

WHITE PAPER



WELCOME TO TREEDEFI

THE FIRST ECO-FRIENDLY YIELD FARM ON BINANCE SMART CHAIN

TreeDefi is a prominent DeFi protocol operating on the Binance Smart Chain, focused on Yield Farming and Carbon Credits. Our project is a Decentralized Exchange that allows our users to swap and farm tokens while helping the environment through tree planting activities. TreeDefi will also offer companies and individuals the opportunity to offset their CO2 emission.

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MANIFESTO

TreeDefi was built following our intense studies of the recent BSC Yield Farming Platform explosion. Our team has been involved in cryptocurrency for the past 7 years, and it's always surprising to see how creative the landscape keeps getting.

We've had a great time utilizing on some of the other Yield Farms, and an even better time figuring out which ones are operating under scummy principles just to steal from users.

One thing we noticed is the lack of creativity that is being set in stone in this community. The most creative projects with the most innovative ideas can be counted on one hand. It's okay to take inspiration from someone's work and add your spice to it, but most of the new releases have been scammy clones of each other, with each iteration becoming somehow worse than the previous.

That's why we started TreeDefi, a community where users can swap tokens, farm in various pools, take advantage of interesting pairs and use governance to vote for the next innovations on our platform. Our main focus is and will always be user protection, that's why audits and security features are so prevalent in our timeline before anything else.

And the most important differentiating factor we have is that we're doing it all for a good cause. A third ($\frac{1}{3}$) of all deposit fees on our platform will go towards planting real life trees. Everyone in our team is a nature lover and it's been sad to see how negligent the Bitcoin mining community has been towards the environment.

Our contribution might not be massive, but if we ensure the safety of your investment and the prosperity of our community and platform we could make a significant difference. Together we are strong.

CHAPTER ONE

Introduction



INTRODUCTION

WHAT IS DECENTRALIZED FINANCE

Decentralized Finance or DeFi is a term used to generalize various financial blockchain applications that aim towards the disruption of financial intermediaries.

This is important because it allows a noticeable increase in transaction speed and sophistication, while offering users more control over their own money.

YIELD FARMING APPLICATIONS

In our case DeFi is essential for Yield Farming opportunities, as it leaves the control in the hands of the users. Under perfect circumstances where there is no dishonest motivating factor from the developers, a DeFi Yield Farm can become a fully automated, community driven project.

That's what makes this field beautiful, especially since governmental control is more and more prevalent and suffocating nowadays.

Though Yield Farming is still a niche concept and more adequate for knowledgeable traders, it's an interesting proposition for newcomers too, since the economical side is easily understandable with a little effort.



GENERAL APPLICATIONS

Some of the more general applications of DeFi are simply cryptocurrency coins, as long as they are not controlled by a single, central source. Bitcoin and many other digital assets stand out from digital payment methods such as Visa and PayPal, since they remove any intermediaries from transactions. When you pay with a credit card at a local business like a bar or coffee shop, a financial institution sits between you and the local business, having control over the transaction. With cryptocurrency the intermediaries are out of the picture. These are not the only examples of intermediary control though. Insurance, loans, crowdfunding and betting are also controlled by them. The main purpose of DeFi is cutting all of these issues and leaving the control in the hands of the user.



IS IT SAFE?

Right now DeFi is still growing and operates in slightly uncharted territory. There are many innovations to be had, and many security features to be built, so make sure that you study everything accordingly and attentively before throwing your hard earned money away carelessly. We hope Binance focuses heavily on setting systems in place that make it impossible for developers to act untruthfully towards users.

PROBLEM

DeFi is in an early and experimental phase. This is both good and bad. This is fantastic because it means that if users invest in the right platforms they might reap significant rewards in the future, as the DeFi market keeps growing further and further. Imagine investing in Bitcoin or Ethereum during their first months of inception, you would be a very happy camper right now.

On the other hand it means that there aren't many systems set in place, and the landscape is free for anyone to take with no rules or limitations. That's why we've seen so many manipulative and scammy platforms released in the past few months. Crypto thieves have figured out that releasing a yield farm and promising the moon can allow them to steal upwards of millions of dollars sometimes, with little to no repercussions.



The most common scamming technique you might have heard of is rug pulling. Rug Pulling is a practice where a development team launches a project, promises the moon, waits for the right moment when user trust is high along with investments and then proceeds to remove all of the liquidity from the project. The following liquidity is generally moved through countless wallets and the culprits are often not caught since there aren't many systems put in place to protect users from these attacks.

This method used to scam people has luckily started becoming less prevalent as people are more educated on how DeFi platforms operate and developers are almost forced to implement safety features such as Timelocks and migrator function removal to even be considered as a potentially viable project by the community. If you're not sure about a project and don't trust your own research make sure you get in contact with Telegram groups where people are well versed and will gladly help you figure out how safe your investment is. We'd be happy to help you too.

AT TREE DEFI THE NAME OF THE GAME IS SECURITY!

We've put a lot of thought into the list of features we have implemented on our platform. It might be fun to make a lot of money in 24 hours and run away with it, but that would only create more damage in a community that is already struggling to find honesty. So everything we've done thus far has been based on a long term proposition and prospect. If we put the work and time into making the safest platform on the Binance Smart Chain people will eventually hear our voice and support our community and goal of improving the DeFi landscape and helping the environment. That's why we've removed the migrator code at launch and we're working on further features to protect users from exploits and whale market manipulation. We're constantly in contact with various auditors whenever we release a new feature on the platform to make sure that the code is safe from any potential issues.

 Total Planted Tree (TPT)

4,105,903,906

We donate 1% of every deposit to plant new trees

We have a lot of respect for some of our honest competitors on the BSC, who are always striving to stay competitive, innovative and loyal to their users. That's why we've studied them and adapted the most innovative concepts to our platform. But we wanted to have something that is truly our own.

We haven't seen other platforms use their power and community for a good cause, so we decided to use one third ($\frac{1}{3}$) of the deposit fees on our platform to plant real trees. It's a great cause that we care deeply about, especially since Cryptocurrency mining has been affecting the environment more than several countries combined each year.

In practice $\frac{1}{3}$ of the deposit fees will always go to a separate address, used only for donations. Our users won't have to worry about us taking any of these profits, as the donations will be frequent and constantly tracked through our donation page on the platform. If anything shady happens it would mean the end of our project and the beginning of distrust in our community, which is exactly what we're focusing so hard on avoiding. We are employing our maximum attention towards delivering updates on tree donations as this is one of our main goals with the platform. The donation wallet money will also be used to fund our private tree planting projects around the world.

