니다. 현재 저희는 이더리움 네트워크와 바이낸스 스마트체인을 연결한 ETH-BSC 크로스체인을 가능케 할 크로스 체인 프로젝트 (cross chain project)를 런칭해, 더 많은 이더리움 유저들을 BSC 내 이자 농사에 참여할 수 있는 기회를 제공하고자 합니다.

## chương 3

연락

Twitter: @PancakeBunnyFin https://twitter.com/PancakeBunnyFin Telegram: https://t.me/pancakebunny\_fin Medium: https://pancakebunny.medium.com Email: hello@pancakebunny.finance GitHub: https://github.com/PancakeBunny-finance/

## 3.1 초보 가이드 (How-to guide)

#### 3.1.1 How-to Video

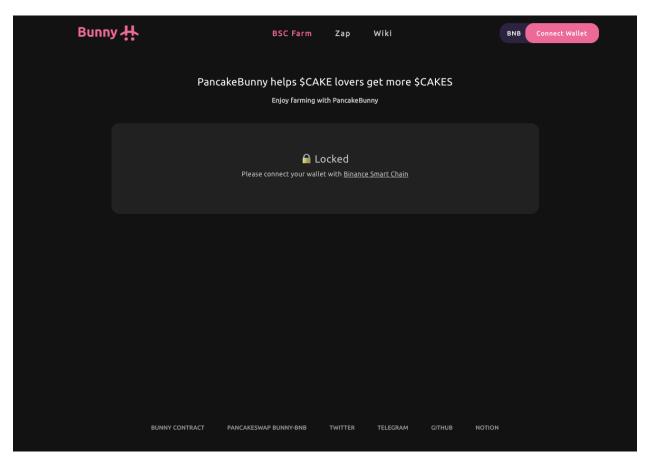
## **3.1.2** 필수 요건

특정 농장의 토큰 (Farm's underlying token)이 있어야 합니다. Cake-BNB를 위해서는 CAKE 토큰들과 BNB 토큰들이 필요하듯, 다른 농장들도 마찬가지입니다.

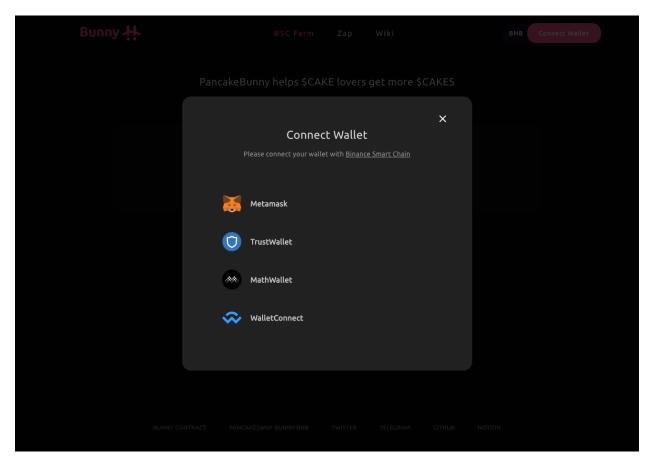
Metmask, Trust Wallet, Walletconnect와 같은 팬케이크버니가 지원되는 지갑이 있어야 합니다.

### 3.1.3 단계별 절차

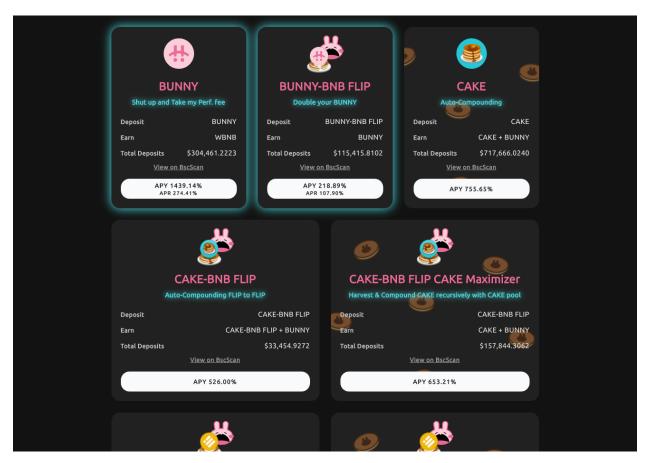
1. pancakebunny.finance/에 접속한 후, "Connect Wallet (지갑 연결)" 를 클릭합니다.



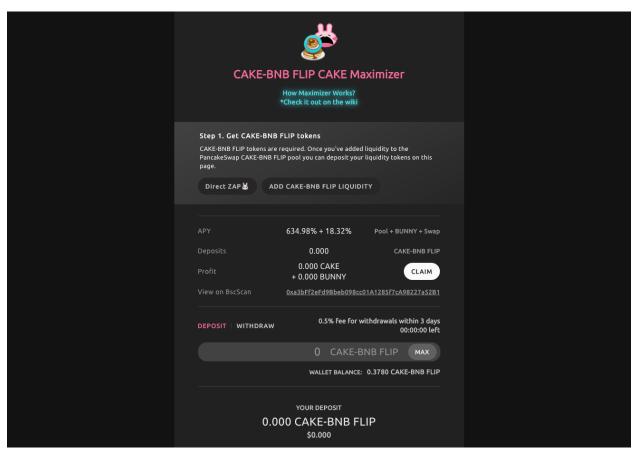
2. Metamask나 WalletConnect 같은 자신이 이용하는 지갑의 아이콘을 클릭합니다.



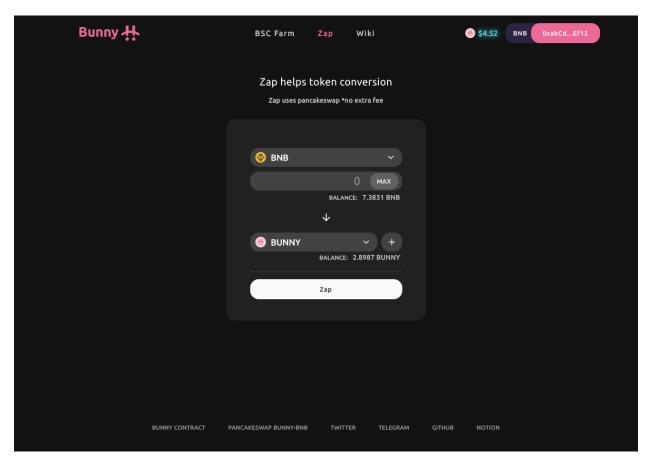
3. 투자하고 싶은 농장(Farm)을 선택합니다.



