

# Integrated Pest Management (IPM) Materials

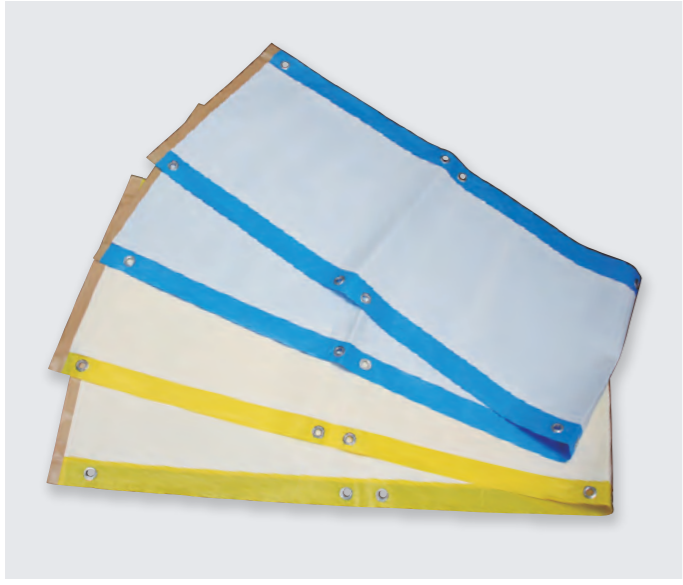
## Woven Fabric Sheet with Adhesive

Contrast of light and shade due to irregular translucency of the warp and weft threads of the fabric




Three-dimensional contrast created by the uneven surface structure peculiar to the textile

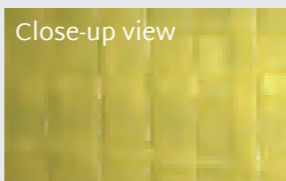
**Powerful Attraction Effect**




Translucency and surface unevenness of the sheet




Yellow



Close-up view

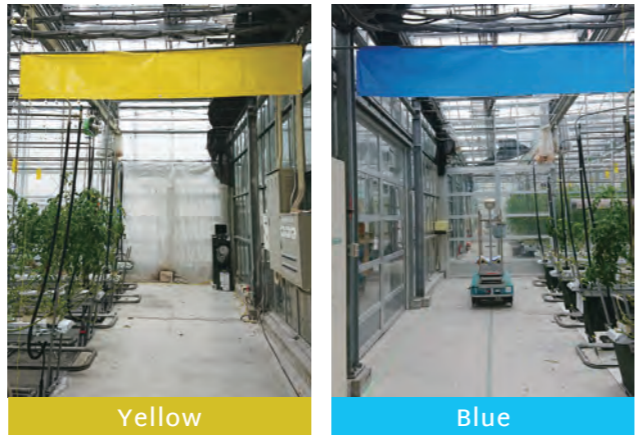
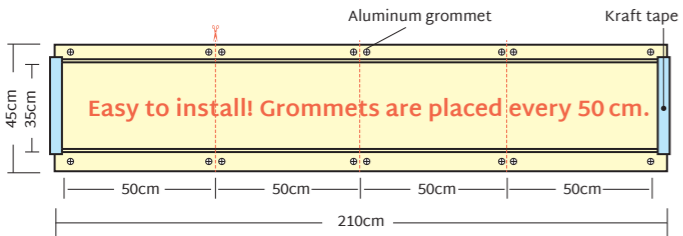


