

# PROVISIONAL ENDORSEMENT APPLICATION

## .clpJZnhZ Trees

### *APPLICANT INFORMATION*

INVENTOR: Dr. Rimelda Xhirae

For additional inventors, attach Form 1220i

SPONSOR: The Forum of Innovations

(if applicable)

ADDRESS: Office 616, Forum 4, 552824

PULSE: jeLgVSMtipaSoTWJXgZW^fLX

### *INVENTION FIELD*

CATEGORY: Human centered sustainability

OBJECT OF THE CONCEPT: Continually harvestable fruit plant regardless of growth season

### *LIMITS OF RELATED ARTS*

This section should summarize the gap in existing technologies

Current human centered food sustainability is limited to preservation methods, flora durability, fauna reproductive cycle modification, and biodiversity increases. There are no concepts yet which address the seasonal growth cycles of food availability.

### *SUMMARY*

This section should list the objective(s) of your concept. For additional objectives, attach form 1220s

1. Provide a sustainable source of food for individuals afflicted by food insecurity
2. Provide a sustainable source of income for individuals selling grown goods
3. Create an additional global revenue stream which remains consistent regardless of season

### *BRIEF DESCRIPTION OF THE DRAWINGS*

Briefly describe each drawing and/or flowchart and/or logic diagram

Figure 1 shows a standard deciduous fruit tree before genetic modification. It has a central trunk that splits into several bare branches during the winter season when the tree is dormant. Small images of DNA structures surround the tree to represent its natural genome.

Figure 2 depicts the same tree during its fruiting phase. Small images of the flowers which precede the fruits fill the upper corners of the image to detail the phases of the growth cycle.

Figure 3 depicts the same tree after genetic alteration using sequencing techniques to enable year-round fruiting. Different branches are shown bearing fruits indicative of spring, summer, fall and winter simultaneously. The DNA strand images have colored segments to illustrate the targeted genetic changes made to enable phased flowering and fruiting.

## *DETAILED DESCRIPTION*

Describe your concept and its preferred embodiment in depth

The .clpJZnhZ Tree represents a revolutionary approach to perennial food production through sequenced genetic modification. Utilizing advanced gene editing techniques, regions of the tree's genome regulating seasonal flowering and dormancy cues were identified and altered to enable asynchronous cycling.

Rather than going through synchronized stages of flowering, fruiting, and winter dormancy, the .clpJZnhZ Tree maintains a distributed phenology at all times. The crown is divided into quadrants programmed to persist in separate seasonal phases simultaneously:

25% of branches remain dormant with bare deciduous woody stems, accumulating and storing resources.

25% are in spring growth, covered in newly emerged leaves and shoots.

25% bear blossoms indicative of peak flowering season.

25% are laden with fruit.

This ensures a continual yearly supply of produce by preventing the boom-bust cycles endemic to conventional fruiting trees and their limited seasonal yields. The .clpJZnhZ Tree provides regular access to nutritious foods independent of regional climate variations.

While complex, the core genetic changes can be summarized as tuning flowering pathway genes to respond to engineered cues rather than environmental stimuli. Dormancy is similarly induced through genetic timers rather than temperature and light signals. Ongoing research aims to optimize asynchronous cycling for maximum fruit quality and tree health.

Figure 1