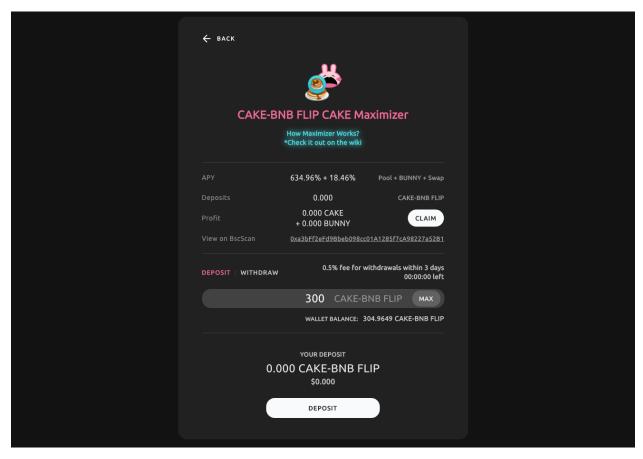
4. CAKE-BNB LP나 BUSD-BNB LP 등 같은 LP 토큰들이 필요합니다.



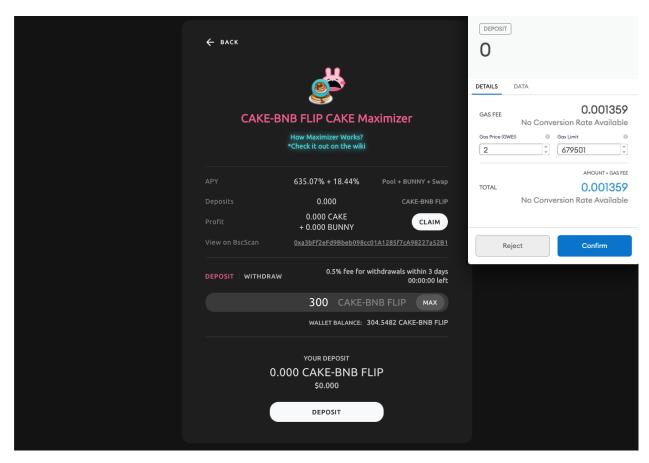
잽(Zap) 기능을 이용해, 한번의 클릭으로 LP 토큰을 제공할 수 있습니다.



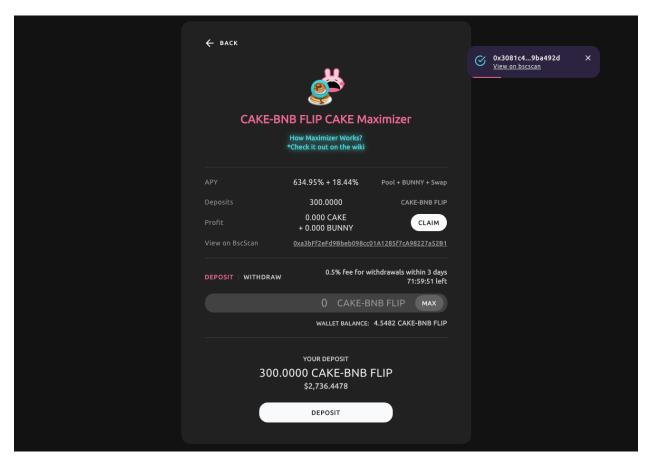
5. LP 토큰을 받은 이후에, 입금하고자 하는 토큰의 양을 입력하고 "Deposit(입금)"을 클릭합니다.



6. 거래를 MetaMask나 WalletConnect 같은 지갑을 이용해 확인합니다.

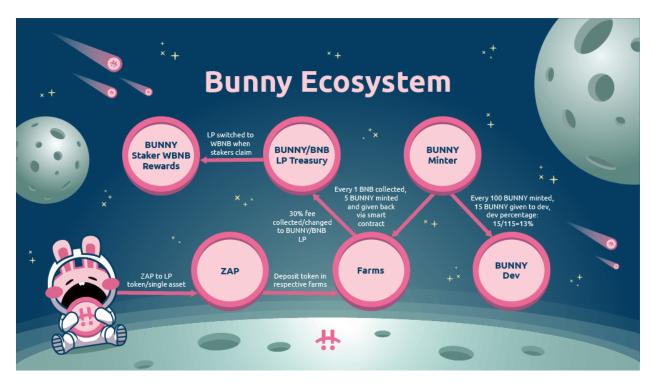


7. BscScan을 통해 거래를 지켜보고 거래 확인을 기다립니다.



8. 축하합니다! 이제 버니 농장(Bunny farm)의 일원이 되셨습니다!

## 3.2 버니(BUNNY) 토큰



The BUNNY token doesn't have a max supply. For every 1 BNB earned in the performance fees, 15 BUNNY is minted, so supply is not capped at the moment. We may establish new strategies to limit the cap or burn some tokens, however currently we are focused on the growth of the BUNNY token. You can earn BUNNY by using the farms, or you can buy BUNNY through our zap function. Roughly 13% of all BUNNY mints will go towards development to ensure rapid innovation.

- 정직한 \$케이크 농부들 (Honest \$cake Farmers): CAKE-BNB LP를 입금하고, 복리효과의 혜택을 실현할 수 있습니다. 단리를 통한 CAKE-BNB의 APY는 150%에 그치지만, 복리를 통한다면 347% APY로 늘어납니다. 이는 다음과 같은 가정들에 따른 결과입니다: 1) 기초자본액이 100만 달러이다. 2) 거래 수수료가 1달러이다. 3) 하루마다 복리 이자를 창출한다(Compounded once daily). 거래 수수료는 팬케이크 버니가 입금된 토큰을 복리 이자 창출하기까지 4-5단계를 거칠 것이라는 가정에 기반을 두고 있습니다. 농사 이익의 일부 퍼센티지는 BUNNY 리워드 풀(BUNNY reward pool)에 BNB로 저장될 것입니다.
- 투기꾼들 (Degens): 런치가 시작할 때 BUNNY를 삽니다. 그후 자신의 탐욕을 만족시킬만큼치 가격이 올랐을 때 팝니다. 또한 BUNNY가 최초 가격인 3달러 아래로 떨어질 가능성은 매우 낮습니다. 왜냐하면 1) 사전판매 참가자(presale participant)들은 3달러에 BUNNY를 샀기 때문에 손해를 감수하며 3달러 아래에 매도하지 않을 것이며, 2) BUNNY의 가격이 올라갈수록 BUNNY의 발급량이 줄어들 것이기 때문입니다.
- 똑똑한 투자자들 (Smart Investors): BUNNY를 장기간 스테이킹합니다. BUNNY 풀의 APY는 정말 굉장하기 때문입니다. BUNNY 풀의 APY가 100%라는 말의 뜻은 \$10만큼의 BUNNY를 사서 1년동안 스테이킹한다면 \$10만큼의 BNB를 받는다는 뜻입니다. 남는 BUNNY를 시장에 판다면 부수적인 수익 또한 챙길 수 있습니다. 만약 현명한 투자자라면 스테이킹 풀의 APY를 세심하게 분석 한 후, 얻은 BNB 리워드를 통해서 뿐만 아니라 BUNNY를 매도함으로써 이익 실현을 할 것입니다.
- 다음과 같은 수수료 구조입니다:
  - 1) 30% 성과 수수료
  - 2) 출금이 입금 72시간 이내에 이루어졌을 경우에는 0.5% 출금 수수료

For further clarification the 30% performance fee is collected and given to the BUNNY stakers. For every 1 BNB earned through performance fees, 15 BUNNY is minted and given to respective users.