Blue



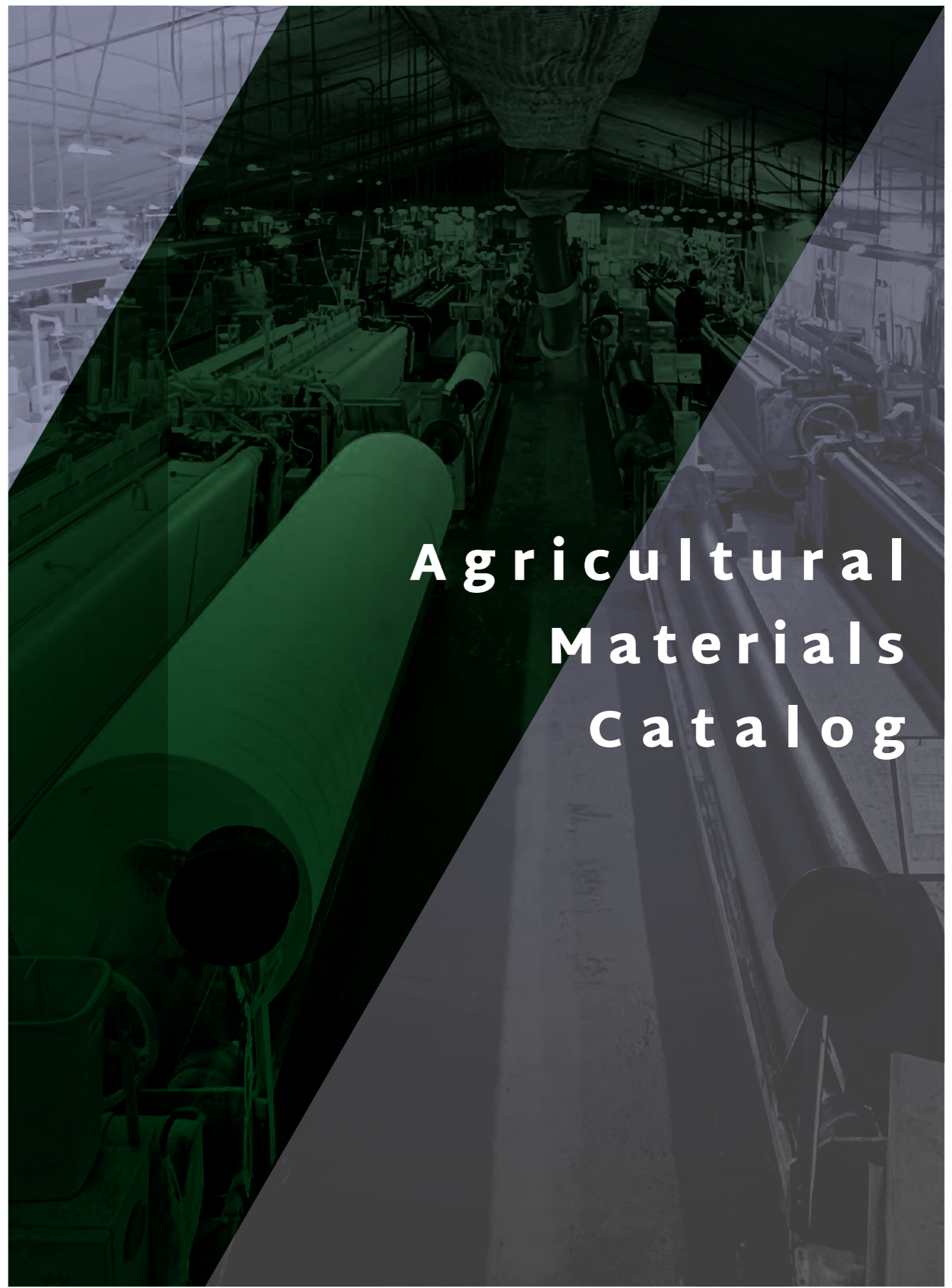
Close-up view

When the sheets are placed on paper with printed text, the text remains visible due to the translucency of the sheets



- |  |   |   |   |
|--|---|---|---|
| <p><b>Yellow</b></p> <ul style="list-style-type: none"> <li>- Leafminers</li> <li>- Thrips palmi</li> <li>- Thrips tabaci</li> <li>- Planthoppers</li> <li>- Whiteflies</li> </ul> | <p><b>Blue</b></p> <ul style="list-style-type: none"> <li>- Stable flies</li> <li>- House flies</li> <li>- Fruit flies</li> <li>etc.</li> </ul> | <ul style="list-style-type: none"> <li>- Flower thrips</li> <li>- Thrips palmi</li> <li>- Thrips tabaci</li> <li>- Stable flies</li> <li>- House flies</li> <li>etc.</li> </ul> | <ul style="list-style-type: none"> <li>- Fruit flies</li> <li>etc.</li> </ul> |
|--|---|---|---|

The values in the test data are measured values, not guaranteed values. Please feel free to contact us. We'll be happy to answer your questions.



