

Proposal for greening with environmental-friendliness



Evergreen Kirinsou Association



常緑キリンソウ普及協会

What is the Sedum Kirinsou?

It grows naturally in various areas of Japan and Asia.

Evergreen Kirinsou
Newly developed patent plant

Feature of Kirinsou



Strong in the hot and also in the cold.



Strong in dryness and also in excessive moisture.



Low maintenance

**(Only a little water is necessary for planting.
Natural rainfall is enough in Japan.
Cropping is not required unlike lawn.)**

Feature of Kirinsou-1



**Strong in the hot
and also in the cold.**



The other plant withers due to the hot.

Kirinsou grows up energetically.



Examination of passing the winter in the VT, United States

The lowest temperature -40 degrees

Survivable temperature -40°C ~ +50°C

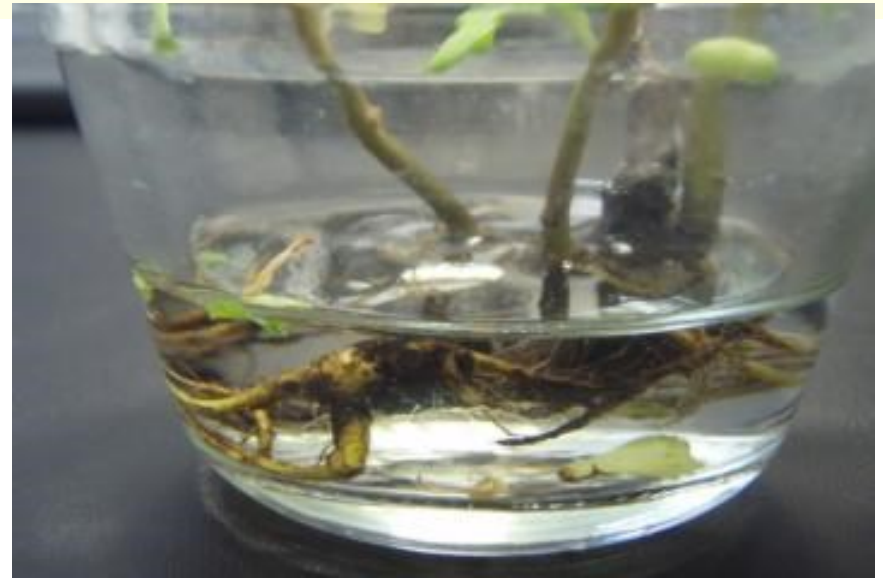
Feature of Kirinsou-2



Strong in dryness and the excessive moisture.



After one month of no soil and no water, above is a state which Kirinsou is alive without withering.



The environment which the root is under water is OK..
It is alive. The root does not rot.

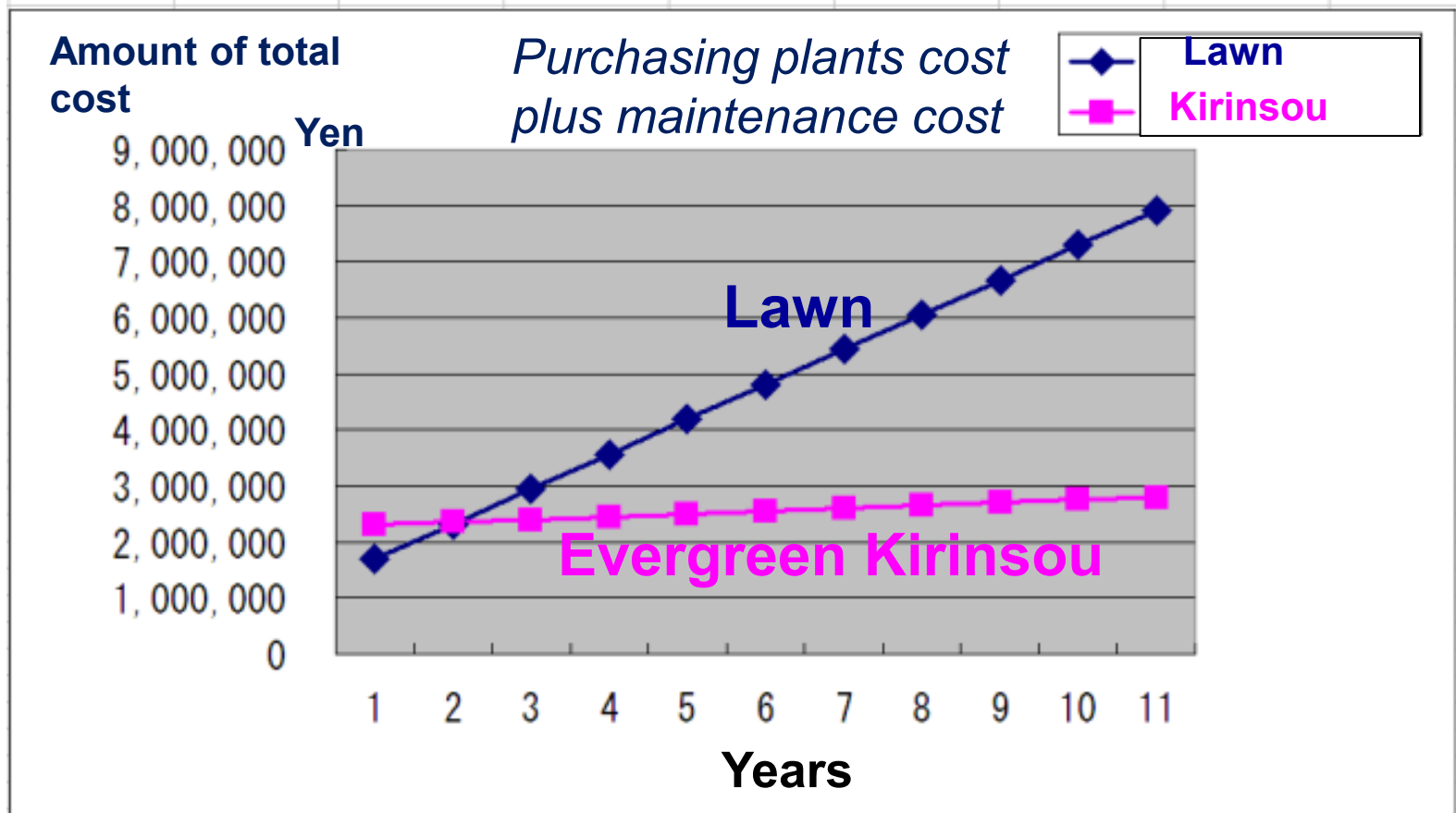
Even if it does not rain for three months, Kirinsou is survivable in Japan.