CARBON CREDITS

One of our main goals for the future of the TreeDefi project will include the implementation of Carbon Credits into our project and future company structure. Our aim is to provide a blockchain solution for CO2 offset, since it's a continuously growing field and in our opinion a fantastic growth proposition for the future.

As always we're thinking long term, and we believe that the next decade will be very influenced by environmental activities and carbon footprint offset, since companies will slowly be forced to comply.

Our Carbon Credit platform will offer CO2 offset options to both companies and individuals, allowing everyone to be mindful and proactive about their impact on the environment.

⑥ Earn CO2 Bond

04	TOKEN ID T4657984324	TOKEN NAME My Token Name	TREE NAME Baobab	OFFSETTED 0.5	CO2 OFFSET 300/year	Harvest	CO2 PENDING BOND 213 kg	Harvest All
05	TOKEN ID T4657984324	TOKEN NAME My Token Name	TREE NAME Baobab	OFFSETTED 0.5	CO2 OFFSET 300/year	Harvest		
06	TOKEN ID T4657984324	TOKEN NAME My Token Name	TREE NAME Baobab	OFFSETTED 0.5	CO2 OFFSET 300/year	Harvest		

EARN CREDITS



CHAPTER TWO

Yield Farming



YIELD FARMING

TOKENOMICS

Our tokenomics are based on a two token system, SEED and TREE. SEED is our token that features a low and deflationary emission, starting at 0.15 SEED per BSC Block, which deflates by 2% each week. SEED is also the main engine running our Yield Farms on the platform, since most farms and pools feature it as one of the present assets.

TREE is a capped token with a supply of only 16001 tokens. It is our governance token and rarest asset on the platform. Since TREE will never be minted again it's not usable as a reward in farms and staking pools, but we still try really hard to have launch pools that reward users with their favourite token. The launch pools are quite expensive at this point, but we're happy to offer them to our dedicated investors.

This system is based on a scarcity proposition, since we've noticed that many projects go for very high emission rates and fail to hold a steady market along the way.

Our goal has always been to start the project slowly and give it the proper time it deserves to grow, and this idea is noticeable in our token structure too. There was no reason for us to have ridiculous minting strategies and insane returns on the first days of the project if our goal was already more broad from day one.

This choice has played in our favour as months went by, and gave more trust to our users compared to other protocols.



F FARMS, STAKING POOLS AND LAUNCH POOLS

During the inception of our project we carefully thought out the farm and staking pool scheme we were going to implement. Our main goal in mind was to ensure really low selling pressure by incentivising our users to hold our tokens.

Farms

Our farms are not overwhelming in quantity and offer fantastic returns for our native token based farms. This incentivizes users to purchase the tokens and keep them inside the farms. All of the farms featuring our native tokens have solid multipliers and 0% deposit fees. At the same time we wanted to attract more investors, which is why we added BNB/BUSD and DAI/BUSD farms. The only issue with these is that they attract a lot of users that are ready to farm for free and sell off any profits. To combat that we made sure that the allocation points for those farms aren't too high and we added a 3% deposit fee. This will give the farmers a risk free investment on our platform, and with the addition of SEED auto-compounding they now also have an easy way to make more profits with the rewards they receive from their farms.

Staking Pools

We also feature staking pools that are fantastic since they don't feature the impermanent loss that is present in farms. It's also a much simpler system to understand for new investors. The same deposit fees apply here too. Native token staking pools have high multipliers and 0% deposit fees, while non native staking pools have lower multipliers and 3% deposit fees.

Launch Pools

Launch pools are limited time staking pools where users can stake their TREE or SEED for various rewards purchased by the team from the Treasury. The launch pools generally last anywhere from 1 week to 1 month depending on the value of the tokens added as rewards.

They are launched frequently and whenever one launch pool expires we launch others to have fresh pools for TreeDefi users.



AUTO COMPOUNDING

One of the most requested features since the beginning has been auto-compounding. Lots of investors believe in the project and would rather know that their investment is working by itself long term without having to worry about compounding it manually.

We've done our research, developed the feature and properly audited it before the official release. It's fun to drop new features every day, and it works in the beginning while releasing small updates. But currently our project is moving on a more serious path, with larger investments from users and an ever-growing community of people ready to exploit any code they can get their hands on. So we made sure to take our time and do things as right as possible for this feature, knowing that a lot of SEED will be held there.

The base functionality is relatively simple. You stake your SEED and the SEED manages itself, compounding your rewards back into the pool.

THE TECHNICAL DETAILS ARE AS FOLLOWS:

Deposit fee

No fees will be applied to your deposit.

Unstaking Fee

0.1% if you unstake (withdraw) within 72 hours.

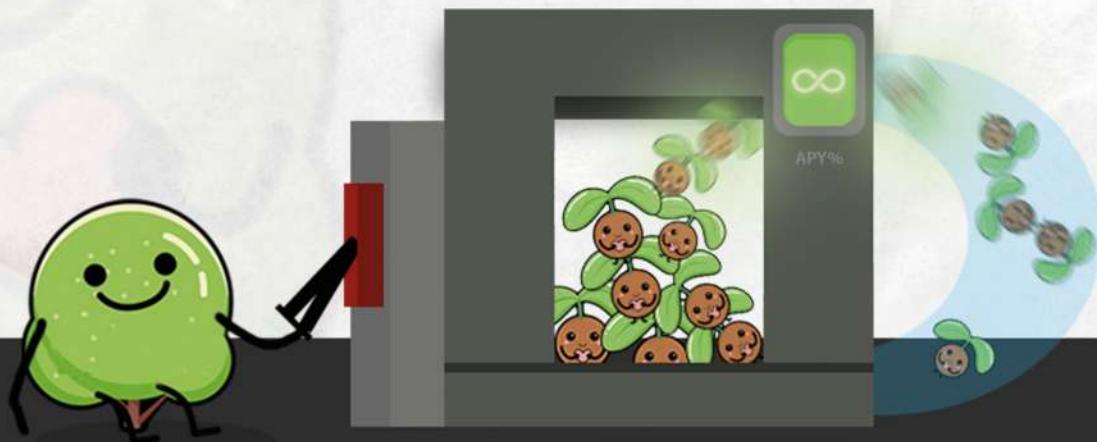
After 72 hours, you can withdraw with no fee.