# Agricultural Materials Catalog



# Dattanda! Koizumiseima's Agricultural Materials



## What does "dattanda!" mean?

Japanese phrase "dattanda!" has two key meanings:

1. An expression of amazement.
2. A phrase for discovering something previously unknown.

We aim to be an indispensable force that steadfastly supports agriculture and makes a lasting global impact beyond Japan, even if unnoticed in daily life. We hope that when people notice us, they say with surprise and inspiration:

**"Koizumiseima dattanda!  
We've been using Koizumiseima's products  
for a long time!"**

### Greenhouse Inner Curtains

Improves light environments thanks to a unique folding method

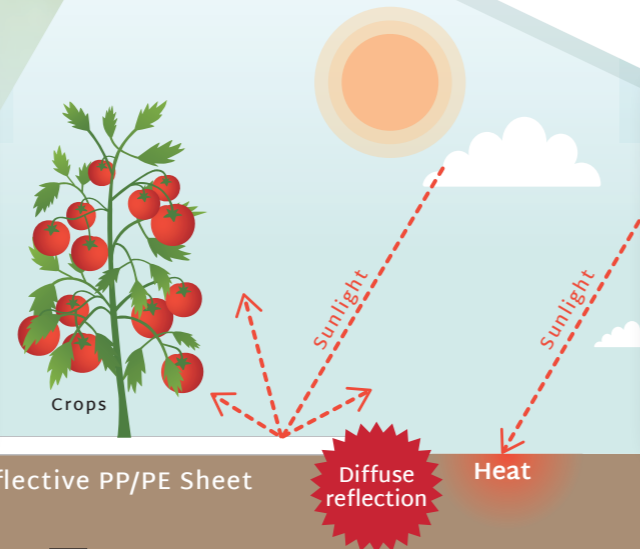


### Reflective PP/PE Sheet

Installation around crops improves light environments



Reflective PP/PE Sheet



1

### Reflective PE Sheet UV Plus

Installation around a greenhouse keeps pests out



### Reflective PE Net UV Plus



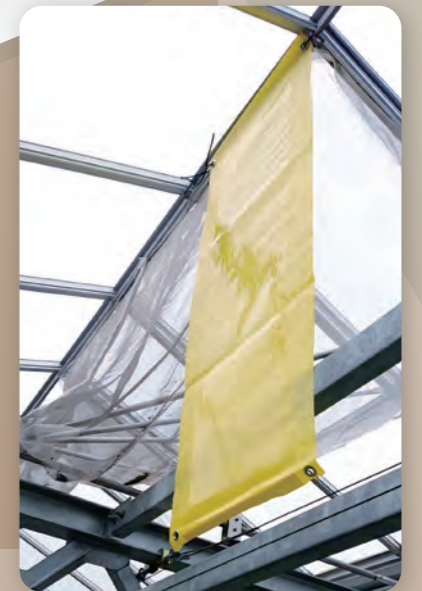
### Reflective PE Screen

Contributes to reducing extreme heat



### Woven Fabric Sheet with Adhesive

Attractive effect with two types of contrasts



2

# Reflective Materials

Reflect light of a wide range of wavelengths to create a suitable environment for crops



## Reflective PP/PE Sheet

Japanese Patent No.6319853



**Best for**

- Tomato
- Peach
- Fig
- Asparagus
- Persimmon
- Flowers
- Eggplant
- Cherry
- Strawberry
- Orange
- Grape
- Apple