Feature of Kirinsou-3



Low maintenance

(Only a little water is necessary for planting. Only natural rainfall is enough in Japan. Just a few fertilizer is necessary. Cropping is not required unlike lawn.)



The maintenance expense is very cheap compared with other plants such as lawn. 6

The general **problems** of greening which Kirinsou bag method solves

(details are to be explained later)



The soil flows out.



The weed invades.

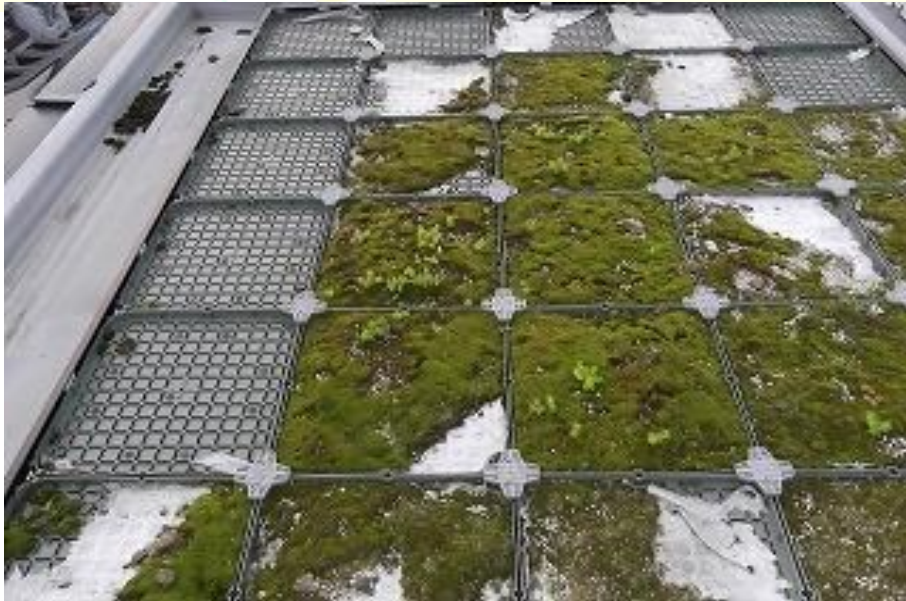


**The gardening
construction is difficult.**

The general problem of greening-1



The soil flows out.



The soil flows out because of the strong wind and the heavy rain.

The general problem of greening-2



The weed invades.



**The weed cannot be prevented from invading.
The maintenance fee increases.**

The general **problem** of greening-3



The gardening construction is difficult.



**Gardening construction by specialists is necessary.
The amateur cannot construct it.**

The problems of greening are **solved by Kirinsou.**



The soil erosion is prevented.



**The weed is prevented from
invading.**



**The gardening construction is
easy.**

Solution-1

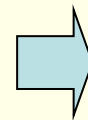
Evergreen Kirinsou bag method



The soil erosion is prevented.



The weed is prevented from invading.



This special bag for Kirinsou is Patented item in Japan.

Solution-2

Evergreen Kirinsou bag method



The gardening construction is easy.



It is possible to set it up easily.

The junior high school students can also do it very easily.