So long as the price of BUNNY stays above 1BNB/15, users are actually earning money through this performance fee system. All of these fees will ultimately go towards staking BUNNY, thereby ensuring the sustainability and longevity of our project and benefitting BUNNY supporters/holders.

• 다음 스프레드시트 링크는 더욱 자세한 토큰 경제(tokenomic)의 명세를 담고 있습니다: http://bit.ly/bunny\_tokenomics

#### 3.2.1 사전판매 (마감)

날짜: 11/4 SGT 12:00 ~ 11/17 SGT 12:00

할당량: 10,000 BNB

총 수익: 10,000 BNB어치의 LP 토큰들 + 묶여있는 (locked up) 50,000 BUNNY 토큰들

출시: 11/20

리워드 배당: 11/21

- 1 BNB마다 10 BUNNY 토큰이 배당됩니다. 만약 10,000 BNB 모두 팔려 할당된다면, 100,000 BUNNY가 발급됩니다.
- 사전판매 참가자들에게는 출시 이후에 BUNNY-BNB LP를 출금할 수 있는 자격이 주어집니다.

#### 목적

- 1. 유동성 풀 (liquidity pool)
- 풀이 만들어진 후, 5,000 BNB와 50,000 BUNNY가 팬케이크 스왑 유동성 풀에 들어갈 것입니다. (추정 가치: \$300,000)
- LP 토큰들은 사전 판매 참가자들에게 지분에 따라 주어질 것입니다.
- 2. BUNNY 리워드 풀(BUNNY reward pool)
- BUNNY 리워드 풀은 BUNNY를 스테이킹했을 때, 리워드로 BNB를 발급하는 리워드 풀입니다.
- 풀이 만들어질 때, 사전 판매 참가자들의 50,000 BUNNY가 스테이킹될 것입니다.
- 5,000 BNB가 리워드로 축적이 된 후, 365일에 걸쳐 분배될 것입니다.
- 사전판매 참가자들에게는 BUNNY 잠금(lock up)이 이루어질 것입니다. 출시 이후에는, 새롭게 발급된 BUNNY 토큰 양에 따라 사전 판매된 BUNNY 토큰들의 잠금이 풀어질 것입니다.
- 1년 동안의 지속적이 스테이킹은 어떠한 수수료도 없이 총 5,000 BNB의 출금을 가능토록 합니다.

## 3.3 Vaults (BSC)

#### 3.3.1 BUNNY 스테이킹 농장

이 농장에서 유저들은 소유한 BUNNY 토큰들을 스테이킹하고, WBNB를 되돌려받을 수 있습니다. 다른 농장들의 성과 수수료 30%를 모아 BUNNY 스테이킹 풀의 리워드/ROI로 분배되기 때문에, 이 농장의 APR은 다른 농장의 성과에 따라 달라집니다. BUNNY 풀은 어떠한 출금 수수료나 성과 수수료가 없습니다.

3.3. Vaults (BSC) 17

#### 3.3.2 BUNNY/BNB 농장

In this farm, users can deposit BUNNY/BNB and earn even more BUNNY tokens. There should be a withdrawal fee of 0.5% if withdrawn within 72 hours.

#### 3.3.3 CAKE 자동 복리 농장 (Auto Compounding Farm)

The CAKE farm is where you can reap the benefits of automating compounding and the high APY. There should be a withdrawal fee of 0.5% if withdrawn within 72 hours. The 30% performance fee is collected but for every 1 BNB in fees collected, we give 15 BUNNY, so you're getting free money.

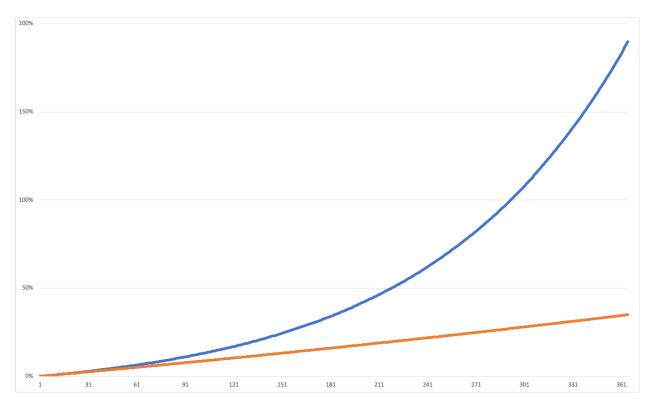
#### 3.3.4 이외의 팬케이크스왑 농장들

Currently we have CAKE-BNB, ETH-BNB, BTCB-BNB, BUSD-BNB, USDT-BNB, DAI-BNB, USDC-BNB, VAI-BUSD, USDT-BUSD pools, which exist on Pancakeswap. Our smart contracts automatically compound your investments, giving you a higher APY. For these pools, as profit you will be getting the respective LP Token of the pool, as well as BUNNY tokens. 30% of profits will be collected and given as BUNNY tokens. For every 1 BNB collected, we give 15 BUNNY. There should be a withdrawal fee of 0.5% if withdrawn within 72 hours. Currently you can only claim your profits, if you claim & exit the pool. We may change this in the future.

#### 3.3.5 고금리 적금(Maximizer) 팬케이크 스왑 농장

The Maximizer farms takes the profits that come out of the original compounded Pancakeswap farm, and puts it into the CAKE auto-compounding farm, in order to give you a higher apy, while protecting your principal. There should be a withdrawal fee of 0.5% if withdrawn within 72 hours. With the Maximizer Farms, users can claim their profits, without exiting the farm.