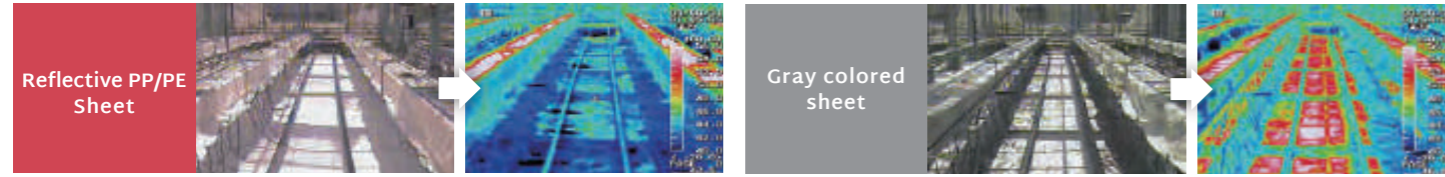
Features



### Heat Shielding

Suppresses temperature rise on the ground surface

by highly reflecting light in the infrared region

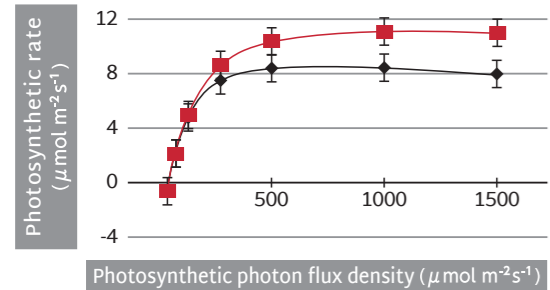


### Improvement of Light Environment

Increases yield, enhances coloring

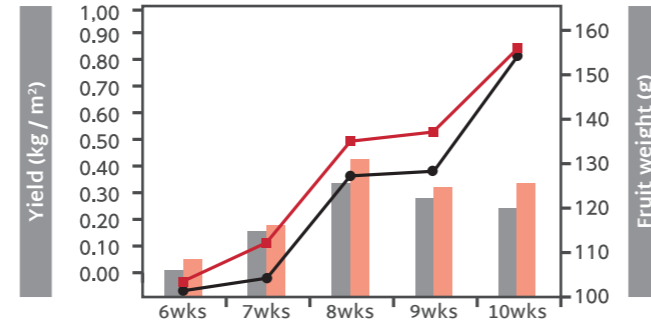
by highly reflecting light in the 400-700 nm region

#### Photosynthetic rate and light intensity



Measured on the lowest leaf of a tomato plant  
Test Institutes: Ehime University

#### Yield and fruit weight of tomatoes



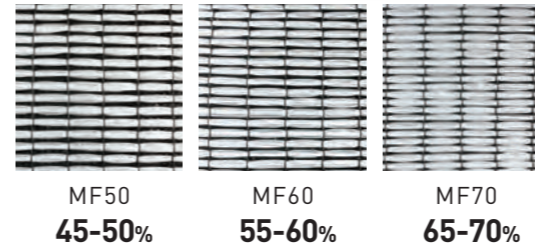
Test Institutes: Ehime University



## Reflective PE Screen

Japanese Patent No.6319853

Shading Rate



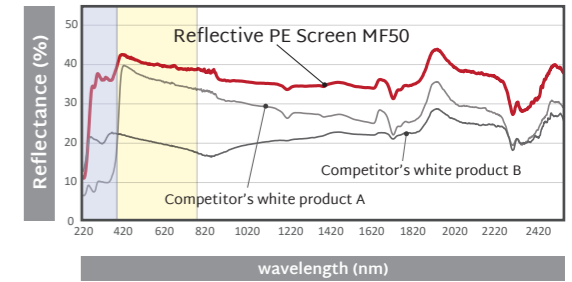
**Best for**

- Tomato
  - Bell pepper
  - Flowers
  - Strawberry
  - Leafy vegetables
  - Live stock house
- \*Successful Applications in Japan

Features



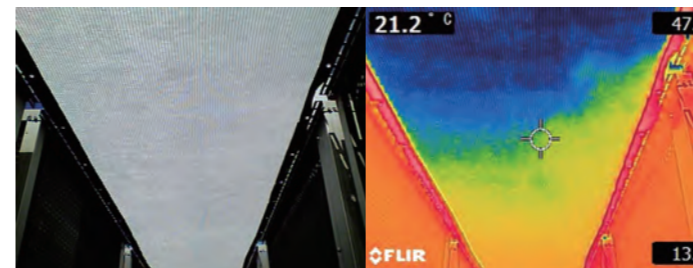
Reflectance comparison



### Heat Shielding

Contributes to reducing extreme heat and improving the working environment

through its high reflectivity and light diffusion



### Improvement of the Growing Environments

Increases yield

by preventing high-temperature damage



### Strawberry Fruit Protector

Guards strawberries

against pest damage, water accumulation, and thermal burn



YouTube

Heat shielding test in a greenhouse



YouTube

Case study on improving the yield of high-grade produce



# Reflective Materials

Reflect light of a wide range of wavelengths to create a suitable environment for crops



## Reflective PE Sheet UV Plus

Japanese Patent No.6319853



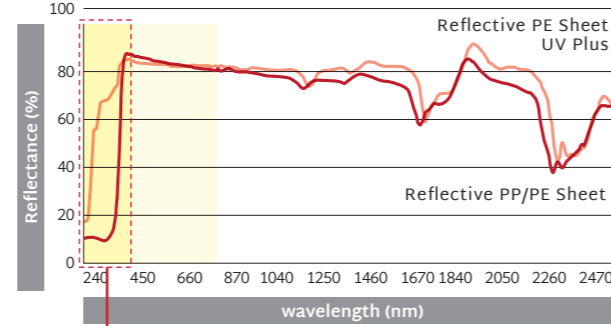
**Best for**

- Tomato
- Strawberry
- Grape
- Dry onion
- Green onion
- Perilla
- Eggplant
- Asparagus
- Cucumber
- Fig
- Orange
- Apple
- Blueberry
- Flowers