Advantages of Greening by Kirinsou

1. Expansion of green areas against desert

- Kirinsou can survive even in dry environments, it can expand green areas -

2. Moderation of global warming

- Contribute to moderation of global warming by CO2 reduction -

3. Keep cooling buildings and houses in summer and keep warming in winter

- Kirinsou moderates variation of temperature -

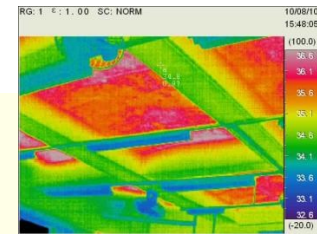
4. Aesthetic Effects

- Create aesthetic scenes and relax people -

5. Protection of buildings and houses

- Prevent deterioration of buildings and houses caused by acid rain, ultraviolet light, variation of temperature, etc.,

Temperature of the Ordinary room



Temperature of the Room with a roof greened

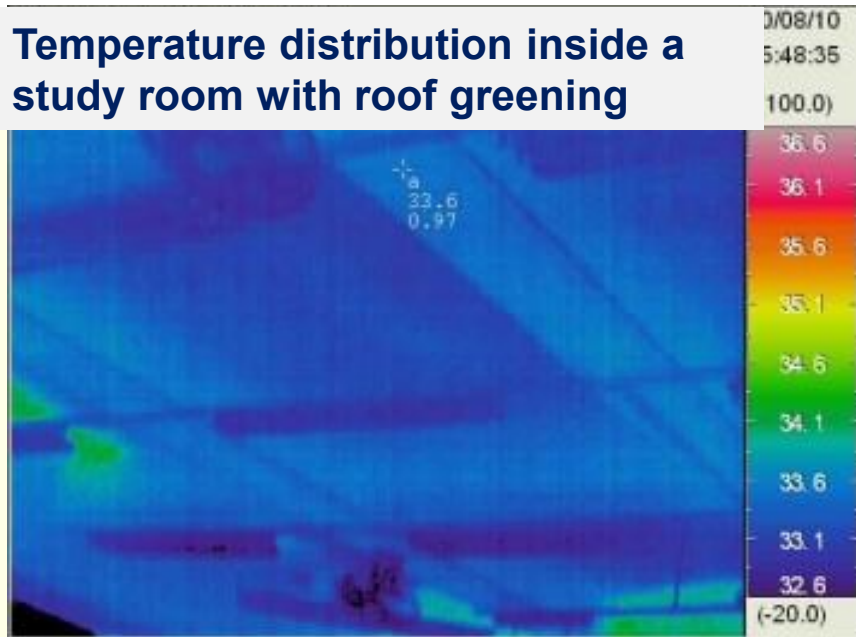


Roof greened makes comfortable living and/or working spaces.

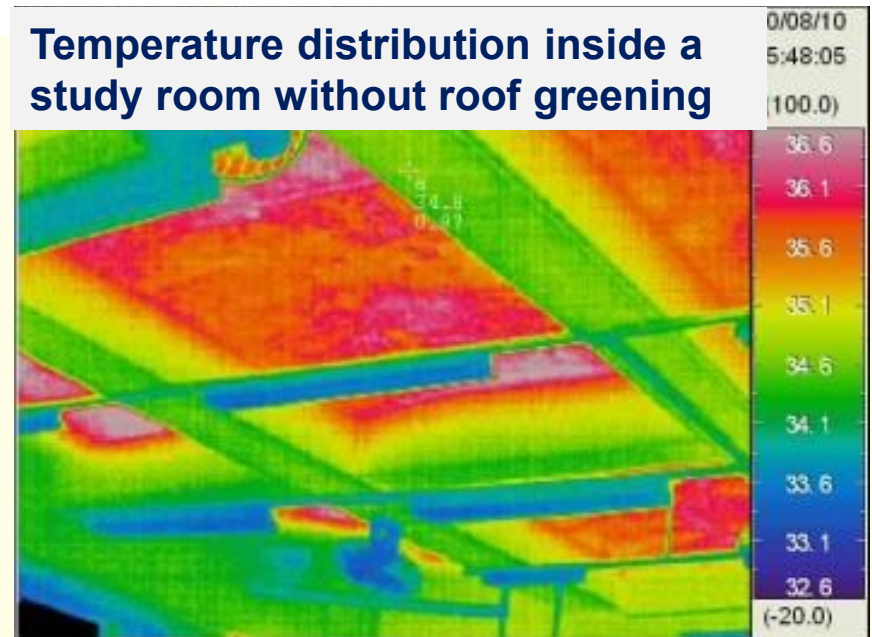


Effects of roof greening with Kirinsou to temperature inside study room(Maebashi No4. junior high school)

