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).

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.

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).