Features



Reflectance comparison

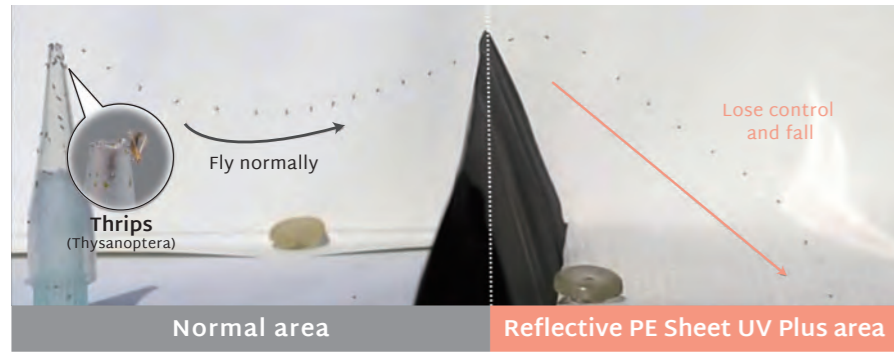


**POINT!** High reflection in the UV region

### Pest Control

Causes "flight confusion" of tiny pests

due to high reflection in the UV region.



YouTube

Thrips' behavior after dropped on the sheet



YouTube

Pest reduction test on citrus trees



Repellent effect test results (Sheet)

| Product       | Pest*1 Reduction Rate (%) | Installation Location |
|---------------|---------------------------|-----------------------|
| Strawberry    | 95                        | Around the greenhouse |
|               | 52                        |                       |
|               | 63                        |                       |
|               | 75                        |                       |
| Grape         | 85                        | Open-field            |
| Dry Onion     | 90                        | Open-field, Furrow    |
|               | 50                        |                       |
| Perilla       | 51                        | Around the greenhouse |
| Chrysanthemum | 50                        |                       |
|               | 90                        |                       |
| Flowers       | 85                        |                       |
|               | 90                        |                       |
| Green onion   | 75                        |                       |
| Strawberry    | 80                        |                       |

Crop yield increase test results (Sheet)

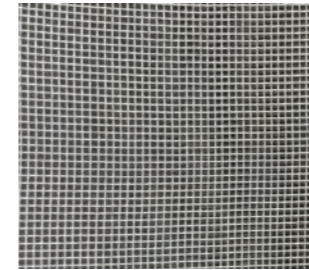
| Product    | Increased rate (%) | Installation location                     |
|------------|--------------------|---|
| Strawberry | 105                | Corridors in the greenhouse               |
|            | 113                | Corridors in the greenhouse, elevated bed |
| Tomato     | 107                | Corridors in the greenhouse               |
| Dry onion  | 120                | Open-field, Furrow                        |

\*Comparison with normal area



\*1 Thrips (Thysanoptera)  
\*2 Comparison with normal area

## Reflective PE Net UV Plus



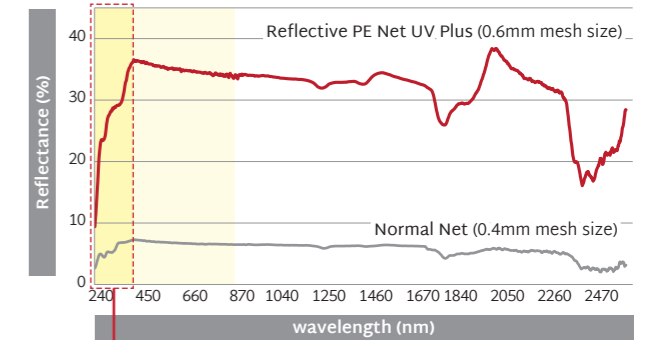
**Best for**

- Tomato
- Strawberry
- Eggplant
- Basil
- Green onion
- Paprika
- Spinach
- Avocado