Temperature distribution inside a study room with roof greening

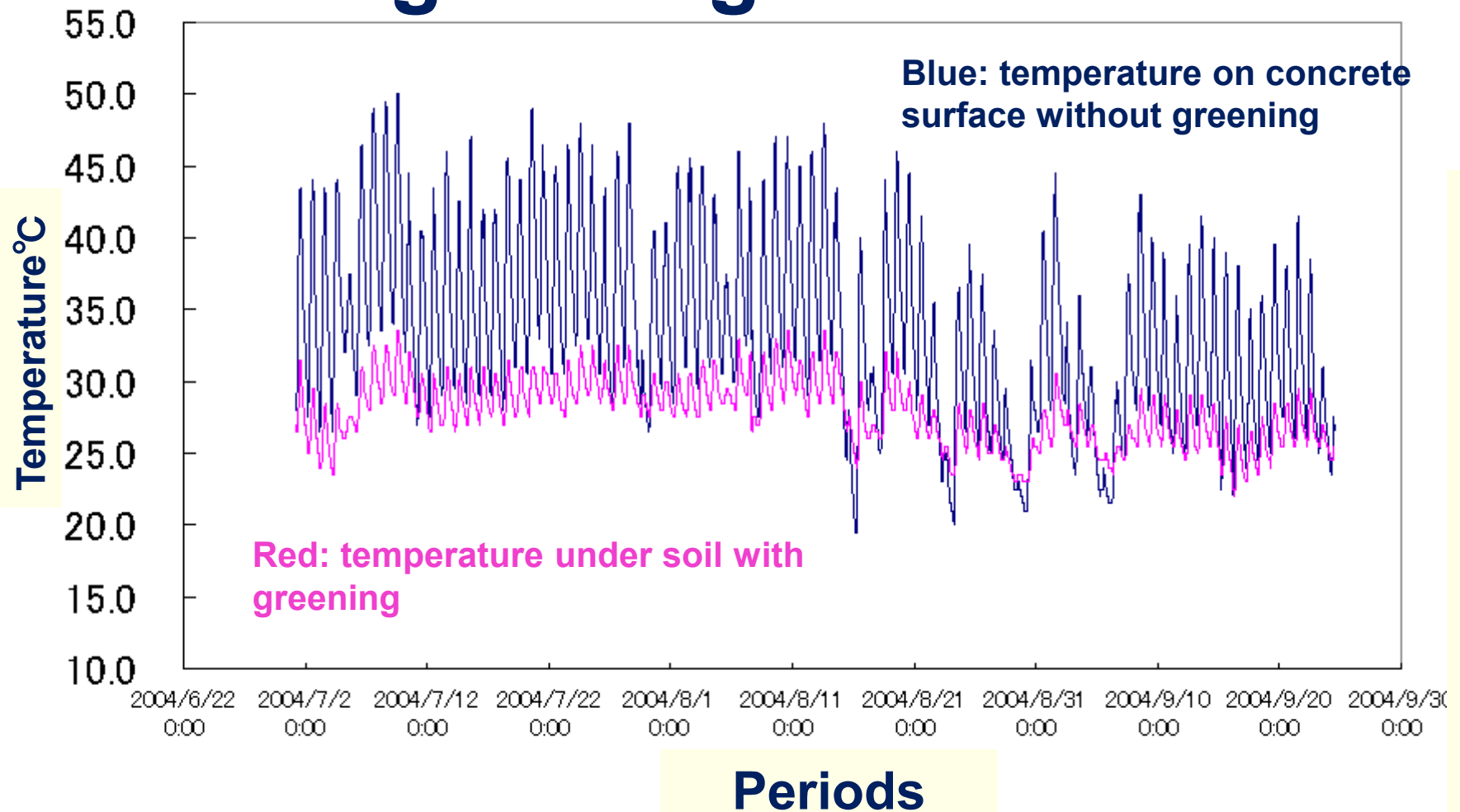


Temperature distribution inside a study room without roof greening