시뮬레이션에 따르면, CAKE의 가격이 일정하고, USDT-BNB 농장의 APY는 30%, CAKE APR은 300%라고 가정했을 때, 수익 극대화 USDT-BNB 농장(Yield Maximizing USDT-BNB Farm)에 입금하는 사람의 APY는 189.9% 입니다. 이는 USDT-BNB를 단리 이자 창출했을 때의 30% APY보다 높지만, 리스크는 아주 적습니다. 존재하는 리스크 변수는 CAKE의 가격이나 CAKE APR이 급락했을 두가지의 경우 뿐입니다. 그러나 CAKE의 가격이 급락하더라도, USDT와 BNB의 투자 원금은 유지됩니다. 복리효과로 충분히 수익을 보기 위해서는, 유저는 기하급수적으로들어나는 수익을 물러서서 지켜볼 수 있는 인내심이 필요합니다. 한가지 작은 문제는 새로운 수익 극대화 농장(new yield maximized farms)들이 백엔드 개발(back-end development)을 통해 코딩이 되었기 때문에, 하루 혹은 24시간내에 번 수익은 롤링 사이클(rolling cycle) 기반으로 다음날에 분배됩니다. 예를 들어 첫번째 날부터 두번째날로입금한 유저들은 첫 24시간 동안의 온전한 수익보다 약간의 손실을 볼 수 있다는 뜻입니다. 이 요소를 완화시키기위해서, 얼리 유저들에게 소량의 BUNNY를 제공해 손실을 메꿀 수 있도록할 계획입니다. 아래의 그래프는 시간에따른 기존의 스테이블-BNB 농장(Stable-BNB farm)과 새로운 수익 극대화 스테이블-BNB 농장(Yield Maximizing Stable-BNB farm) 수익의 차이를 보여줍니다.



아래는 총 기하급수의 합을 구하는 공식으로, 각자의 투자 금액과 방식에 따라 복리 이자 수익을 계산하실 때 쓰실수 있습니다.

#### Formula [edit]

For r 
eq 1, the  $\operatorname{\underline{sum}}$  of the first n terms of a  $\operatorname{\underline{geometric}}$  is

$$a + ar + ar^2 + ar^3 + \cdots + ar^{n-1} = \sum_{k=0}^{n-1} ar^k = a\left(rac{1-r^n}{1-r}
ight),$$

where a is the first term of the series, and r is the common ratio. One can derive the formula for the sum, s, as follows:

$$s = a + ar + ar^2 + ar^3 + \dots + ar^{n-1}, \ rs = ar + ar^2 + ar^3 + \dots + ar^{n-1} + ar^n, \ s - rs = a - ar^n, \ s(1-r) = a(1-r^n), \ s = a\left(rac{1-r^n}{1-r}
ight) \quad ( ext{if } r 
eq 1).$$

3.3. Vaults (BSC)

#### 3.3.6 Single Asset Smart Vaults

Currently, our single asset vaults feature BNB, ETH, BTCB, USDT, and BUSD. The new Smart Vaults provide users with opportunities to earn interest safely without losing their principal. The loan interest rate model follows TripleSlope-Model. (Source code for AlphaHomora v1 was forked and partially modified.) Any principal amount in these smart vaults that is not used directly for cross chain will be managed and invested in Venus. When cross chain goes live, the single asset vaults will provide liquidity for ETH users, resulting in the loan interest rate model below.



- 1. 0%-50% utilization has interest rate of 10%
- 2. 50%-95% utilization has interest rate of 10%-25%
- 3. 95%-100% utilization has interest rate of 25%-100%

These Vaults will be the first to use Venus on our platform, exemplifying our goals of diversifying and optimizing yields from various DeFi Platforms. Our Smart Vault will automatically calculate the interest rate and adjust leverage dynamically. (e.g. If borrowing interest is high, we simply deposit into venus. Otherwise, we borrow again, redeposit, and repeat.) This is quite different, and much more innovative than the current single asset Venus vaults that exist on other yield aggregating platforms since we optimize and adjust the leverage, while providing liquidity for our future cross chain product.

#### 3.3.7 Farm profit breakdown

For all of the non Bunny farms, keep in mind that everything is being compounded in the respective token before withdrawal. I.e. cake compounding farm, cake is the only thing being compounded. The same applies to cake maximizer, flip vaults, etc... In this example we will use the cake auto-compounding farm. At the time of withdrawal, 30% CAKE profits will be calculated into the \$ equivalent of bnb. For every 1 BNB this equals to 15 BUNNY is minted and given. The UI breakdown of Cake and Bunny rewards is just an approximation, and will differ greatly depending on the exact time of withdrawal/claim. Please see the example below for calculation purposes. -User A deposits 1000 CAKE, and earns a profit of 100 CAKE when he decides to withdraw. At the exact time of withdrawal, CAKE is \$18, BNB is \$360, and BUNNY is \$25. As such User A will receive 70 CAKE as well as (((30 CAKE x \$18)/\$360) x 15 BUNNY) = 22.5 BUNNY.

## 3.4 Polygon

Pre-Liquidity Period

Schedule:

Start: 02:00 on 23 June (UTC)

End: 24:00 on 30 June (UTC)

Limits:

No total cap

No limit per wallet

Based on 1 ETH staked during this pre-launch window, users will receive a bonus of 750 polyBUNNY according to the following mechanism:

- 1. User provides 1 ETH on PancakeBunny's Polygon fork;
- 2. PancakeBunny mints 750 polyBUNNY for the user;
- 3. PancakeBunny uses 0.5 ETH and 250 polyBUNNY to create a Quickswap LP token;
- 4. PancakeBunny automatically begins farming the LP token in the newly forked polyBUNNY-ETH Pool to generate PancakeBunny Polygon yields (i.e. polyBUNNY-ETH LP + additional polyBUNNY rewards);
- 5. PancakeBunny uses 250 polyBUNNY and the remaining 0.5 ETH to create another polyBUNNY-ETH LP token, which it then sends to the Polygon Bunny Pool to be farmed over the next 90 days (similar to the operation of the original Bunny Pool on BSC);
- 6. PancakeBunny automatically stakes the remaining 250 polyBUNNY to farm returns in the newly forked Polygon Bunny Pool, which returns are then distributed in the form of polyBUNNY;
- 7. Staked pre-launch polyBUNNY-ETH LP and polyBUNNY tokens locked up for up to 90 days, subject to the ratio of pre-launch polyBUNNY to polyBUNNY minted post-launch.

