Synthetic Amino Acids

China looking to U.S. dairy industry for ideas

WHEN comparing the rural areas in China with the rural areas of the U.S., there aren’t a lot of similarities, but the Asian culture is quickly beginning to realize that it needs to make its dairy farms more efficient if they are going to meet the demands of a growing population.

During the Professional Dairy Producers (PDPW) annual meeting in Madison, Wis., last month, Jim Bakker of East Rock, Ltd., explained how China is looking to the U.S. for ideas and expertise that will help its own dairy sector evolve.

Hao’s company specializes in bringing products to the Chinese dairy industry. He said traditional dairy farms in his country have always consisted of several cows that grazed freely in grassy areas on a roadbed, but modern operations are now being constructed in which cattle are housed in freestall barns and milked in parlors.

“Chinese dairy managers are slowly learning how to get more production out of their cows by using better feeding and animal care methods,” Hao said. “As a result, the Chinese government is paying people to build better facilities, which is causing a demand for milk and livestock.”

Feed availability is one of the largest challenges facing with what most Chinese dairy farm managers must deal. Since most fields are only a couple of acres in size, farms need to find many small suppliers in order to get enough feed for their livestock.

Manure management is also a concern. Since the people don’t own their own land in China, spreading manure on the ground is not common. That means the risk of groundwater contamination is much higher.

Still, said most of the milk produced on Chinese dairy farms is used for fluid beverages, although a lot of sales are also converted into yogurt and cheese for pizza.

PDPW executive director Shelly Mayer said Hao was invited to the meeting to draw attention placed on value and isolcine. The Table also shows estimated digestible amino acid requirements for both valine and isolcine from a number of published reports.

Research on the digestible amino acid requirement for valine has increased since feed-grade L-valine became commercially available in 2008.

Corzo et al. (2011) showed that L-valine could be successfully used at an inclusion level of more than 0.65% in practical broiler diets that also contained DL-methionine and L-threosine.

Several published papers have noted that the limiting amino acid for valine in allvegetable broiler diets containing meat and bone meal is threonine, hydrochloride and L-threonine.

Threonine requirements that accurately reflect the need of birds in practice will be lower. Research has shown that broilers raised in practical broiler diets that also contain threonine requirement for 4th 56 42 56 0.52 Ross x Hubbard Webel et al. (1996)

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**Mathematical model predictions from selected published research reports.**

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<thead>
<tr>
<th>Digestible threonine, valine and isolcine requirements</th>
<th>Reference</th>
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<tr>
<td>Day of age</td>
<td>Amino acid, %</td>
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<tr>
<td>Threonine</td>
<td>1-14</td>
</tr>
<tr>
<td>1-20</td>
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<tr>
<td>1-21</td>
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<tr>
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> **Average of bodyweight gain and feed conversion estimates.**