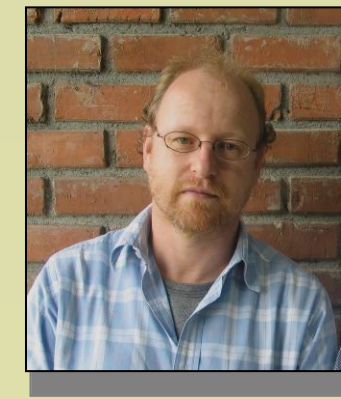


Tropical forages for monogastric animals:

Enhancing smallholders competitiveness in local and emerging markets

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1. INTRODUCTION

- Consumer demand for livestock products is rapidly increasing, with pork and poultry dominating the changes.
- Higher costs of grain-based concentrate feeds are affecting the competitiveness of livestock producers; thus alternative feeds are needed.
- Women who have an important role in small-scale monogastric production, are most likely to benefit from enhancing feed production capacity on-farm.

2. METHODS

- Rapid diagnostic studies were conducted in Colombia, Honduras and Nicaragua to assess constraints and potentials of smallholder pig and poultry production and to facilitate the identification of priority interventions.
- In on-station or controlled on-farm studies forage based technologies for monogastric feeding were tested.

3. RESULTS AND DISCUSSION

- More than 70% of smallholder farm families in the three countries produce chickens and pigs, other monogastric animals include duck, guinea pigs, rabbits and fish.
- Protein is lacking in most smallholder monogastric systems, thereby limiting animal productivity and quality.
- In Colombia, concentrates are widely used. In view of their variable quality, most farmers integrate locally produced feed and/or agricultural by-products in monogastric feeding. In Nicaragua and Honduras, protein deficiency is more pronounced. Feed is mainly limited to energy sources such as maize and sorghum.
- In the three countries, monogastric production is an important strategy to diversify household risk. Occasional and/or informal sales of meat, eggs, and animals provide an additional income source, especially for women and in off-harvest season (increased cash-flow).
- With increasing grain prices, the domestic production of tropical forage-based feed is becoming economically more attractive.
- Tropical forages, in particular legumes, are a promising source of protein for monogastric production, e.g., *Desmodium velutinum* (Fig. 1).

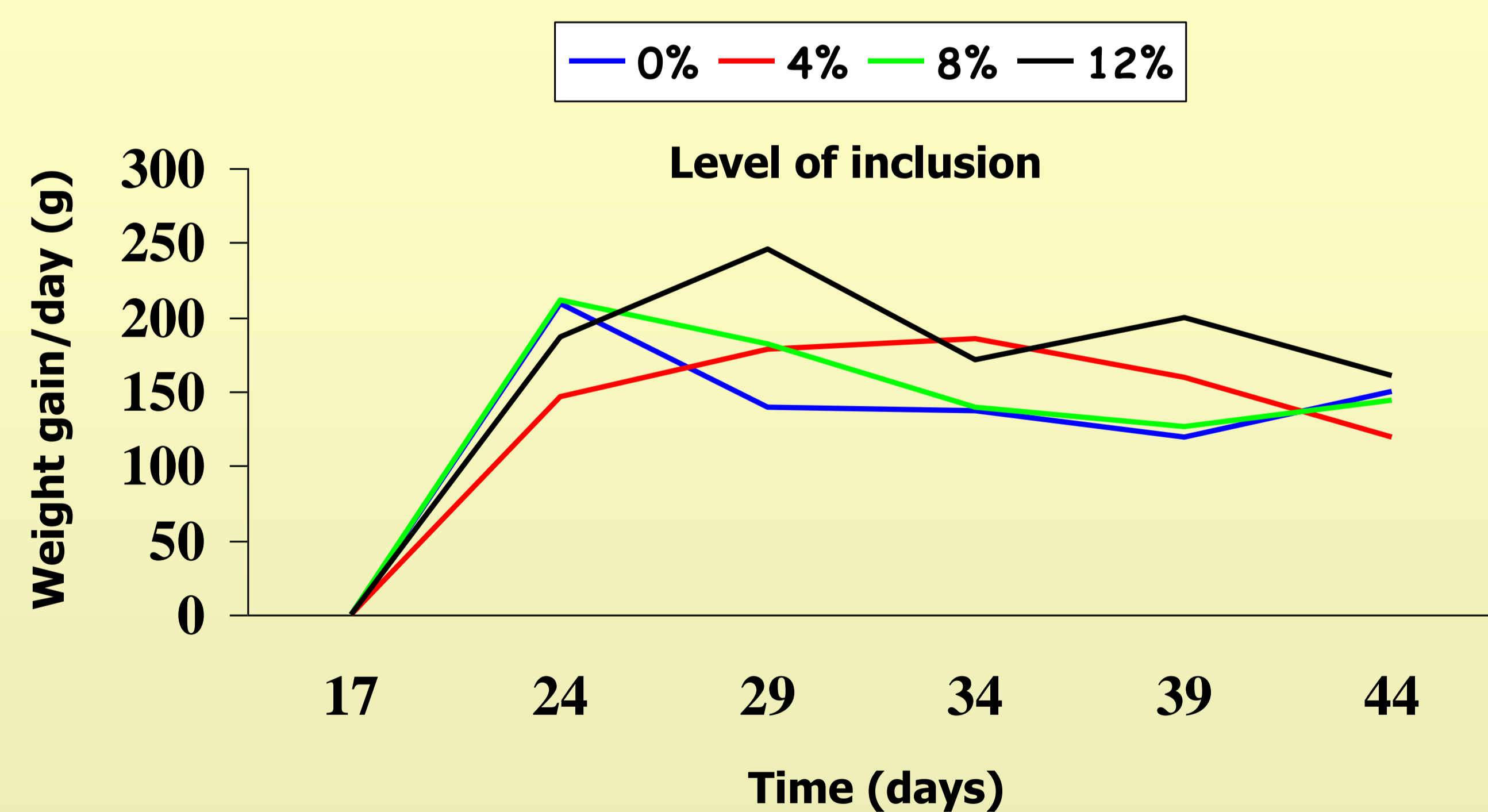


Fig. 1. Live weight gain of broilers in response to different levels of inclusion of *Desmodium velutinum* leaf meal (0% concentrate control, concentrate substituted by 4, 8 and 12% of *D. velutinum*).

4. CONCLUSIONS

- The local production of high-quality tropical forage-based feed can increase monogastric animal production and quality, therefore serving as a livelihood strategy that improves household cash generation and/or family nutrition.
- A challenge for research and development is to identify favorable production and market niches and foster enhanced market access according to local context.