Initial APR for polyBUNNY/ETH: 400%

Initial APR for polyBUNNY staking pool: 800%

#### 3.5 **ZAP**

버니플랫폼에 접목된 잽 기능은 유저들이 팬케이크 스왑을 거치지 않고서도, 한번의 클릭으로 단일 자산 BNB를 BNB-CAKE LP 토큰으로 전환할 수 있도록 합니다. 또한 유저들은 다른 자산끼리, 예를 들어 BNB에서 BUNNY 로와 같이 전환할 수도 있습니다. 유저들의 편리함을 위해 만든 툴이기 때문에 잽 기능을 이용하는 데에는 따로수수료가 발생하지 않습니다:)

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#### 3.6 Pot

#### 3.6.1 What Is a Bunny Pot?

A Bunny Pot is a no-loss "jackpot" pool similar to the service pioneered by Pool Together. Users stake tokens to a Bunny Pot during an initial Staking Period (e.g. the first 24 hours). At the end of this initial Period, the Pot is closed to further staking and for the next 6 days (the Farming Period), the Pot farms all of the pooled assets to generate a pooled yield. (Note: technically, the Bunny Pot begins staking tokens as soon as they are staked, but in the interests of simplicity, we call the next 6 days after staking closes the Farming Period).

At the end of the Farming Period, one user is randomly selected as the winner, based on a composite weighting of the Number of Tokens they have contributed to the Bunny Pot times the Speed multiple (S) and the History multiple (H) (so that the composite weighting = # Tokens X S X H).

#### 3.6.2 What Does No-Loss Mean? Can I Lose Any of the Tokens I Stake?

Bunny Pots are no-loss pools in the sense that your principal is never at risk. At the end of the Farming Period, everyone who participates will be returned their initial stake. No one is at risk of losing any of the tokens they stake because Bunny Pots operate just like all of our other pools. The difference lies in how the profits are distributed.

#### 3.6.3 So Then Where Do Bunny Pot Pool Profits Go?

Essentially, Bunny Pot pool profits go to the winner, with some portion reserved for PancakeBunny's program to buy back BUNNY tokens. For launch purposes, 90% of all of the profits go to the winner, and 10% go to the Community Treasury to buy back BUNNY on the open market. This ratio may be adjusted from time to time as Team Bunny monitors user behavior and buy back performance to maximize the benefit to the PancakeBunny Community.

#### 3.6.4 Team Bunny "Jackpot" Contribution

At launch, Team Bunny is contributing a big bag of tokens to each Bunny Pot to grow the total "jackpot". At launch and until the Bunny Pots are organically sufficiently large to obviate the need for Team Bunny to seed the Pots, Team Bunny is committed to contributing this initial stake to make the size of the "jackpots" worth the opportunity cost of users staking to the pools.

NONE of Team Bunny's tokens is eligible to win. Their sole function is to contribute to the size of the pool being farmed. In other words, Team Bunny's tokens are "whitelisted" and are ineligible to win and are therefore not counted in calculations of probabilities. Their only effect on the outcome is to INCREASE the number of tokens that are farmed by the Bunny Pot to INCREASE the size of the "jackpot" that goes to the winning user.

#### 3.6.5 Bunny Pot Math — "Jackpot" Calculations

Suppose the Team has staked 10,000 CAKE to the CAKE Bunny Pot to increase the eventual "jackpot".

And suppose users stake 1,000 CAKE to the Bunny Pot during the Staking Period, so that the total number of CAKE staked to the Bunny Pot is 11,000 CAKE (Team Tokens plus Community Tokens).

Then, throughout the Farming Period, and at current APY's, the Bunny Pot profit would generate a total of around 220 CAKE in profits.

Suppose you were a user who had staked 10 CAKE to the Bunny Pot in this scenario. If you had instead staked 10 CAKE to the CAKE pool on your own, you would expect to have earned around 0.2 CAKE by the end of the Farming Period.

But by staking your 10 CAKE to the Bunny Pot, you are guaranteed the return of your original stake just as in standard pools, and you have a chance to win the "jackpot" of 90% of the entire Bunny Pot yield of 220 CAKE. This is equivalent to a 990x multiple on the earnings you would expect to have earned if you had staked your 10 CAKE on your own.

#### 3.6.6 Bunny Pot Periods

Before diving into how Bunny Pot Weighted Odds work, let's take a look at the different Periods in the status of a given Bunny Pot. These Periods operate as follows over a 7 day period:

- Staking Period (the first 24 hours): This is the period during which you can stake tokens to the Bunny Pot. (BUNNY POT STATUS = UNLOCKED)
- Farming Period (the 6 days following the Staking Period)\*: This is the period during which the Bunny Pot is closed to any more staking, and during which the Bunny Pot will farm profits using the total pooled assets of the Bunny Pot (including the contribution from Team Bunny!). (BUNNY POT STATUS = FARMING)
- Return Period (the period after the Farming Period ends): At the end of the Farming Period, open the Bunny Pot to see if you have won! If you have won, you will receive your original stake, plus 90% of the profits farmed by the entire pool over the course of the Farming Period! If you haven't won, don't worry, your stake will be returned to you because Bunny Pots are NO-LOSS! (BUNNY POT STATUS = COLLECT)

### 3.6.7 Understanding Bunny Pot Parameters

Your final odds are determined by your Weighted Contribution (WC) to the Bunny Pot divided by the Total Weighted Contribution (TWC) of all of the users staked in the Bunny Pot.

Weighted Contribution (WC)

Your WC is determined by the following parameters: the Amount (A) or number of tokens you stake, the Speed (S) multiplier derived from how early you contribute your stake during the Staking Period, and the History (H) multiplier derived from your win/loss history.

Amount (A): Suppose you staked 10 CAKE, as in the example above. Then: A = 10, the number of CAKE you staked in the Bunny Pot

Speed (S): The Speed multiplier, S, is determined by the following table. S = 2.8 if you stake between Hour 0 and Hour 4 of the Staking Period S = 2.4 if you stake between Hour 4 and Hour 8 of the Staking Period S = 2.0 if you stake between Hour 8 and Hour 12 of the Staking Period S = 1.6 if you stake between Hour 12 and Hour 16 of the Staking Period S = 1.2 if you stake between Hour 16 and Hour 20 of the Staking Period, and S = 0.8 if you stake between Hour 20 and Hour 24 of the Staking PeriodWithin 20 to 24 hours: S = 0.8 if you stake between Hour 20 and Hour 24 of the Staking PeriodWithin 20 to 24 hours: S = 0.8 if you stake between Hour 20 and Hour 24 of the Staking PeriodWithin 20 to 24 hours: S = 0.8 if you stake between Hour 20 and Hour 24 of the Staking PeriodWithin 20 to 24 hours: S = 0.8 if you stake between Hour 20 and Hour 24 of the Staking PeriodWithin 20 to 24 hours: S = 0.8 if you stake between Hour 25 and Hour 26 of the Staking PeriodWithin 20 to 24 hours: S = 0.8 if you stake between Hour 26 of the Staking PeriodWithin 20 to 24 hours: S = 0.8 if you stake between Hour 26 of the Staking PeriodWithin 27 to 28 hours: S = 0.8 if you stake between Hour 28 of the Staking PeriodWithin 28 hours: S = 0.8 if you stake between Hour 28 of the Staking PeriodWithin 28 hours: S = 0.8 if you stake between Hour 28 hours: S = 0.8 if you stake between Hour 28 hours: S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28 hours S = 0.8 if you stake between Hour 28

History (H): Your History multiplier increases your chances of winning the longer you have gone without winning a Bunny Pot.? H = 1 if you have not won a single Pot in your previous 0 to 4 Pots; H = 2 if you have not won in your previous 5 to 8 Pots; H = 3 if you have not won in your previous 9 to 12 Pots; and H = 4 if you have not won in your previous more than 13 Pots.

