**DIFFERENT METHIONINE SOURCES AFFECT METABOLISM AND GROWTH IN NILE TILAPIA JUVENILES**

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**BACKGROUND**

1. Commercial diets for Nile tilapia juveniles contain high levels of plant protein sources.

   **Most commonly used plant ingredient:**
   - **Soybean**
     - Easily Available
     - High Protein Content
     - Balanced Amino Acid Profile

   ![Diagram](image)

   + Typography: Diets that fulfill fish Met requirements

2. Synthetic sources of Met frequently added to fish feeds:
   - **DL-Methionine (DL-Met)**
   - Calcium bis-methionine hydroxyl analogue (MHA-Ca)

   **Biological efficiency of the different methionine sources may differ.**

**MATERIALS AND METHODS**

**AIM: Understand how different dietary sources of methionine affect metabolism and growth of Nile tilapia juveniles.**

**8 WEEKS FEEDING TRIAL**

**DIETS**

<table>
<thead>
<tr>
<th>REF</th>
<th>DLM</th>
<th>MHA</th>
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<tr>
<td>Basal diet (REF)</td>
<td>DLM</td>
<td>MHA</td>
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**RESULTS**

**Methionine and one-carbon metabolites in liver**

**Growth Performance Indicators**

- **Final Body Weight**
- **Protein & Energy Retention**
- **Feed Conversion Ratio**
- **Nitrogen balance**
- **Protein Efficiency Ratio**

**DIFFERENT SUSTAINABLE AQUACULTURE**

**CONCLUSION**

» Dietary **DL-METHIONINE** supplementation of soy-based diets improves **GROWTH** and **NITROGEN RETENTION** in Nile tilapia.

» This contributes towards a more **SUSTAINABLE AQUACULTURE** industry by minimising its environmental impact.

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