

FAMILY FARMING'S CONTRIBUTION IN INCREASING HOUSEHOLD INCOME AND STUNTING

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PAPER INFO	ABSTRACT
Received: January 2023	Background: The incidence of stunting is influenced by various factors, one of which is income in the household, therefore it is necessary to make efforts to increase income, including the family farming business.
Revised: January 2023	Aim: This study aims to determine the contribution of family farming businesses in increasing income and the incidence of stunting at the household level.
Approved: January 2023	Method: This research is a type of qualitative research, while data collection techniques are carried out by exploring journals and other information relevant to the study.
	Findings: The results of the study show that the contribution of family farming businesses can increase income, this can have an impact on increasing the ability to buy nutritious food, thereby reducing the risk of stunting at the household level.
KEYWORDS	<i>family farm, income, stunting, household</i>
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INTRODUCTION

Stunting is a growth disorder due to malnutrition that occurs in children under five years old (Rahayu et al., 2018). Stunting is also defined as a condition where the body condition is short or very short which is based on the index of Body Length according to Age (PB/U) or Height according to Age (TB/ U) with a threshold (zscore) between -3 SD to < -2 SD (Olsa et al., 2018). Children are categorized as stunted if their length/height is less than -3 primary school from the median Child Growth Standards according to the World Health Organization (WHO) for the same age and sex categories (de Onis & Branca, 2016). Thus, stunting is a condition of growth failure experienced by children under five due to chronic nutritional problems, especially at 1000 HPK. Stunted children will experience a decrease in interaction with their environment, which can further have implications for the child's development and quality of life to be poor. Various studies have also shown that stunting results in the loss of 11 percent of GDP (Gross Domestic Products) and reduces the income of adult workers by 20 percent.

Indonesia is ranked fifth in the world and the highest in Southeast Asia for the number of children with stunting conditions (Ariati, 2019). Furthermore, East Nusa Tenggara (NTT) is the province with the highest prevalence rate of stunting children in Indonesia. Basic Health Research (2018) recorded the prevalence of stunting in NTT reaching 42.6%. Although the trend of stunting prevalence at the end of 2021 is recorded to decrease according to the results

E_PPGBM (20.9%) and SSGI results (37.6%). However, this situation is still above the Cut off point from the Indonesian Ministry of Health and WHO (20%). This is the biggest

threat to the quality of human life in the future because it can inhibit physical growth, inhibition of children's brain growth (cognitive), decreased quality of learning to decreased productivity in adulthood and the threat of increased non-communicable diseases (Victoria et al., 2008). Many factors affect the nutritional status of the child, both direct and indirect factors, as well as the root of the problem. The root of the problem is economic status which has a bad impact on the nutritional status of children (Bloem & Semba, 2001). This is in accordance with research conducted by Agus Hendra and Ampera Miko which states that 41.7% of stunted toddlers are in families with low incomes, while toddlers with normal nutritional conditions are 81.2%, namely in families with high incomes (Rahmad & Miko, 2016).

Family income is related to the household's ability to meet the needs of life, both primary, secondary, and tertiary. High family income makes it easier to meet the needs of life, on the contrary, low family income has more difficulty in making ends meet (Nurmalasari et al., 2020). Low income will affect the quality and quantity of foodstuffs consumed by the family. The low level of income and weak purchasing power make it possible to overcome eating habits in certain ways that hinder the improvement of effective nutrition especially for their children. The food obtained will usually be less varied and small in quantity, especially in ingredients that serve for the growth of the child such as sources of protein, vitamins, and minerals, thus increasing the risk of malnutrition. These limitations will increase the risk of family members being stunted (Hapsari et al., 2020).

Research conducted by Wahyuni and Fithriyana (2020) shows that in the stunting group more income is below the UMR, namely 67 respondents (35.8%), while those who have income above the UMR are only a few, namely as many as 45 people (22%). This is in accordance with Sulistyoningih's opinion that increasing income will increase opportunities to buy food with better quality and quantity, on the contrary, a decrease in income will cause a decrease in the purchasing power of food both in quality and quantity. High income that is not balanced with sufficient nutritional knowledge, will cause a person to be very consumptive in his daily diet, so that the selection of a food ingredient is more based on taste considerations than nutritional aspects. Non-stunting occurs when the body acquires enough nutrients that are used efficiently, thus enabling physical growth, brain growth, workability and general health at the highest possible level.

The magnitude of this influence needs to be overcome by efforts to increase income, including the family farm business. Based on the background explanation of the problem, researchers are interested in conducting a study entitled "Family Farming's Contribution in Increasing Household Income and Stunting."

METHOD

This research is a survey research and then analyzed and described and further strengthened by exploring journals and other information relevant to the study. Qualitative research is research that intends to understand the phenomenon of what is experienced by the research subject for example behavior, perception, motivation, action and others holistically and by means of description in the form of words and language, in a special natural context and by utilizing various natural methods. Meanwhile, data collection techniques are carried out by exploring or photographing some data at the household or group level and qualitative

secondary data are carried out exploring journals and field observations as well as other information relevant to the study.

RESULTS AND DISCUSSION

East Nusa Tenggara is a province with a prevalence rate of stunting children reaching 42.6%, the direct cause is due to inadequate food consumption patterns and the high incidence of disease infections. People's eating habits are generally sourced from energy-intensive foods, while protein-dense foods (such as meat, fish and eggs) are relatively rarely consumed. This situation is further exacerbated by weak purchasing power and agricultural production which is less than encouraging in supporting improvements in food consumption and nutritional status of the people.