Stake Limits: What Are the Min Stake and Max Stake? For launch purposes, we have set the following stake limits:

Minimum Stake: Min Stake = 1 Token

Maximum Stake: Max Stake = 100 Tokens

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#### 3.6.8 Bunny Pot Math — Calculating Your Odds

As in the above "jackpot" calculation, suppose the Team Contribution = 10,000 CAKE and the total Community Contribution = 1,000 CAKE, of which you have contributed 10 CAKE.

Suppose further that you staked your CAKE during the first 4 hours of the Staking Period, and that you had not won a single Pot in the last 10 times that you had participated.

Then your Weighted Contribution (WC) would be calculated as follows:

$$WC = A \times S \times H = 10 \times 2.8 \times 3 = 84$$

To calculate your odds, let us assume that the average Speed multiplier for the remaining CAKE staked to the pool by the Community is S = 2.6 and the average History multiplier for the remaining Community stake is H = 1.001.

Then the Total Weighted Contribution (TWC) of the rest of the Pool is calculated as follows:

TWC = WC + 990 x 
$$2.6$$
 x  $1.001$  =  $84 + 2,576.574$  =  $2,660.574$ 

In which case, your Final Odds (FO) would be calculated as follows:

$$FO = WC / TWC = ~3.16\%$$

Because the user, in this case, staked quickly and hasn't won a single Pot in the last 10 Pots, they have increased their odds by over 3x versus their simple unweighted share of the total token pool (1%).

Finally, your Expected Return for Participating (ERP), in this scenario, would be calculated as follows:

$$ERP = 220 CAKE * FO = ~7 CAKE$$

In this scenario, your ERP =  $\sim$ 7 CAKE =  $\sim$ 34.7x 0.2 CAKE (your expected return if you farmed your 10 CAKE on your own). So your ERP is  $\sim$ 35x your ERP if you staked your CAKE on your own.

The above description is meant to illustrate the functioning of the construct. For a more formal statement, please see the following:

$$\begin{split} WC &= a_1 * s_1 * h_1 \\ TWC &= \sum_{k=1}^n a_k * s_k * h_k \\ FO &= \frac{WC}{TWC} \end{split}$$

## 3.7 Floating Rate Emission

Given both the necessity to generate meaningful rewards yet also continually improve the current token dynamics, we implemented a mechanism for a floating rate emission (FRE). The initial FRE is 36% - 30% Performance Fee, 6% BUNNY mint.

When the relative price of BUNNY goes below 1/15 of BNB (or an otherwise optimal threshold), the system will adjust to do the following:

- 1. The system uses the 30% Performance Fee to buy BUNNY at the market price.
- 2. An amount of BUNNY equal to 6% of the Claim is minted and sent to the user

On the other hand, when the BUNNY/BNB Ratio is over the above optimal BNB threshold, initiated claims will perform as originally designed, with the Performance Fee going to the Bunny Pool and the newly minted BUNNY delivered to the user.

Start Date: 17 June 2021

### 3.8 거버넌스(Governance)

BUNNY holders control the ecosystem and receive the majority of farm performance fee profits. In order to claim these profits, BUNNY holders stake their tokens in the BUNNY Governance Pool. Profits are sent to this pool in the form of BNB rewards. The amount of profits you receive is determined by the number of BUNNY tokens you stake (% of the pool) you own. We currently have a snapshot voting page where users can use BUNNY to vote on decisions within our community. Thus the more BUNNY you stake, the higher your influence in the ecosystem. In the future, we expect to come up with a more concrete governance tokenomics ecosystem, perhaps by introducing a new, separate governance token.

## 3.9 자주 묻는 질문(FAQ)

#### 3.9.1 팬케이크버니는 무엇인가요?

팬케이크버니는 팬케이크스왑에서 사용되는 새로운 디파이 일드 애그리게이터입니다. 팬케이크버니 프로토콜은 농부들의 수익추구 성향에 따라 BSC에서의 복리화 수익 창출 전략을 최적화 할 수 있도록 돕습니다. 최대 수익률를 찾는 투자자들과 리스크 리워드 최적화(risk reward optimizing)를 추구하는 투자자들까지 다양한 이자 농부들의 니즈에 맞게 여러 전략들을 제공하고 있습니다.

#### 3.9.2 팬케이크버니를 출시한 이유는 무엇인가요?

팬케이크버니는 투자금액이 적은 사람들까지 포함한 모든 사람들이 수익의 복리 이자를 자동적으로 창출시킬 수 있는 플랫폼을 만들고 싶었습니다. 팬케이크버니의 목표는 바이낸스 스마트 체인(Binance Smart Chain)에서의 디파이 생태계를 확장시키고, 유저들의 리스크를 줄이면서도 수익을 극대화할 수 있는 다양한 전략들을 제시하는 것입니다.

#### 3.9.3 버니 농장들은 어떻게 작동하나요?

현재 대부분의 버니 농장들은 팬케이크 스왑(Pancake Swap)내에 존재하는 농장들입니다. 팬케이크버니 플랫폼의 농장들은 스마트 컨트랙트를 통해, 유저들에게 자동적으로 복리 이자를 창출하고 수익을 재투자할 수 있는 허가를 받습니다.

#### 3.9.4 그냥 유저가 직접 복리 이자 창출을 하면 안되나요?

팬케이크스왑에서 유저가 직접 복리 이자 창출을 하는 것은 매우 힘들고 지루한 작업일 뿐만 아니라, 대부분의 유저들은 가장 최적화된 이자 지급 주기(frequency)와 타이밍을 알기 어렵습니다. 버니는 이러한 모든 작업들을 대신해주고, 가스 수수료(gas fee) 또한 덜 발생합니다.

#### 3.9.5 BUNNY 토큰은 무엇인가요?

BUNNY 토큰은 팬케이크버니의 고유한 거버넌스 토큰입니다. BUNNY 소유자들은 팬케이크버니의 생태계에 의 결권을 행사할 수 있고(govern our ecosystem), 농장 성과 수수료 수익의 대부분을 받습니다. 그렇기 때문에 BUNNY 를 소지하거나 스테이킹하는 것은 개인 수익에 도움이 될 뿐만 아니라, 버니의 생태계가 잘 운영 되도록 합니다.