Features



Reflectance comparison



**POINT!** High reflection in the UV region

### Pest Control

Boosted repellency rate with synergistic effect of the sheet

Repellent effect test results(Sheet & Net)

| Product     | Pest*1 Reduction Rate (%) |            |
|-------------|---------------------------|------------|
|             | Sheet & Net               | Sheet only |
| Strawberry  | 98                        | 87         |
| Green Onion | 96                        | 62         |

\*1 Thrips (Thysanoptera)  
\*2 comparison with normal areas (without the sheet, with a normal 0.4mm mesh size net)

### Ventilation

Enhances ventilation with a mesh size of 0.6 mm

Airflow and working environments in greenhouses can be improved

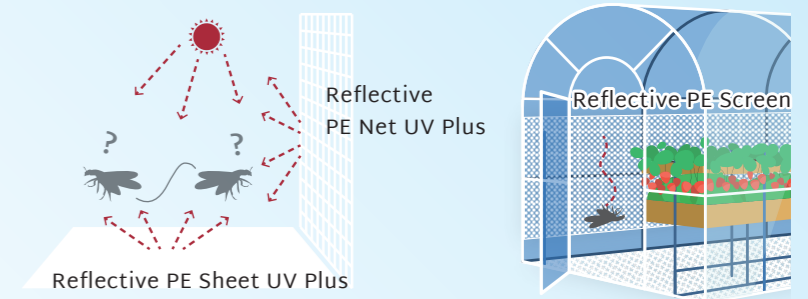


### Pest repelling mechanism

- Reflective PE Sheet UV Plus
- Reflective PE Net UV Plus
- Reflective PE Screen



Tiny pests receive UV rays on their backs, which helps them maintain their flight posture.



Our reflective material diffuses and reflects UV rays. As a result, pests become disoriented in flight and fall.

# Greenhouse Inner Curtains

## Venus Series

For Sliding and Roll-Up Systems

International Patent Pending  
PCT/JP2024/033013



Our unique weaving method improves the way the curtains fold



## White Strong



- + White film with heat-shielding performance equivalent to aluminum foil
- + High heat-shielding and insulation with multiple internal air pockets
- + Applicable to both inclined and horizontal systems
- + Certified with PET Bottle Environmental Recycling Mark

## White

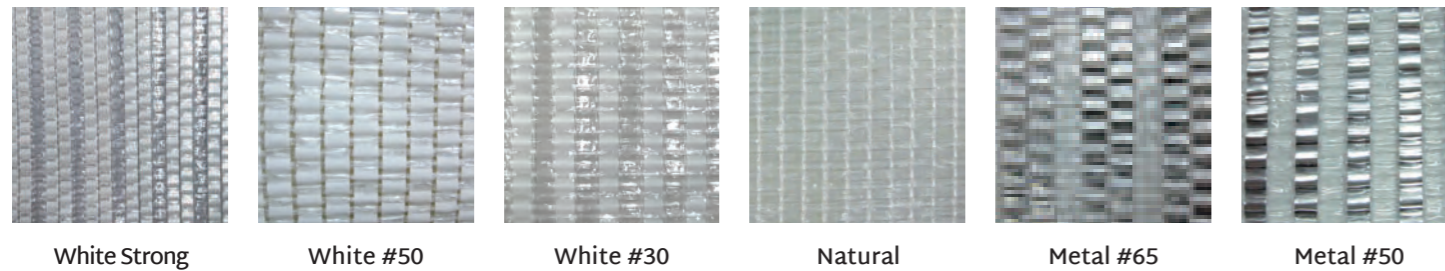
- + EVOH film
- + Excellent moisture absorption and permeability
- + High heat retention

## Natural

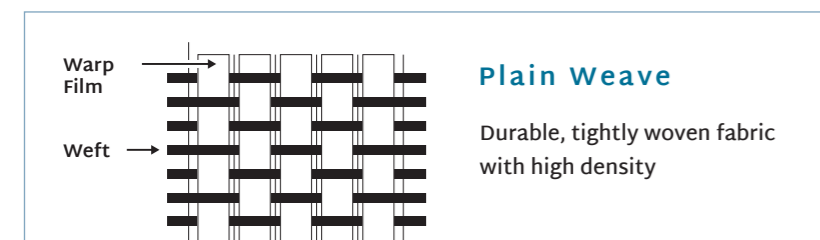
- + EVOH film
- + Excellent moisture absorption and permeability
- + High heat retention
- + Reduces drip-off