The unstaking fee timer resets back to 72 hours every time you stake more SEED.

New Burning System

2% of each yield harvest is burned automatically

For example, if the harvest was 1 SEED, then 0.02 SEED would be subtracted and burned



HARVEST GUARD

Another safety feature we are adding with the release of our Masterchef V2 is the long awaited Harvest Guard. Harvest Guard is a system that will slow down the harvesting of rewards, making it harder for whales to dump tokens freely, especially when they join a fresh new pool that still has high APRs.

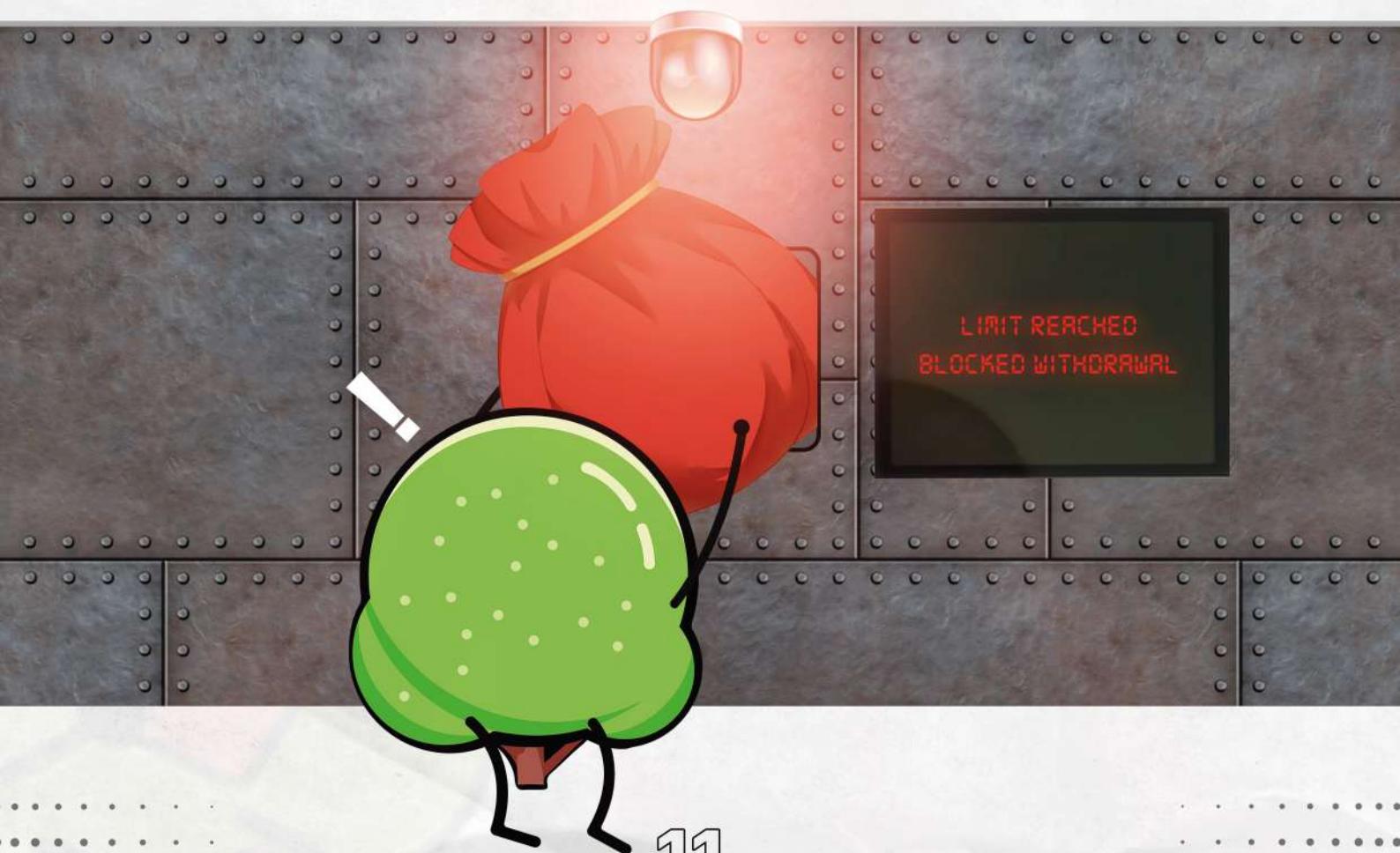
It will avoid price manipulation on our platform by locking part of the harvested tokens, 30% of your tokens will be released instantly, while 70% will be locked in harvest guard.

Harvest Guard will last 7 days, but for each new block added, a percentage of your harvest will be unlocked. So you will gradually receive all of your tokens through the next 7 days. This will help us keep a healthy token price, and will stop users from manipulating the market short term.

IMPROVED HARVEST ALL

Our Harvest All button on the homepage will receive a good logical update. When toggled, the Harvest All button will collect all of the rewards from farms, pools and harvest guard in one single transaction.

Furthermore, we will add an Auto Stake button that will allow our users to compound all of the pending rewards from farms and pools directly into Auto Seed.



AUTOMATED MARKET MAKER

Our next step after founding a stable base for the project has been the development of our own AMM (Automated Market Maker).

An AMM would allow us to step away from Pancake's router and offer more rewards to our loyal holders, while having more freedom with developments. It's the right step towards our platform's independence.

Our AMM Fee Split will be 0.22% on each trading fee and distributed as follows:

- **0.16% LP Token Holders**
- **0.03% Treasury**
- **0.03% Distributed in a pool where token holders will be able to farm the various LPs split from the trading fees**



FARM OPERATED MERCHANDISING

Ever since our project launched at the end of March we've had countless requests for merchandising. It seems like people love the TreeDefi brand and would like to represent it in the real world. We've been studying various ways to implement this in a creative way through the blockchain. Opening up a regular e-commerce would be fine and get the job done, but we wanted to get more creative with it and give it the proper Yield Farming flavour it deserves.

So we launched the TreeDefi Merchandise Store, where you can use SEED to farm FRUIT and have a chance to purchase items from our limited collections that we will release!



HOW DOES IT WORK?

The store is managed through the creation of a new utility token named FRUIT, which is a BEP20 token. The token has an initial supply of 100,000 FRUIT that will be distributed through a launch pool.

