

# Life Support

The Ajinomoto Group is expanding sales of electronic materials in the specialty chemicals business and converting from a commodity supplier to a specialty supplier in the animal nutrition business.



## Life Support Business Growth Strategies

**1** Accelerate the growth of the electronic materials business

**2** Promote the shift to specialty in the animal nutrition business

### Accelerate the growth of the electronic materials business

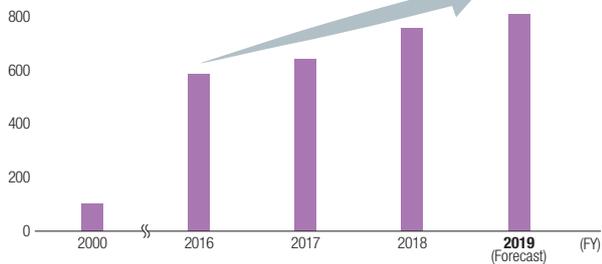
**1**

Sales of *Ajinomoto Build-up Film® (ABF)* have been growing in recent years with expanding applications, such as for data center servers. Demand for *ABF* is expected to continue increasing with ongoing growth in IoT-related markets.



#### Sales trend

\*Indexed to 100 = sales in FY2000



#### Growth areas expected by expansion of IoT



Automotive applications

Cloud servers

High-speed communications

AI and deep learning

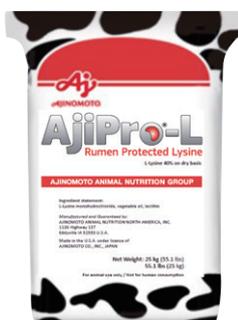
Promote the shift to specialty in the animal nutrition business

2

The Group will expand the specialty business by rapidly developing peripheral products of the *AjiPro*<sup>®</sup>-L lysine for dairy cows.

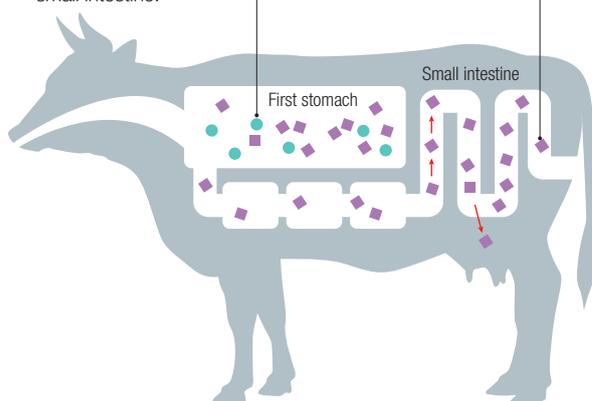
● *AjiPro*<sup>®</sup>-L lysine for dairy cows

Because cows have four stomachs for digestion, most amino acids supplied by formulas are broken down by microbes in the rumen and do not reach the small intestine for absorption as nutrients. The Group developed a proprietary protective granulation technology to gradually dissolve lysine, an essential amino acid where it is needed, and introduced *AjiPro*<sup>®</sup>-L, a rumen-protected lysine for dairy cows. *AjiPro*<sup>®</sup>-L enables efficient feed use in ruminants and improves the nutrition and productivity of dairy cows. *AjiPro*<sup>®</sup>-L also helps reduce nitrogen excretion thereby lowering the environmental impact.



Mechanism for improved lysine utilization efficiency

- **Standard lysine**  
Standard lysine is broken down by microorganisms in the cow's first stomach before it can reach the small intestine.
- ***AjiPro*<sup>®</sup>-L**  
*AjiPro*<sup>®</sup>-L remains intact through the first stomach and is absorbed in the small intestine.



Focus

Contributing to Comfortable Lifestyles with *Ajinomoto Build-up Film*<sup>®</sup>  
We have entered a new growth phase with the arrival of IoT.

Yoshimasa Fujiwara  
Electronic Materials Division, Ajinomoto Fine-Techno Co., Inc.  
(As of June 2019)



When we created *ABF* in 1999, we were the first in the world to successfully produce a liquid resin film for use as an insulating material for semiconductor packages, and the film quickly became the standard for major semiconductor manufacturers. Demand for *ABF* grew substantially in the 2000s with the proliferation of the internet and personal computers. Sales leveled off in 2008 with stagnating computer demand during the global financial crisis, but entered a new growth phase in 2017 fueled by the arrival of 5G technology and expanding use of IoT.

Our biggest challenges are keeping pace with the changes in the semiconductor market and developing products quickly enough to meet the rapidly evolving emerging customer needs. We constantly communicate with clients to stay on top of their needs so we can propose solutions and deliver new products for testing.

The Group set up a presence in Silicon Valley where many of our customers have operations so we can be in touch with the latest information to further develop and hone our products while also introducing *ABF* to potential new clients and increasing recognition.

We will continue to contribute to the comfortable lifestyle of society through *ABF*.

Growth in servers and other recently expanding domains