## Metal

- + Aluminum foil
- + High heat-shielding performance
- + Excellent heat retention
- + Reduces heating costs in winter
- + Superior durability with a unique high-density weave



| Item         | Item number | Shading Rate (Approx. %) | Thermal Insulation | Heat Shielding | Air Permeability | Moisture Permeability | Convergence | Film Structure | Material  |
|--------------|-------------|--------------------------|--------------------|----------------|------------------|-----------------------|-------------|----------------|---|
| White Strong | #50         | 50                       | ✓                  | ✓✓             | —                | —                     | ✓✓          |                | Polyester, Polyethylene                             |
| White        | #50         | 50                       | ✓                  | ✓              | —                | ✓✓                    | ✓✓          |                | EVOH (White), Polyethylene                          |
|              | #30         | 30                       | ✓                  | ✓              | —                | ✓✓                    | ✓✓          |                |   |
| Natural      | —           | 20                       | ✓                  | —              | —                | ✓✓                    | ✓✓          |                | EVOH (Transparent), Polyethylene                    |
| Metal        | #65         | 65                       | ✓                  | ✓✓             | —                | —                     | ✓✓          |                | Aluminum Foil, Polyethylene Film, Polyethylene Yarn |
|              | #50         | 50                       | ✓                  | ✓✓             | —                | —                     | ✓✓          |                |   |



Approximate durability:  
**5 Years**  
**Superior Endurance**



International Patent Pending

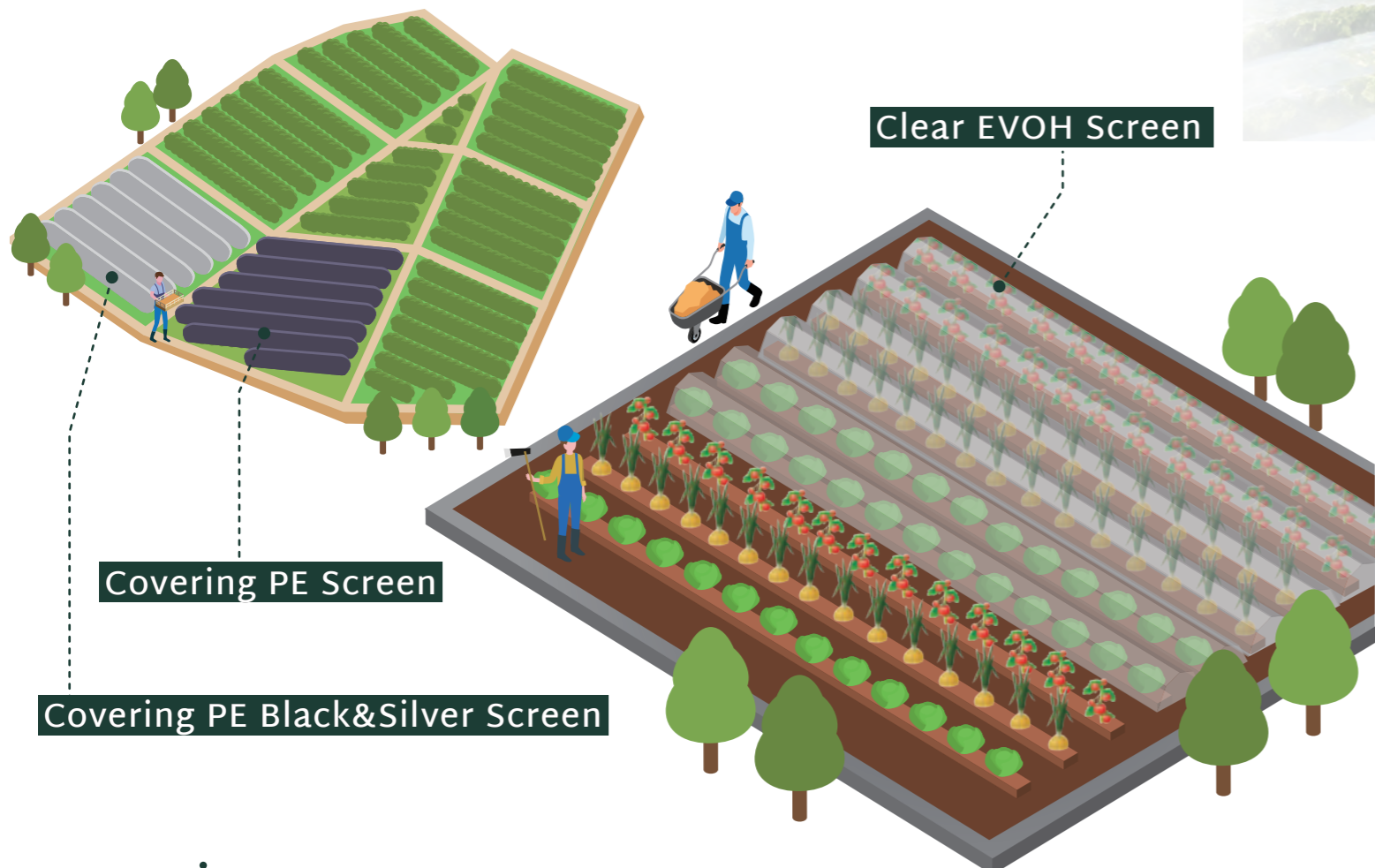
**Achieves neat folding lines with minimal bulging**