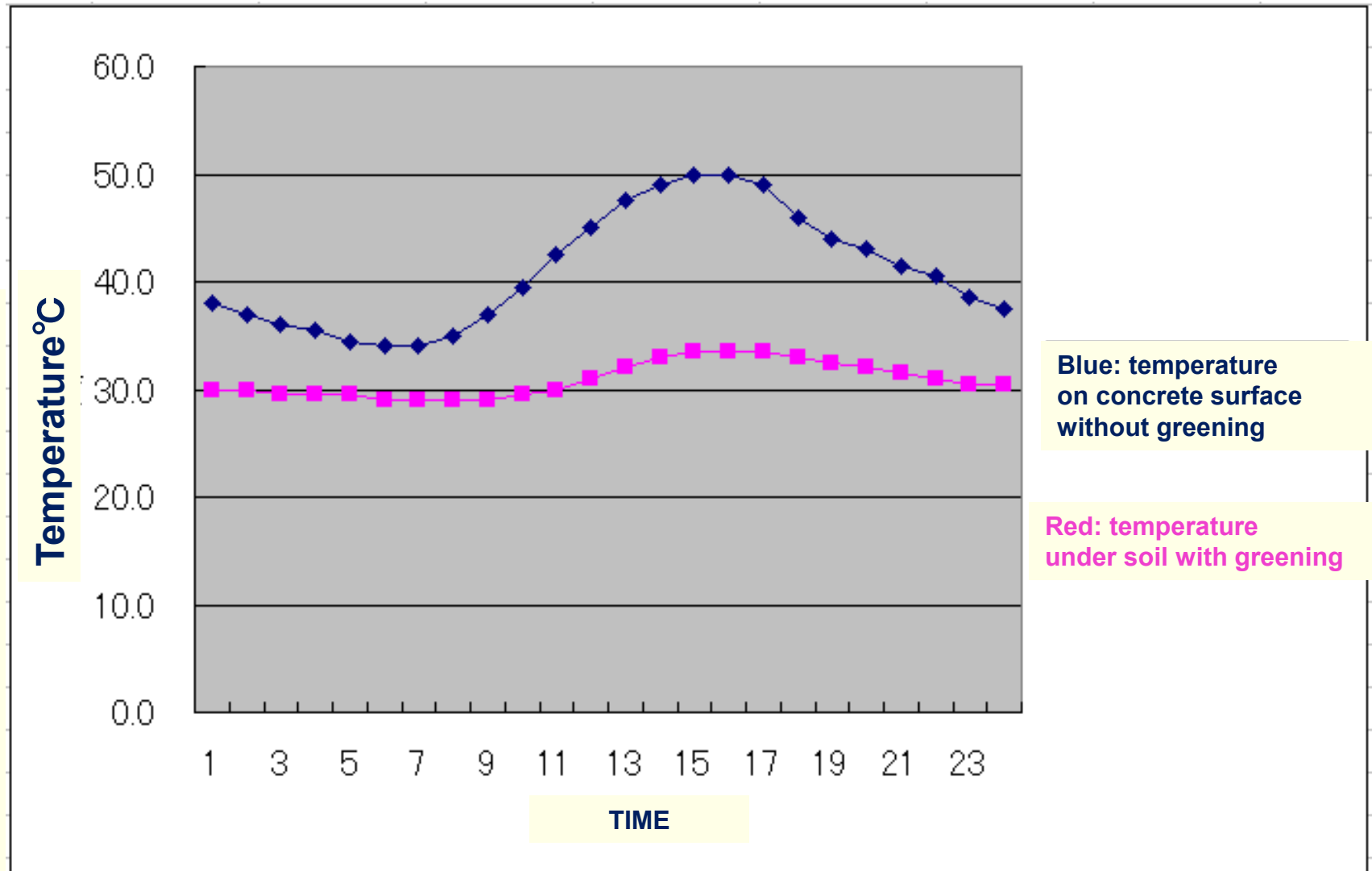


Roof greening cooled a study room.

Temperatures in summer season on concrete surface with and without greening



Temperature change in a day(7/20)