Users will be able to join said launch pool, stake their SEED and receive FRUIT tokens. Afterwards they can use their FRUIT rewards to order merchandising from our store.

FRUIT will not be a trading or speculation asset, but will only be used for merchandising. Therefore it won't have a daily emission, and the only new tokens available will be the ones minted by our team

Consider it a first come, first served methodology, but in this case it involves farming. The first users to farm enough FRUIT tokens will be able to order items from the store. When the item supply runs out and the merch drop is completed we will work on a future one with brand new items so our community can always have fresh items to work towards.

This is effective because we will only be dropping desirable items, we can accumulate the orders easily, contact manufacturers with exact numbers and not go insane while doing it, making everyone happy.

KING OF THE FOREST

King of the Forest is based on a last man standing concept. The last person to stand when the game timer expires is the winner. Every time a user bids SEED into the game the timer extends by a little bit, leaving some room for new users to join. Once the timer expires, the last person to have bid their SEED wins the whole pot and becomes the King of the Forest. The longer users are willing to bid SEED, the longer the game will last and the bigger the final reward will be. It's a game of patience and determination that rewards players if they keep playing for a long time.

The current version of King of the Forest has some newly added security features to ensure that bots and cheaters have a really hard time playing the game.

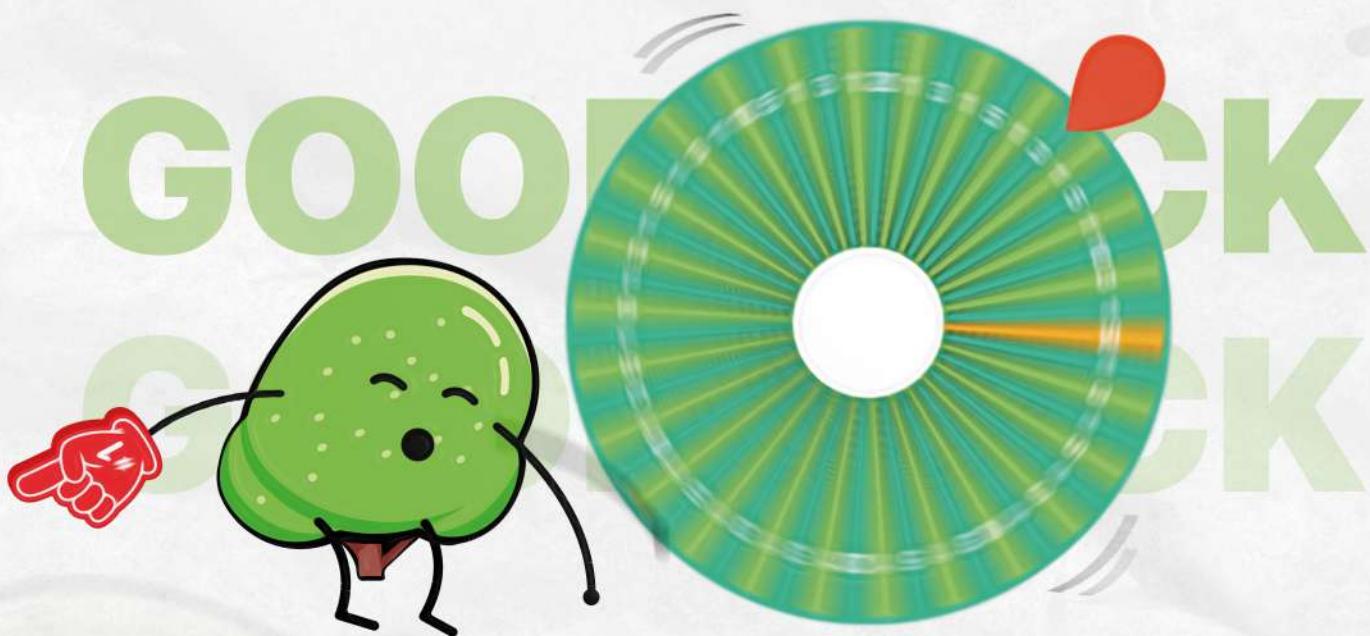
Firstly we added a cooldown period for the current king following his victory, meaning that the winner will have to skip one match in order to play again. This will stop bots from playing the game over and over again. It will also give smaller investors a chance to play without whales with a lot of patience.

We've also implemented a blacklist system that allows us to block certain addresses from accessing the game. If we notice any botting activity or something shady that would be dishonest to other King of the Forest players we can ban the wallet in question from playing the game.



GREEN WHEEL

Green wheel is the first game we released on the TreeDefi platform, and it works on a roulette concept. The main objective for it is to offer something fun to our investors while adding a burning mechanism to the game, giving it utility for the whole ecosystem.



The rules of the game are as follows:

- You can bet on the number on which you believe the wheel will stop
- The multipliers are 1X, 3X, 5X, 10X, 20X, 50X
- Winners receive the multiplier reward + the initial bet they made
- You can split the bet on different numbers to step up your strategy!
- The max allowed bet is dynamically calculated to ensure that your eventual win can be fulfilled by us
- 10% of each lost bet will be burned, 90% will be added to the pot

CHAPTER THREE

NFTrees



INTRODUCTION

Our NFT journey on the BSC has started as a way to bring NFTs to the real world, through real connections with the environment. We did this by creating artwork that our users could purchase and give said artwork a direct correlation with one of the trees we planted in real life. For each NFT from our original collection there is at least one real tree planted, with its own story, location and photo updates of the NFTree's life.