YouTube Curtain retraction improvement



# Covering Materials

Support the growth of open-field vegetables



Clear EVOH Screen

Covering PE Screen

Covering PE Black&Silver Screen

## Covering PE Screen



- + Heat shielding
- + Light blocking
- + Wind shielding
- + Heat retention



**Best for**

- Home gardening
- Outside / inside greenhouses
- Tea leaves

Can be used directly on tea leaves without causing damage



## Covering PE Black&Silver Screen



- + Excellent heat shielding
- + Superior light blocking
- + Excellent ventilation
- + Protects tea leaves from strong sunlight

**Best for**

- High-grade tea leaves



## Clear EVOH Screen

- + High transparency ensures ample sunlight
- + Excellent heat retention
- + Enhances photosynthesis

**Best for**

- Lettuce
- Chinese cabbage
- Potato
- Green onion
- Broccoli
- Celery
- Tea leaves
- Corn
- Green pepper and more

### Heat Retention

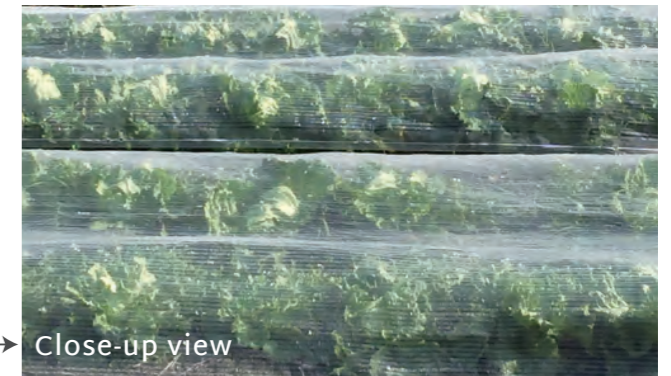
Provides 26% higher heat retention than polypropylene nonwoven fabric

Test conducted by Japan Textile Products Quality and Technology Center



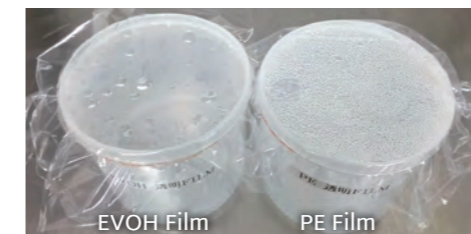
### Transparency

Ensures ample sunlight with 94% light transmittance



Close-up view

### Breathable



Reduces moisture buildup and helps prevent pests and diseases

### Strength



Reinforced edges resist tearing, even with pins in use

With a center line mark

### Comparative test on lettuce

| Applied Materials  | Weight (g) | Diameter (cm) | High-Quality Product Rate(%) |
|--------------------|------------|---------------|------------------------------|
| Clear EVOH Screen  | 493        | 15.8          | 62                           |
| PP nonwoven fabric | 444        | 15.8          | 46                           |
| PVC film           | 457        | 15.2          | 53.2                         |

Test conducted by Awaji Island Japan Agricultural Cooperative

### Comparison with PP Nonwoven Fabric

- + No fuzzing
- + Woven structure resists abrasion and prevents crop damage
- + Less fiber contamination



\*Note: Due to the nature of the film, it may shrink lengthwise when it dries. Please ensure an adequate allowance shrinkage when installing.