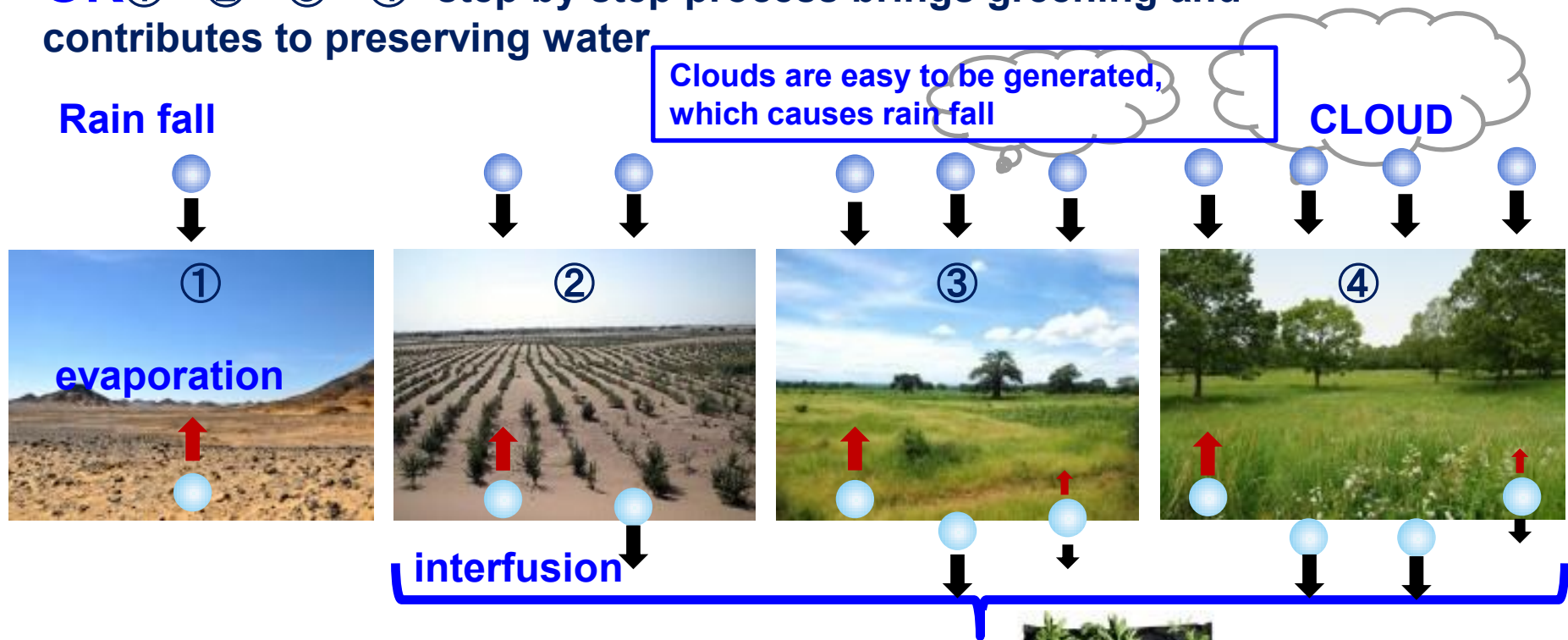


By greening, change of temperature is to be mild, which contributes to reduction of cooling/warming expenses.

Process of greening dry areas

NG ① → ④ rapid change is impossible

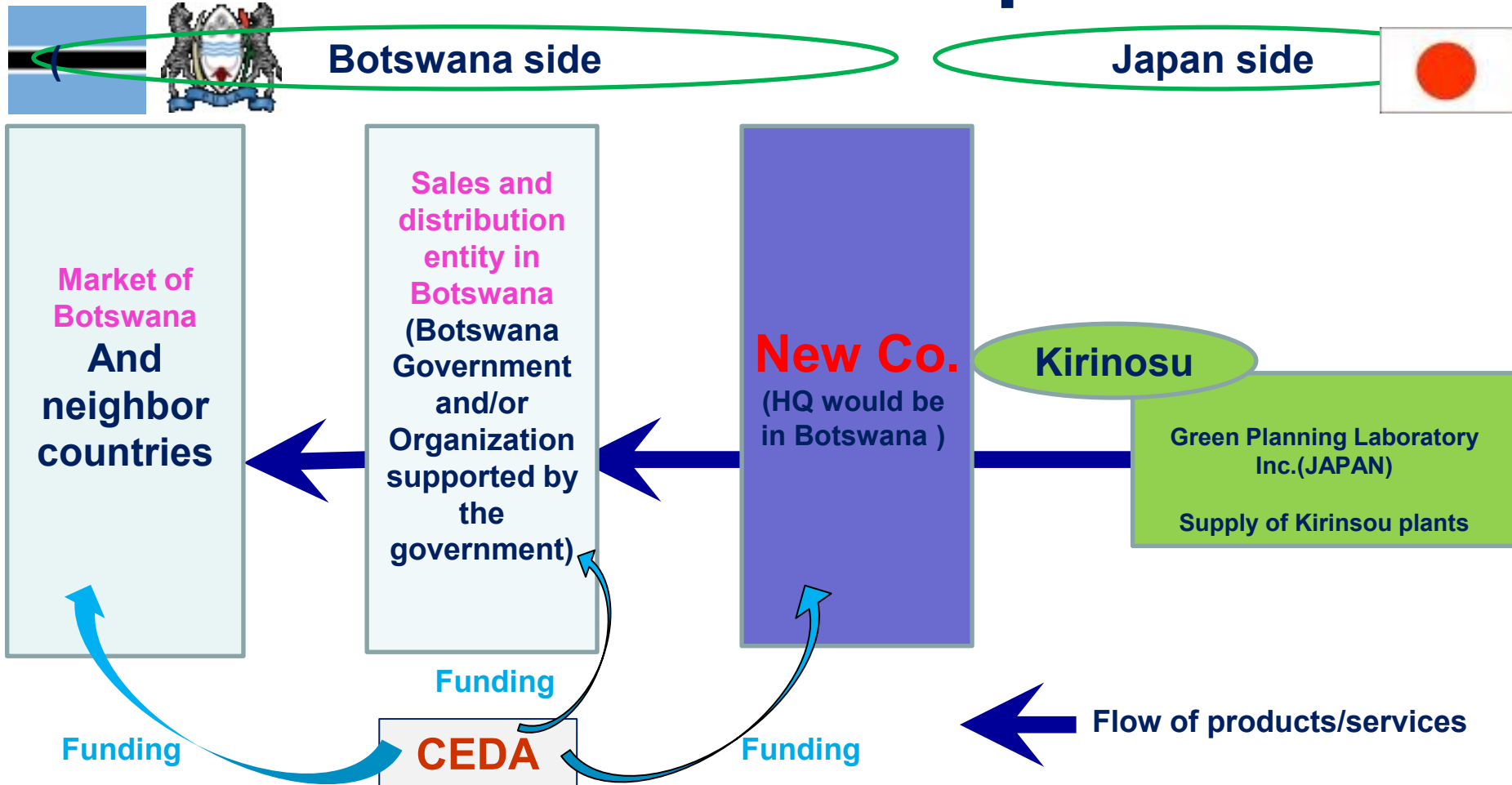
OK ① → ② → ③ → ④ step by step process brings greening and contributes to preserving water



1. Ground plant which is tolerable to Dryness and is kept green is necessary.
2. Some method which sand does not move is necessary
3. Some method to reduce water evaporatio is necessary.