- The first collection featured 9 NFTrees
- The initial sale burned 90% of the raised SEED, while the remaining 10% went
- Into the Marketing Vault
- Users could resell their newly purchased NFTrees

The image shows a digital marketplace interface titled "Marketplace". Above the interface, there are two cartoonish tree characters with faces and arms; one is orange with green leaves, and the other is green with white spots. They are positioned behind a decorative border featuring green leaves and a network-like pattern. The marketplace grid contains eight cards, each representing a different tree:

Tree Type	Base Price
Markhamia	1.01 TREE
Coffee	20.00 TREE
Cacao	10.00 TREE
Sesbania	10.00 TREE
Passion Fruit	1.00 TREE
Loquat a.k.a. the Japanese Medlar	10.00 SEED
African Fern Pine	3.00 TREE
African Fern Pine	10.00 WBNB

Our brand new NFT Marketplace brings some new features to our original system and a brand new interface that was battle tested thanks to our community's bug finding skills. The new NFTs will still keep all of the features of the first version, including:

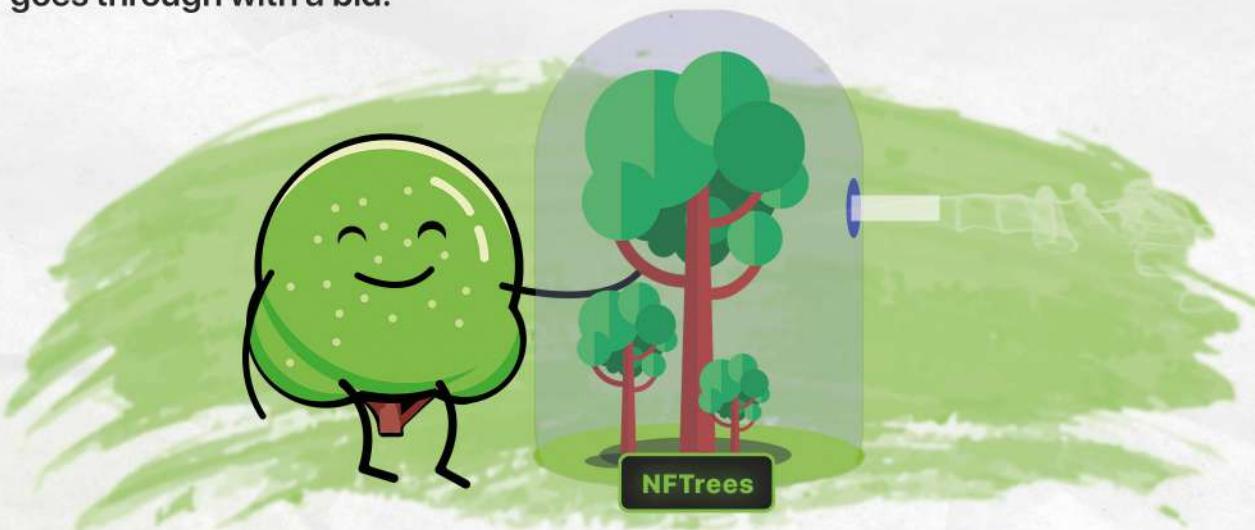
- NAME • BIRTH DATE AND PLACE • IDENTIFICATION CODE

The best new feature included is that they will also showcase how much CO2 they absorb. This allows us to offset the amount of CO2 emitted into the atmosphere each day through our future carbon credit system.

We've also focused heavily on improvements to our NFT User Experience, by offering our users the chance to purchase each NFTree with SEED, TREE or WBNB. Each NFTree can be put up for auction through the English or Dutch Auction systems.

In the English system the user can set a base price, an auction length and then choose his preferred bid.

In the Dutch system the user can choose a maximum price, a minimum price and auction length. As the auction goes on the price will start to drop until someone goes through with a bid.



The Marketplace fee will be 0.5% for SEED and TREE, and 3% for WBNB.

We will also feature NFTree filters

- Categories: Guava, Cacao, Coffee, Macadamia etc.
- Country: Philippines, Brasil, Kenya etc.
- CO2 Offset Range: for example 0-5 kg/year, 5-20 kg/year etc.
- Price range



CHAPTER FOUR

Carbon Credit Platform



CARBON CREDIT PLATFORM

What are Carbon Credits?

Now that you were able to get massive amounts of information about TreeDefi and became a professional TreeHugger, you are prepared to understand our golden ticket, Carbon Credits. "Carbon Credit" is a non-specific term for any tradable certificate or permit representing the right to emit one ton of Carbon Dioxide (CO₂) or the correspondent of a different greenhouse gas (GHG), as H₂O, CH₄, N₂O and O₃.

Carbon Credits were launched in 1997 during the United Nations Framework Convention on Climate Change (UNFCCC) that was hosted in Kyoto, Japan.

At this convention the world's nations agreed that carbon credits were a good way of reducing the emissions of GHG (GreenHouse Gas) and climate change. However, it was only later in 2016, when carbon credits got massive spotlights from the entire world during the Paris Agreement event, also realized by the UNFCCC. During this global event, 175 parties (including China, United States and India) and the European Union, signed the agreement with all of its conditions – including the Article 6, in which all of the parties are in agreement to collaborate for the reduction of GHG and allow international cooperation, meaning that emission reductions can be transferred between countries and counted by the NDCs, (Nationally Determined Contributions) using carbon credits.

The goal is to allow market mechanisms to steer industrial and commercial processes toward lower-emissions or less carbon intensive approaches than those used when emitting carbon dioxide in the atmosphere and other GHGs are free.



HOW DO CARBON CREDITS WORK?

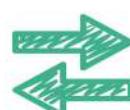
Essentially, carbon credits are an artificial way of creating a new market of supply and demand of credits. Based on the rules of the Kyoto Convention, Emitters of GHG (usually big industries i.e., stationary resource) are allocated a number of permits to emit, that is supposed to be lower than their annual average emission on greenhouse gasses. In practice, if a company receives a permit to emit 100 tCO₂ (tons of CO₂) but they need to spend 150 tCO₂ to keep their operations, consequently, they will have to buy 50 tCO₂ in Carbon Credits from someone allowed to emit them – in this case, us! It is important to point out that after an organization or an individual buys a carbon credit the credit is permanently retired, so it can't be reused, only the owner (who possesses it) can be changed via a trade or transaction.

Moreover, it is important to mention that the company is not obligated to buy the credits, they also have the option of reducing their emission of GHG, which is usually not their preferred choice. In addition, a noticeable thing is that the permits for big industries are decreasing every year, meaning that the demand for Carbon Credits will intensify in the coming years. The prices for 2021 were expected to average around 40€ before doubling it by the end of this decade. Having all of this mentioned above in mind, it is relatively easy to reach the conclusion that demand is something that is not missing in this market. The supply matter and competition will be discussed a few pages down on this whitepaper.



The best Swap for the environment!

Carbon



Oxigen

WHO IS BUYING THEM?