#### 3.9.6 어떤 버니 농장을 골라야 하나요?

모든 농장마다 다른 종류의 LP 토큰을 요구합니다. 또한 각 농장마다 버니 유저들에게 다른 리스크 허용 수준을 나타 냅니다. 높은 APY는 주로 기반 토큰(underlying token)의 높은 가격 변동성을 의미합니다. 예를 들어, BUSD-BNB는 CAKE-BNB보다 아주 낮은 복리화된 APY(compounded APY)를 가지고 있습니다. 왜냐하면 BUSD는 달러와 페깅되어 가격 변동성이 거의 없는 스테이블 코인(stable coin)이기 때문입니다.

#### 3.9.7 버니에서 농사하는 것에는 어떠한 리스크가 따르나요?

시스템적 리스크(Systematic risk)

시스템적 리스크는 BNB나 CAKE 등 입금한 자산의 금전적 가치 하락입니다. 예를 들어, 입금했을 때 \$30였던 BNB의 금전적 가치가 출금할 때 \$25로 하락할 수 있습니다.

특유한 리스크 (Idiosyncratic risk)

The Idiosyncratic Risk would be risks associated with our actual project. Although our code has been audited by Haechi Labs, there are always risks that projects will fall victim to malicious hackers. That being said, our Bunny developers account for the security risks of smart contracts and only will interact with contracts that meet the security threshold.

#### 3.9.8 일간 %수익 (daily % gains)은 어떻게 아나요?

팬케이크 스왑에서의 APY는 계속적으로 변하기 때문에, 버니 플랫폼의 복리화된 APY도 계속 변합니다. 또한 기하급수적으로 상승하는 복리화 효과 때문에, 일간 수익은 (복리화된 APY)/365과 같이 선형으로 계산할 수 없습니다. 특정 기간 동안 버니 플랫폼의 농장에 자산을 예치한다면 투자금액은 기하급수적으로 성장할 것입니다.

#### 3.9.9 리워드로 받는 CAKE나 LP는 어디서 나오나요?

CAKE나 LP 토큰은 모두 팬케이크스왑에서 이용되고, 팬케이크버니는 자동적으로 팬케이크스왑을 통해 복리 이자를 창출합니다.

#### 3.9.10 BUNNY는 어디서 나오나요?

BUNNY is minted via the project's smart contracts.

When the user executes a Claim on their profits in a given Pool, they receive 70% of the profit's value in the respective auto-compounded farm token, and receive 30% of the profit's value in BUNNY.

This 30% worth of profit is calculated in \$ equivalent of BNB, and for every 1 BNB the user gets 15 BUNNY.

#### 3.9.11 스왑 %는 어디서 나오나요?

The swap percentage is an estimation based on the swap fee that liquidity providers receive every time someone swaps that pair. These rewards go to the LP token itself, causing its value to increase, which in turn causes your share to increase. The displayed percentage rate is obtained via the PancakeSwap API.

#### 3.9.12 어떤 리워드들이 복리화되나요?

Currently, all the farms get compounded except for the BUNNY Staking farm and the BUNNY/BNB farm.

When the user executes a Claim on their profits in a given Pool, they receive 70% of the profit's value in the respective auto-compounded farm token, and receive 30% of the profit's value in BUNNY.

#### 3.9.13 수수료 구조가 어떻게 되나요?

#### 출금 수수료

There is a 0.5% withdrawal fee from Farms only if a Withdrawal happens within 72 hours of deposit. This fee exists to maintain the smooth flow of the ecosystem and to prevent possible exploitation from individuals acting under bad faith. For example if there was no 0.5% withdrawal fee within the 72 hours, someone could keep depositing right before the compounding takes place and withdraw right after and still reap the same benefits and continuous long-term holders.

#### 성과 수수료

When you choose to Claim profits from a pool, a 30% performance fee is collected to reward BUNNY stake holders. In return, all pools are rewarded with BUNNY tokens. For every 1 BNB in fees collected, 15 BUNNY is rewarded.

#### 3.9.14 Can I make a partial withdrawal?

Yes. On the Pool screen:

- 1. Next to the "Deposit", tap or click 'Withdraw"
- 2. Enter in the amount of Tokens you wish to withdraw or select "Max" to select all of your Tokens in the pool.
- 3. Tap the "Withdraw" button at the bottom

#### 3.9.15 Why are the transaction fees so high?

The GAS LIMIT is the maximum amount of gas that can be spent on a transaction. In some pools the GAS LIMIT is set higher than others even on claim actions. This is due to the complexity of our contracts and to ensure the transactions do not fail in case of BSC instability or high transactions load.

Take note that the gas spent will be usually half of the gas limit set. You can always check the transaction on bscscan.com to see more details.

#### 3.9.16 Why does my balance decrease?

Your balance is the instantaneous sum of your deposited principal and your unclaimed profit at the moment that you claim and immediately redeposit the profit into the pool.

At some points, the balance may decrease because the price of tokens relevant to the pool may have fluctuated.

#### 3.9.17 How does the timer work?

Withdraws within 72h will have a 0.5% fee applied. This timer is reset every time you make a new deposit. Claiming rewards on the pools that allow it does not reset the timer.

#### 3.9.18 How is the profit calculated?

At the moment of withdrawal (exit & claim) the performance fee is exactly calculated (30% of profits) and BUNNY is rewarded.

#### 3.9.19 Is there slippage using the ZAP function?

ZAP is based on PancakeSwap's swap feature so we can't control the slippage/IL associated with it.

#### 3.9.20 Why is my TVL or Deposit showing 0?

If you see 0 tvl or 0 deposit just try refreshing your browser and reconnecting your wallet.

#### 3.9.21 Why am I getting failing transactions?

Unfortunately this seems to be a common issue on the chain lately. Try increasing by 5 GWEI. When this happens, it is probably happening on PancakeSwap (and other projects as well), and it is generally fine if you use 18-20 GWEI.

#### 3.9.22 버니의 로드맵은 어떻게 되나요?

노션에 게시한 팬케이크버니의 로드맵입니다: http://bit.ly/bunny\_roadmap. 팬케이크버니는 더욱 다양한 풀들로 확장시키기, 단일 자산 금고 만들기, 재정거래 등을 계획하고 있습니다.

#### 3.9.23 버니는 누가 만들었나요?

버니 프로젝트는 개발자들과 블록체인 전문가들이 모여 시작되었습니다. 다른 일드 애그리게이터 프로젝트처럼, 팬케이크버니의 코드가 곧 팬케이크버니라고 생각합니다! 그렇기 때문에 완전히 투명하고 자명한 코드를 제공하 겠습니다.