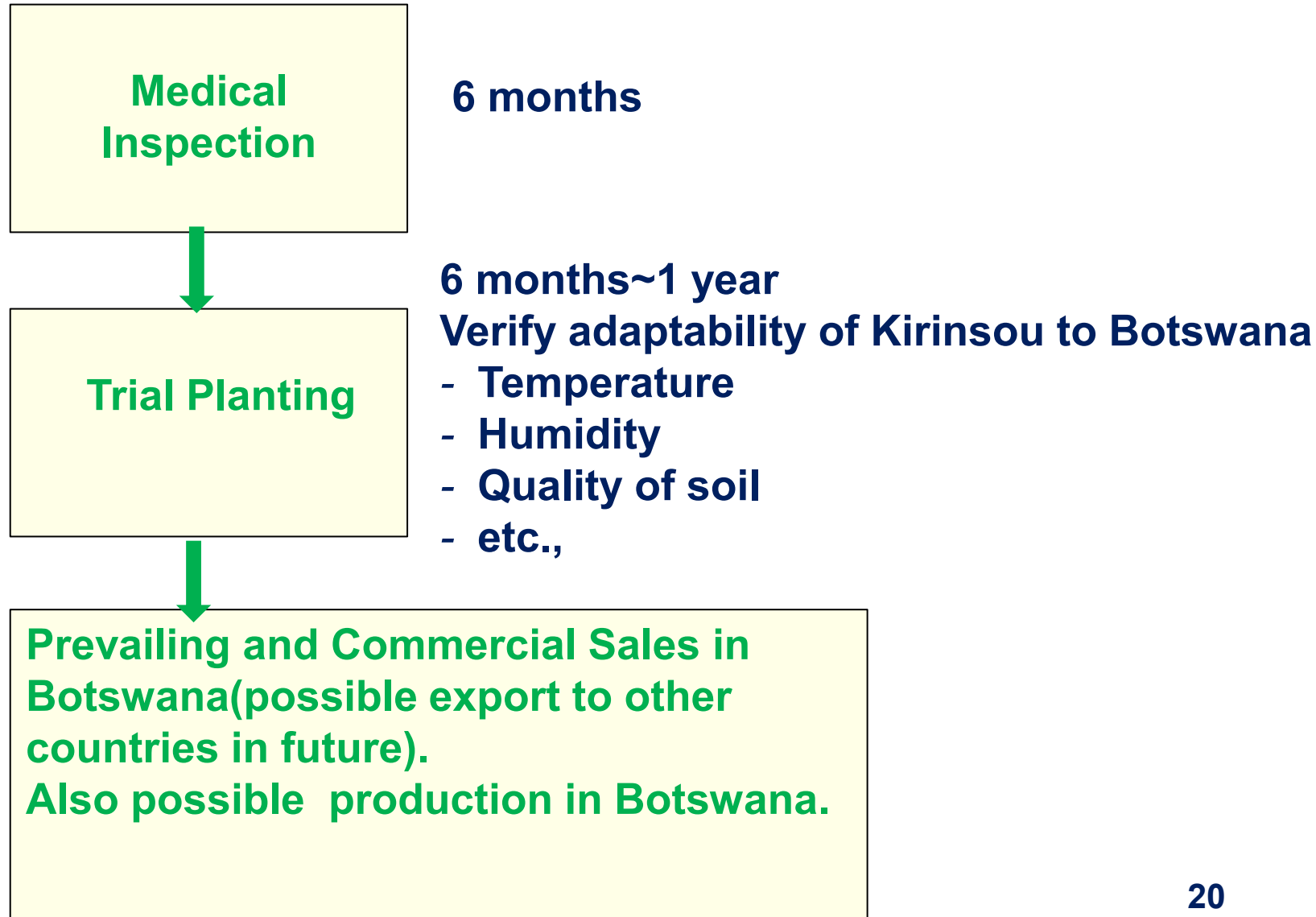
KIRINSOU Bag suits those requirements perfectly.

