

# What Happens Before Igusa Is Ready?

— From Planting to Harvesting —



### 1. Suckering

The best strains are selected and suckered to produce seedlings.



### 2. Planting

The seedlings of igusa are planted.



### 3. Top Clipping

The top parts of igusa are clipped to compensate for the unevenness in growth.



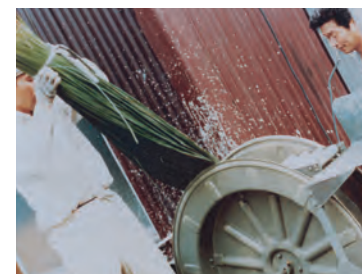
### 4. Net Setting

A net is spread over the igusa to prevent it from toppling over. The height of the net is adjusted in accordance with the growth of igusa.



### 5. Harvesting

When the plants have grown to their maximum height which may reach 160 to 170 cm, the net is taken off so that harvesting can begin.



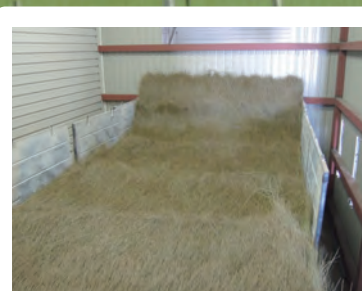
### 6. Dyeing with Soil

The harvested igusa is immediately immersed in special dyeing soil (sendo) and then dried. The dyeing soil is used to speed up drying and to prevent discoloration. It also facilitates the separation of igusa when weaving and improves the texture of igusa.



### 7. Drying

The harvested igusa is put into drying machines.



### 8. Finishing

Dried igusa is taken out of the drying machine and stored away.

The igusa we cultivate ourselves is called "Musendo igusa" and is not processed with dyeing soil.



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## Things You Probably Didn't Know About Igusa.

Did you know that Igusa, the material for making tatami, has multiple functionalities?

Natural Life  
自然に暮らそう

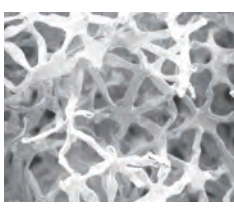
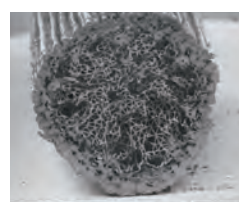
## Igusa

Juncus effusus var. decipens  
Japanese name: Igusa, a.k.a. Toushinsou.  
"Ikari" is a seasonal word for summer in haiku.  
It means igusa harvesting.

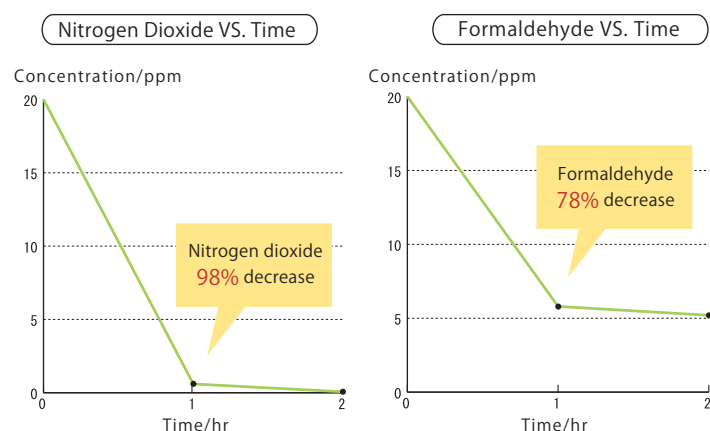


### Function 01 Air purifying

Igusa is an air purifying plant. Inside Igusa, there are lots of overlapping honeycomb-like hexagonal structures, making hundreds of little cells. Therefore, the surface area is large, and the sponge-like structure adsorbs nitrogen dioxide as well as formaldehyde, purifying the air.



Cross-section of Igusa  
Cross-section of Igusa (enlarged)