As mentioned in the previous section, big industries/companies are the major buyers of Carbon Credits, however, not only them. It was stated by the Kyoto Protocol that each nation was responsible for manipulating its domestic fossil fuel emitters to reach the targeted reductions while any countries having difficulties meeting their own emissions targets could reduce their emissions on paper by trading in emissions allowances with countries that already had surplus allowances or by buying directly carbon credits from authorized sources since many countries still have governmental companies. The countries that are most producing and buying carbon credits are: New Zealand, Japan, Australia, United States, South Korea, Mexico and India. It is also possible to mention some massive companies that are constantly buying carbon credits such as: Boston Consulting Group, IBM, Delta, Disney, JP Morgan Chase, Salesforce and many other companies from the oil and gas sector.

Besides that, many individuals are buying carbon credits with the aim of reducing their CO₂ footprint since most businesses, as most people, would like to make a positive impact on the environment. This is called the voluntary market and is mainly inhabited by individuals, families and privately owned companies.

This can be slightly controversial since buying carbon credits is 'obligatory' for many companies nowadays, however, it is extremely important to point out the benefits of the carbon credits for: Corporations, Small-businesses and Individuals

Corporations: For Corporations and Large-Multinational companies the main benefit is the fact that carbon credits are tax deductible, which is extremely important since these companies are mainly based in developed countries where corporate taxes are high. Furthermore, supporting carbon credits means being against carbon taxes, a precursory idea of carbon credits where companies would have their taxes increased based on their carbon emissions. Additionally, the legal obligation can be converted into marketing campaigns pursuing that the vast majority of customers are integrally interested in environment-friendly companies. The new generations are growing with the environmental-awareness which can be vastly explored by companies. We at TreeDefi believe that the corporations are the best possible allies to reduce the destruction of the environment and consequently make the world a better place. The market, the customers and the environment need to walk hand in hand.

Small-Business: For small, local and family businesses, trading carbon credits can be a good way of getting immersed on the future and already get acquainted to it. By buying carbon credits you support vulnerable communities around the world in ways that can be life-changing, empowering for girls and women, provide jobs, boost crop yields and protect biodiversity, these are just a few of the benefits.

Individuals: For individuals, buying carbon credits can be an amazing investment opportunity having in mind what was mentioned previously. The demand is huge and the price will most probably sky-rocket in the following years. Additionally, individuals can reduce their own carbon footprint that nowadays is an average of 4 tons per person. Studies are showing that this average has to be reduced to 2 tons by 2050 to avoid irreversible damage. For instance, the global temperature would rise by 2°C, which would end up making more than 70% of Earth's coastlines' sea-level rise greater than 0.2 meters.

HOW TO GET CERTIFIED

To get certified to emit carbon credits, projects must adhere to a rigorous set of criteria that was settled on by the Kyoto Protocol, pass verification by third-party agencies and be reviewed by a panel of experts leading carbon offset standards. After it, your project can be approved Internationally to emit and commercialize carbon credits. Moreover, it is extremely important to state that the production of the carbon credits has to be clean of more Carbon dioxide emission, which suits us perfectly since we are a Proof of Stake cryptocurrency.

This process is directly related to the Supply subject mentioned previously, the entry barrier to emit carbon credits is thick and the mechanism is too bureaucratic. This is probably why you do not see a ton of cryptocurrency projects that are doing it.

The bureaucracy in a way is good because it keeps the market relatively clean of fake plantings and fake projects trying to enrich themselves by selling fake carbon credits. However, it does not motivate new projects to start or even individuals with land to help the environment since having the land, buying the saplings, making viability studies and keeping the trees safe are pretty expensive and without any monetary return it becomes a non viable option for many small projects. Furthermore, it also means that we are not going to see many TreeDefi competitors any time soon which is amazing news for our investors and users.

OUR PLATFORM

Our Carbon Credit platform is designed to fit in the TreeDefi ecosystem and will follow the same design language as the V2 of our Yield Farming app and our NFT Marketplace. The platform will be the place where Companies or Individuals will be able to create Co2 Offset Certificates.

Thanks to the magic of the blockchain you'll be able to find useful information such as the origin of your CO2 tokens, therefore which real life planted tree they originate from, which nation the tree was born in, the tree species and of course how much CO2 you are offsetting through our platform. This will allow you to backtrack the origin of your good deed and see exactly how your CO2 tokens were born.

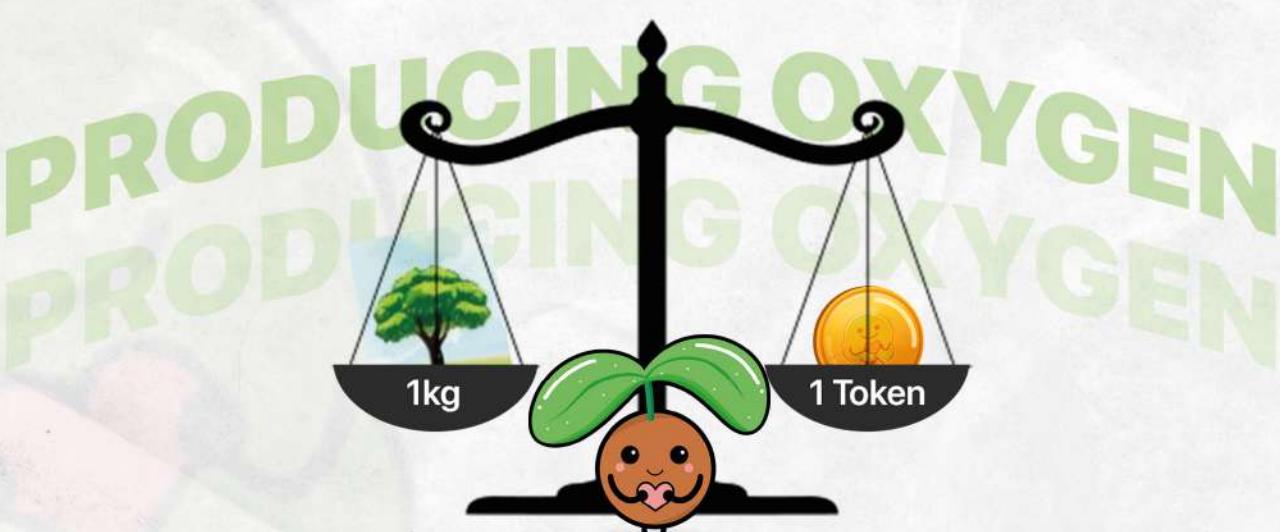
In the certificate you'll also be able to find the specific trees that are fueling your Co2 Offset Certificates and therefore all of the details.