Proposal of a new company which links Botswana and Japan

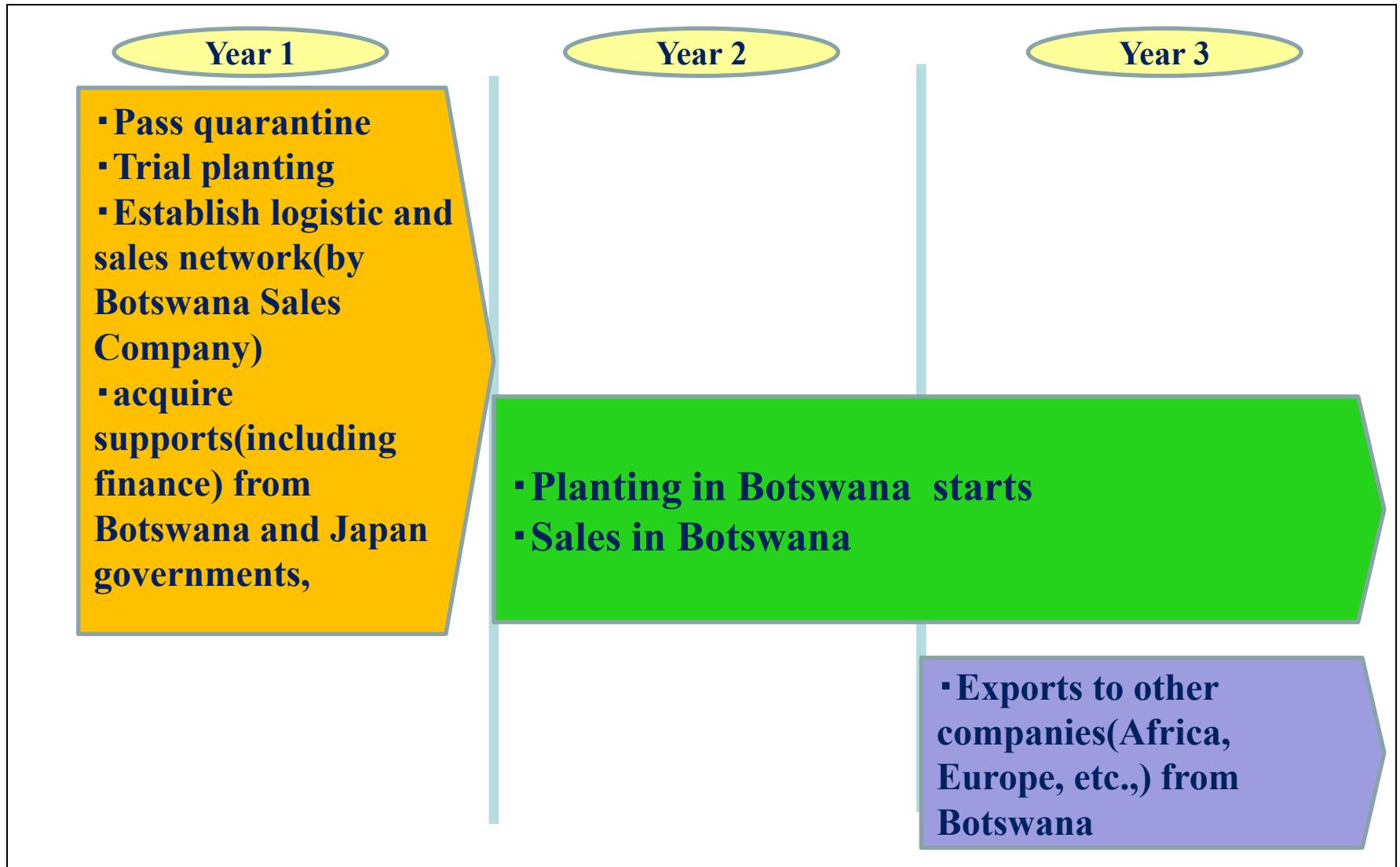


Involvement of Botswana **government** is indispensable anyhow.

Introduction of Kirinsou to Botswana



Kirinsou projects schedule



Patent matters

Kirinsou has Japanese Patent (2007)

- **Needs patent registration in Botswana and also in other countries.**

Examples by Kirinsou in Japan



Rooftop gardening

Examples by Kirinsou in Japan



Slanted roof greening



Examples by Kirinsou in Japan



Greening on wall



Examples by Kirinsou in Japan



Greening in dam

Examples by Kirinsou in Japan



Greening of freeway

Examples by Kirinsou in Japan



Greening of roads

Examples by Kirinsou in Japan

Nuclear plant



Greening of concrete slopes

Examples by Kirinsou in Japan

Photovoltaic power plant



**The power generation efficiency goes up,
and prevention of weed invasion.**

View in the future (Worldwide)

Export to UAE, Oman and other countries is under planning.

Proving test

Cooperation with university



**Urban area
Greening of
facilities**



**Suburbs area
Anti-Desertification
measures**

View in the future (Worldwide)



Expanding applied area (Japan)



Tohoku revival support project started



Expanding applied area(Japan)

The TOKYO Olympics in 2020

Greening of facilities to be constructed newly by Tokyo Olympic 2020.

Hometown of Kirinsou - Tottori Farm



It is 75 minutes by airplane from Tokyo.

Taito City Office (Tokyo)

Sample garden.



The visit is free.
10:00AM-4:00PM of weekday



You are welcome at any time.



Many kinds of plants including Kirinsou are exhibited.

Kirinsou in Exhibition.

Smart Community Japan 2015 Invitation

6/17~6/19
Tokyo Big sight

Integrated exhibition of new city planning that the
next generation energy brings

END



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