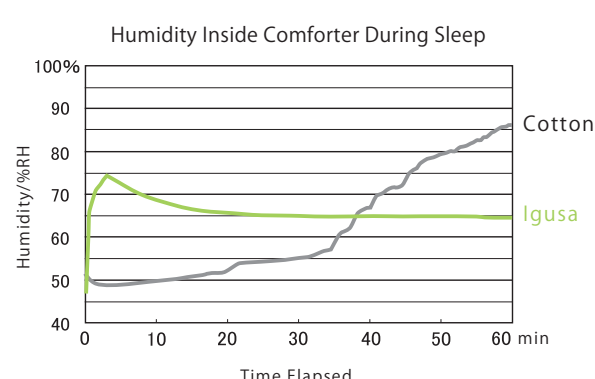
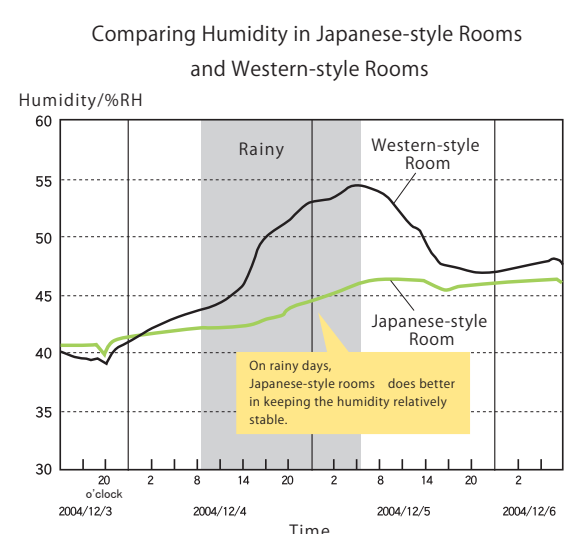
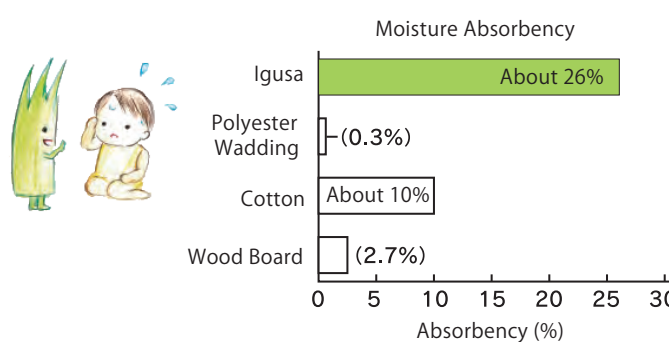
Chemical substance	Initial Concentration (ppm)	Decrease Ratio(%)
Nitrogen Dioxide Contained in exhaust gas. Can cause asthma.	20ppm	98
Formaldehyde Can cause sick-building syndrome	20ppm	78

### Function 02 Humidity Adjustment

Igusa is exceptional in absorbing moisture, and can release the stored moisture when it is dry. The excellent absorptivity of Igusa is shown in the graph on the right. When tatami mats are laid wall-to-wall in a room, they are able to store up to 1.8 L of water. Igusa absorbs and releases moisture according to humidity, keeping the humidity relatively constant.

The absorptivity of Igusa is 2.5 times of that of cotton!

Igusa bed sheets can absorb about 2.5 times of sweat compared to cotton sheets.  
Moreover, when using lightweight comforters, Igusa prevents moisture from building up in the comforters, improving sleep quality.



### Function 03 Deodorizing

Igusa is able to reduce malodors including odor from sweating, old person smell, pet odor and smoke smell by reducing chemicals that cause the odors such as ammonia, acetic acid, isovaleric acid, trimethylamine, indole, 2-nonenal and pyridine.



Igusa deodorizes sweat smell and age-related body odor.

Criterion for Decrease Ratio	Decrease Ratio	Efficacy	Malodors					
			Sweat Odor	Old Person Smell	Smoke Smell	Pet Odor	Fecal Odor	Garbage Odor
Ammonia	70%	99%	○	○	○	○	○	○
Acetic acid	80%	95%	○	○	○	○	○	○
Hydrogen sulfide	70%	5%	×	○	×	×	×	×
Isovaleric acid	85%	85%	○	○	○	○	○	○
Indole	70%	96%	○	○	○	○	○	○
Methanethiol	70%	12%	×	○	○	×	×	×
Acetaldehyde	70%	13%	×	○	×	○	○	○
Pyridine	70%	90%	○	○	○	○	○	○
Trimethylamine	70%	85%	○	○	○	○	○	○
2-Nonenal	75%	81%	○	○	○	○	○	○

The criteria for Decrease Ratio are based on researches by Japan Textile Evaluation Technology Council

### Function 04 Flame Retardant

Flammability of a material can be determined by subjecting one end of a specimen to a 38mm flame for 15 seconds, and then measuring the flame speed. The experimental result for Igusa is such that 0mm of the specimen combusted, the combustion time was 0 min, and the flame speed was 0mm/min. This means that the combustion of the specimen stopped immediately as the burner was turned off. From the experiment, it can be concluded that Igusa is a flame retarding material.

### Function 05 Stain Resistant

Drop soy sauce and coffee on surface of an Igusa product and leave for 24 hours before performing stain removal and the stain resistance experiment. The result shows that Igusa is a top-class material in terms of stain resistance, such that there are almost no stains remaining after the stain removal process. (The stain removal process: hit and scrub the surface 10 times with a cloth that is completely drenched.)

### Function 06 "Forest Bathing" Effect

As the saying goes, "Tatami brings the forest indoors". Igusa contains the same aroma component as in trees, which is "phytoncide". This "phytoncide" is said to have big contribution to the healing effect of "forest bathing". Moreover, the scent of Igusa also contains the signature aroma component in black tea and vanillin as in vanilla.



At IKEHIKO Co., our motto is to "make life delightful". We keep innovating and challenging ourselves in providing comprehensive solutions to home textiles and interior decoration.

Founded over 100 years ago, IKEHIKO has inherited traditions, culture and unique techniques of the region. We find great potentials in "Igusa", the traditional natural fiber familiar to Japanese.

We devote ourselves in planning and developing "Igusa" products, and deliver our products worldwide. We strive to convey the traditional charm of "Igusa", meanwhile adjust our product lines to fit modern home designs.

Always coming up with new proposals, we invest in creating relaxing home spaces that bring healing effects of "Igusa" to modern residences.



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