#### 3.9.24 버니는 안전한가요?

다른 모든 디파이 프로젝트처럼, 프로젝트 합리성은 단순히 신뢰하기보다 데이터와 코드를 통해 입증하는 것이 중요합니다. 그렇기 때문에 버니 플랫폼이 원만히 굴러간다는 것을 입증할 코드와 데이터를 공개해 완전한 투명성을 제공합니다. 팬케이크버니의 깃허브입니다: https://github.com/PancakeBunny-finance

#### 3.9.25 버니는 감사를 받았나요?

Yes, Haechi Labs has completed the first audit. The results were extremely positive! The audit highlighted no critical or major issues, and two minor issues. One of the minor issues has been found on most well-known governance tokens and will not expose much issue/security risk to normal end-users. The other minor issue is an intended behavior.

Please see the report here

#### 3.9.26 연간이율(APR)과 연간수익률(APY)

CAKE 농장의 연간이율이 365%라고 가정한다면, 365%를 365일로 나눠 평균 일간 수익률이 1%라는 뜻입니다. 버니는 이 1% 이율로 복리화하기 때문에, 복리화된 연간이율은 약 (1+0.01)^365 - 1 = 3678%으로 추정됩니다. 이러한 가정과 추정은 CAKE 농장의 연간이율이 1년 내에 일정하다고 가정했을 경우에만 해당됩니다. 하지만 실제로는 연간수익률 또한 매초마다 변하기 때문에, 연간이율이 일정한 경우는 발생하지 않습니다. 그렇기 때문에 복리화된 연간 수익률은 연간이율을 365로 나눠 평균 일간 수익률을 계산한 후, (1+ 평균 일간 수익률)^365 -1 공식을 통해서 계산할 수 있습니다. 새로운 맥시마이저 농장은 농장의 일간 수익을 CAKE 복리화 풀에 넣습니다. 스테이블 코인-BNB 농장은 현재 30% 연간수익률이지만, 맥시마이저 농장들을 이용한다면 연간수익률은 150%로 늘어납니다. 이 전략은 투자 원금에 손대지 않으면서 추가적인 농장 수익만 고위험-고수익인 CAKE 풀에 넣기 때문에, 매우 독특하면서 유리합니다.

The new maximizer farms put the daily yields from the Farms, into the CAKE compounding pools. The Stable Coin-BNB Farms have a current APY of 30%, but if we use the maximizer farms the APY increases to about 150%. This strategy is truly unique and advantageous since the principal investment does not get touched, and only the extra yields from the farm get invested in the more volatile, high risk-high reward CAKE pool.

#### 3.9.27 How is the APY Calculated?

The APY on pool screen is the sum of the following rates:

[Pool APY] This the APY from the auto-compounding rate on the token of the pool you are staking.

[Bunny APY] This is the APY in BUNNY rewards you will receive based on the 30% Performance Fee collected from your total pool profits.

[Swap APY] This is an estimation of the increase in value of your LP tokens due to the rewards from the swap fees on PancakeSwap.

#### 3.9.28 How often do Auto-Compounding Pools Compound?

The auto compounding varies from pool to pool. The current frequencies are: - Cake and Cake Maximizers: At least every 2 hours (harvesting when any user deposit or withdraws) - CAKE-BNB flips: Every 2 hours - Other flip pools: Every 4 hours - Single-Asset "Smart" Vaults: Every 2 hours

#### 3.9.29 Why is there a Claim Button on Auto-Compounding Pools?

The Claim button is an extra option for those that wish to use it. It was a suggested and voted on by the users.

All pools that have "auto-compounding" or "compound cake recursively" in their description are auto-compounding the profits. The BUNNY figure that appears on the Profit line is what you would receive at the moment you choose to Claim.

#### 3.10 Contracts

BunnyToken: 0xC9849E6fdB743d08fAeE3E34dd2D1bc69EA11a51 BUNNY Pool: 0xCADc8CB26c8C7cB46500E61171b5F27e9bd7889D BUNNY-BNB Pool: 0xc80eA568010Bca1Ad659d1937E17834972d66e0D

Bång1:	Auto Com	pounding	<b>FARM</b>	Contracts

	Contract Address	
CAKE	0xEDfcB78e73f7bA6aD2D829bf5D462a0924da28eD	
CAKE-BNB	0x7eaaEaF2aB59C2c85a17BEB15B110F81b192e98a	
BTCB-BNB	0x0137d886e832842a3B11c568d5992Ae73f7A792e	
ETH-BNB	0xE02BCFa3D0072AD2F52eD917a7b125e257c26032	
BUSD-BNB	0x1b6e3d394f1D809769407DEA84711cF57e507B99	
USDT-BNB	0xC1aAE51746bEA1a1Ec6f17A4f75b422F8a656ee6	
VAI-BUSD	0xa59EFEf41040e258191a4096DC202583765a43E7	
USDT-BUSD	0xC0314BbE19D4D5b048D3A3B974f0cA1B2cEE5eF3	

Bång2: CAKE Maximizer Vaults Contracts

	Contract Address
CAKE-BNB	0x3f139386406b0924eF115BAFF71D0d30CC090Bd5
BTCB-BNB	0xCBd4472cbeB7229278F841b2a81F1c0DF1AD0058
ETH-BNB	0x41dF17D1De8D4E43d5493eb96e01100908FCcc4f
BUSD-BNB	0x92a0f75a0f07C90a7EcB65eDD549Fa6a45a4975C
USDT-BNB	0xE07BdaAc4573a00208D148bD5b3e5d2Ae4Ebd0Cc
VAI-BUSD	0xa5B8cdd3787832AdEdFe5a04bF4A307051538FF2
USDT-BUSD	0x866FD0028eb7fc7eeD02deF330B05aB503e199d4

## 3.11 보안감사

Haechi Labs has completed the first audit. The results were extremely positive! The audit highlighted no critical or major issues, and two minor issues. One of the minor issues has been found on most well-known governance tokens and will not expose much issue/security risk to normal end-users. The other minor issue is an intended behavior.

여기서 리포트를 관람할 수 있습니다`here <a href="https://github.com/PancakeBunny-finance/Bunny/blob/main/audits/%5BHAECHI%20AUDIT%5D%20PancakeBunny%20Smart%20Contract%20Audit%20Report%20ver%202.0">https://github.com/PancakeBunny-finance/Bunny/blob/main/audits/%5BHAECHI%20AUDIT%5D%20PancakeBunny%20Smart%20Contract%20Audit%20Report%20ver%202.0</a>. pdf>`\_