CO2 TOKEN

The CO2 Token will be a BEP20 token that users can earn by staking their NFTrees. Since NFTrees are directly correlated to a real life tree they will also offset the specific amount of CO2 that their tree species offsets, giving birth to CO2 tokens.

1 CO2 Token equals 1KG of CO2, so we'll be able to accurately calculate our CO2 Token emission and relate it to the amount of CO2 absorbed by the tree in question.

Afterwards CO2 tokens can be used to create Co2 Offset Certificates through our platform, for both Companies or Individuals. Companies will be able to offset all of their activities and adhere to the growing regulations put in place, while individuals will be able to help the environment and offset daily life activities, such as flights, personal transportation methods and other things related to an individual's personal footprint.



KEEPING SEED AND TREE UTILITY

We won't forget about our Yield Farming origins during our expansion in the Carbon Credit world. To ensure this, SEED and TREE will keep their utility by being the main tokens that allow users to purchase NFTrees, which are the foundation for all of our future Carbon Credit activities.

Furthermore, our TREE holders will reap rewards from all of the additional AMM trading activity that we will receive thanks to the carbon credit platform.

TOKEN USABILITY



Fiat



Seed



CO2

We are also working on systems that will allow users to purchase NFTrees or CO2 Tokens directly through their credit card, but the payment will first be an automatic conversion to SEED and TREE, which will then purchase the NFTree or CO2 tokens desired, ensuring more daily activity for our beloved tokens.

CHAPTER FIVE

Tree Planting



TREE PLANTING

Introduction

Our tree planting activities have started as a way to bring DeFi into the real world through a goal that anyone can relate to. It's pretty hard to find anyone that hates trees around the world, so we thought it would be the perfect proposition for the BSC. At the time there were very few projects working on charitable actions, so it seemed like the right idea at the right moment in time.

After our project launch others have followed with their own version of cryptocurrency tree planting. Some have been decent, others relatively simplistic and others complete frauds. But ultimately it's good to have competition to motivate us further.

Our tree planting origins have also helped us attract a community of lovely people that support the project for its principles and fundamentals, and not for its moonshot value. This has blessed us not only with amazing and constructive conversations with our members, but fantastic new original ideas we could implement in the future for the TreeDefi project.

CONTRIBUTION



BITCOIN AND ITS DAMAGE TO THE ENVIRONMENT

Our idea initially came randomly while looking outside the window, but that was probably the moment when various things clicked in place. We had been studying the negative effects of Bitcoin Mining on the environment for a long time before TreeDefi started and thought that there must be a better way to manage cryptocurrency.

You might think cryptocurrency is fine for the environment since it's just a digital asset, but you would be wrong. Traditionally digital currency is created when high-powered computers compete against other machines to solve complex mathematical puzzles, an energy-intensive process that often relies on fossil fuels, particularly coal, the dirtiest of them all.

Bitcoin production is estimated to generate between 22 and 22.9 million metric tons of carbon dioxide emissions a year, or between the levels produced by Jordan and Sri Lanka, according to a 2019 study in scientific journal Joule.

This is horrible news for the crypto world in general, and should be unacceptable at this point, when so many companies are striving to implement eco-friendly solutions for each of their production techniques and product lines.

Generally hydro solutions are only used during rainy seasons at most and for the rest of the year coal remains the most popular tool. Chemically, coal is mostly carbon, which, when burned, reacts with oxygen in the air to produce carbon dioxide, a heat-trapping gas. When released into the atmosphere, carbon dioxide works like a blanket, warming the earth above normal limits.

According to the Cambridge Bitcoin Electricity Consumption Index, bitcoin-mining operations worldwide now use energy at the rate of nearly a hundred and twenty terawatt-hours per year. This is about the annual domestic electricity consumption of the entire nation of Sweden.



The best solution to this is moving over to Proof of Stake, a modification of Proof of Work introduced in 2012 as a means to solve its perceived dependency on energy consumption as a means to determine blockchain ordering. Rather than rely on computers racing to generate the appropriate hash, the idea behind a PoS protocol is that participation is determined by ownership of the coin supply.

Similar to PoW, a PoS blockchain is a mechanism that consists of a string of blocks aligned in chronological order based on its transactions. The first block in a PoS blockchain is also hardcoded into its software and is commonly named the genesis block. The subsequent blocks added to the blockchain always refer to the previous blocks and each contain a copy of the full, updated ledger.

Of note, in PoS cryptocurrencies, there is no competition for who is selected to add blocks. As such, the blocks are often said to be 'forged', or 'minted' rather than mined. That's precisely how our token creation is managed, allowing us to not only have environmentally friendly goals, but environmentally friendly token creation principles.

DONATIONS

Up until recently we've managed most of our tree donations through our trusted organizations that plant trees around the world. These include TeamTrees, Trees for the Future, One Tree Planted and Treedom. Our donations were done both through cryptocurrency and fiat. Unfortunately Trees for the Future has been one of the few planters that accepts crypto. Hopefully the rest will follow one day. But thanks to the ease in converting crypto to fiat we haven't encountered any issues through fiat donations either.

Our donations come from the donation wallet, fueled by $\frac{1}{3}$ of all of the deposit fees across the farms on our platform.



REAL LIFE PLANTING PROJECTS

The Anak Alam planting project consisted of reforesting a part of local land in Sumbawa where the learning house planted Moringa and Banana trees with us and educated their little students on the proper techniques and the importance of reforestation. It's not only a fun activity but an important educational one for the future generations to come.

We hosted two tree planting activities in the Philippines thanks to our Filipino ambassador, TreeCeratops, who curated each step of the activities. The first event was held in Cainta, Rizal, Philippines. It was hosted with the local government unit of the DENR protected area and ended with 80 seedlings being planted in one day.

The second event was hosted in Quezon City in June, where we participated in the Bike, Hike, Plant event, spearheaded by the Forest Management Bureau, an arm of the Department of Environment and Natural Resources.

Five Hundred seedlings were also donated to the Ninoy Aquino Parks and Wildlife Center. TreeDefi and the Forest Management Bureau signed a Memorandum of Agreement which includes a provision that the FMP will take care of the seedlings' well being and growth.



FUTURE PLANS

Our future plans include more donations to our favourite organisations, various planting campaigns to attract more people to our goals and obviously much more private planting projects across the world. We will constantly look for more trustworthy ambassadors that are as dedicated as we are to the planting objectives, so we can keep spreading the TreeDefi planting initiatives everywhere around the world and increase the size of our team.

We are also looking into having a proper legal structure to base our planting activities in real life. This is taking a lot of thought and we're seeing which company structure is most adequate for such an initiative.

PARTNERS

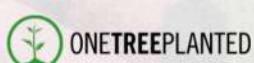
Some of our favourite organizations that we donate to include Team Trees, Trees for the Future, Treedom, One Tree Planted, Instituto Terra and many more. They are well established projects with different positive environmental goals, and we recommend you check them out and help with their initiatives if you wish.

Another important partner of ours is the Anak Alam Learning House, an initiative founded by Baiq Dewi Yuningsih in her community in rural Sumbawa, Indonesia. She has been active for over a year, in which she has expanded the project into a center supporting over 60 children from the local village.

The learning house's goal is to teach children about the importance of environmental sustainability while empowering them to be the seeds for change in their community. Anak Alam has already done a land reforestation project with us, and you can find video content from it on our Youtube channel.

We've also hosted two planting events in the Philippines with the local government unit of the DENR protected area and the Forest management Bureau, thanks to our Filipino ambassador TreeCeratops.

We are also working on partnerships with various local authorities in Brazil thanks to our Brazilian ambassador, MrMadCoin. The first goal is to plant 100 trees around 10 parks in his home city of Goiana, that are tracked through our NFT system and that will bring awareness about our project through QR codes. The next step is to plant 10,000 trees thanks to the help of the environment agency in a program where we'll involve kids in the tree planting activities and we'll educate them about the importance of our environmental activities.



CHAPTER SIX

Security



SECURITY

One of our goals from the beginning of the project was to get a large security audit from a credible firm. We knew this would give our investors more trust and would allow us to test our code and see exactly where our security is sitting. We are always confident in our skills and tests before a feature delivery, but it's better to have specialised external sources that can drop a critical eye on our project. This has become customary now, and each feature we release goes through various reviews, as we will mention later.

Certik is a blockchain security firm operating with cutting-edge Formal Verification technology on smart contracts and blockchain networks. They have serviced countless blockchains and DeFi protocols, including some of the biggest names like PancakeSwap, Polygon, AAVE, 1Inch and now TreeDefi.

To be audited by Certik you must provide your smart contracts and the specification of their intended behaviors to Certik.

The smart contracts will undergo formal verification through the Certik Security Oracle.

Experts will then manually review the contracts, and Certik will provide an audit report classifying vulnerabilities and proposing solutions for them.

Certik Skynet is an intelligence engine powering the security scores on the Certik Security Leaderboard. The engine provides 24/7 security analysis for smart contracts. This is done through various off-chain and on-chain sources.

TreeDefi is fully audited by Certik currently, and you can check our full audit, including the issues we fixed in the code, along with our live Skynet evaluation on Certik's Website.



PRIVATE PEER REVIEWS

Another important step when delivering any new features is peer reviews. We have a list of trusted code reviewers from various audit firms that help us with smart contract safety assessment whenever we wish to deliver a new feature.

Peer reviews are a more effective way to assess code since we can have a larger pool of people analysing it, direct contact with the auditors and shorter waiting times than we would with a traditional audit firm.

For example our AutoSEED code has undergone various security checks and we found several issues in the original code we used to develop AutoSEED. We are ultimately managing user funds through these new features, so it's critical for us to keep analysing and taking the proper time and care while developing anything new.



Users can often be impatient and put pressure on the development team, but we have to stay calm and work at the fastest, but most importantly safest pace we can work at. Having quickly developed features is only good if they are secure, and rushed features are not always secure.

So we will keep operating with maximum care for every new TreeDefi release, while updating everyone on the findings we have, especially if it's about public code, or anything that could be dangerous for other projects on the BSC.

KING OF THE FOREST ANTI CHEAT

As mentioned previously, King of the Forest now features a few security updates, to ensure that we can assess and remove any botting activity from the game.

The BSC and blockchain setup in general is an innovative concept that offers freedom to users, but it offers lots of botting opportunities too. To combat this developers must innovate and find ways to blacklist accounts from accessing their smart contracts. This might go against the "decentralized" concept of cryptocurrency to some degree. But no one likes bots, so there need to exist ways to deal with them, until Binance or other large blockchain players decide to implement native antibot systems into their networks.

In the case of King of the Forest we have added a cooldown period for the current king following his victory, meaning that the winner will have to skip one match in order to play again. This will stop bots from playing the game over and over again. It will also give smaller investors a chance to play without whales every single game.

We've also implemented a blacklist system that allows us to block certain addresses from accessing the game. If we notice any botting activity or something shady that would be dishonest to other King of the Forest players we can ban the wallet in question from playing the game.



ANTI FLASH LOAN FEATURES

In the recent months we have witnessed the unfortunate downfall of a lot of projects on the BSC and other networks recently due to flash loan attacks.

A flash loan attack is a DeFi attack where a person can take a flash loan (uncollateralized loan) from a lending protocol and use it to manipulate the market. The attack usually lasts very few seconds and can affect several protocols at one time.

There are usually two types of loans: secured, which require collateral, and unsecured. In the case of regular finance, a bank could let you borrow a small sum of money if your track record is clean, but for a larger sum they would require collateral, such as your house, car, land etc.

Flash loans fall into the unsecured loan category, and require no track record, collateral, credit check or any limits to the amount you can borrow, as long as you can pay back the loan in the same transaction.

Arbitrage is a popular flash loan method where traders can earn off of price differences on separate exchanges. Cyber thieves have found clever ways to exploit this feature, and have marked the downfall of various tokens across the blockchain.

Flash loans work because they are low risk and high reward while only requiring a computer and internet connection. The people running them are extremely clever, but they have all of the freedom in the world to execute their activities in peace.

To avoid flash loans protocols can implement decentralized pricing oracles such as Chainlink and Band Protocol instead of relying on a single DEX as a source for their price feed.

In our case we've decided to have a 2 block delay before confirming any transaction on our AMM in the future. This would make the flash loan impossible.

ANTI WHALE FEATURES

To make sure that our market is not easily manipulated by whales we decided to develop a feature that limits the transfer amount a user can manage in one transaction. In the beginning more than 0.5% of the total supply will be rejected and as our total supply and market grow this will be reduced.

CREDITS

Dragon Blood Tree - Development

JVS - Carbon Credit Research

Pailer - Design