The transformation of the rural economic structure is a change in the structure of production and consumption from a mono-sectoral state (subsistence agriculture) to a multi-sectoral (surplus agriculture, agroindustry, handicraft industry and growing services) according to the growing internal and external opportunities. The transformation of the household economic structure is expected to diversify production and sources of income, food sources and consumption, which in turn will encourage an increase in the quality of nutritional consumption and access to health services, which ultimately leads to an increase in nutritional status and an improvement in the quality of human resources.

Human needs affect the diversity of goods or services. The need for food requires various types of food that suit the diversity of human tastes themselves. Clothing models always adjust to the wishes of consumers who are different in taste, age, gender and socioeconomic status of a person in society. The desire to always live a healthy life gives birth to various types of medicines, pharmacists, doctors, nurses, hospitals and a wide variety of accompanying equipment. The desire to travel and move goods in a faster time and lighter power has resulted in different types of vehicles. Man's needs and desires for goods and services, the longer there are more and more types and their numbers and can be said to be infinite, in the sense that there is no exhaustible desire of man. Such limitless human desires and needs, *tidak* will be able to *dipenuhi* at once within a certain period of time (Paturochman, 2005). Efforts to meet these needs can be achieved with income, this is important because it can meet basic human needs, especially in a family.

Family income has a relationship with stunting according to UNICEF's statement that the root of the problem of baby growth and development, one of which is the economic crisis. The inability of the head of the family to meet the nutritional needs of babies in terms of quantity and quality results in a bad impact on infant nutrition (Illahi, 2017). This needs to be overcome, one of which is with a family farm business, animal husbandry is a business of raising pets that are taken advantage of. Livestock business can be classified into three, namely large animal husbandry (cattle, buffalo, and horses), large animal husbandry is mostly carried out in areas with large pastures, for example in East Nusa Tenggara, small animal husbandry (goats, sheep, rabbits, and pigs), and poultry farming (chickens, ducks, *entog*, and birds). There are various types of family farming businesses that can increase income including:

- 1) Buying and Selling Animals: Livestock are used as a medium to earn income. Many people cultivate livestock for sale, especially for the types of animals that will be used during *Qurban*, *Aqiqah* and other traditional events. Farmers carry out the process of

selling their livestock by bringing livestock in the market and through promotional media from friend to friend (Pakaya et al., 2020). Revenue from the sale of large livestock will be obtained in a fairly long time, for example for fattening cattle the farmer pattern in NTT takes about 1.5 - 2 years, it is necessary to diversify the business with small livestock, for example poultry (Rosnah et al., 2021). Poultry, especially native chickens, are great for rural development because they are disease resistant and fast in breeding, quickly produce eggs that can be directly utilized by farming families. Where previously eggs for family consumption were obtained by buying, now they can take advantage of their own production and potentially if they are excessive, they can be sold as a source of family income. Similarly, for a stunting household, if given an intervention package in the form of goats, it is very good because it includes livestock that is rapidly growing with the number of children can be 2 heads. In observing the activities of handling stunting intervention packages in the form of chicken livestock have produced eggs that can already be used by families, goats given to stunting partners in Nifukani Village, South Middle East Regency, as much as 30 percent of the female livestock have lambed, as well as the intervention package for pig livestock that grows healthily. A pig livestock when sold at the age of 2 weeks averages Rp. 1,000,000. This is a potential income for stunted families.

- 2) Compost Fertilizer: Compost is a source of side income in addition to income from livestock. NTT is famous for its cattle fattening system, one of the purposes of which is to be delivered to Java Island in addition to fulfilling the animal protein of its people. Similarly, for the goat and chicken livestock business, it produces fecal waste and feed residues which are used as organic fertilizer to increase soil fertility for family horticultural crops in the village. According to Suwahyono and his team (2014), manure can increase household income by processing manure into compost. Compost fertilizer can then be sold to other farmers or communities that need it. Rosnah et al. (2021), assisting a group of farmers in rural areas who integrate food crops, fattening cattle and catfish aims to meet the family's food needs and increase the income of farming families in Oelatsala Village of Kupang District. Fattening cattle waste is processed into bokashi fertilizer which is then used and the rest is sold to provide income of Rp.250-300,000 per fortnight.
- 3) Dairy Milk: According to Ipteknet in Rahmah (2014) the dairy business provides benefits if the number of livestock raised is at least 6 heads. Although the level of efficiency can be achieved by raising a minimum of 2 lactation dairy cows with an average production of 15 liters/day. The reality in the field is that the number of dairy cattle ownership of farmers averages 3.89 ST or 3-4 heads with an average production of under 10 liters/day. The productivity of dairy cows is related to various factors, including feed quality and maintenance management.

The workforce of the family farm business may consist of farmers and their families and outside labor who all play a role in the livestock business. The breeder acts as the manager of the community members who live in the community. The breeder as a manager will face various alternatives that must be decided, which one to choose to work on. Farmers must determine the type of livestock to be cultivated, determine how to purchase production facilities, face issues about costs, strive for capital. For this reason, it is necessary to have skills,

education, and experience that will affect the decision-making process. The reality on the ground shows that the livestock business is still carried out by farmers and their own families and has not used much labor from outside the family. It is necessary to increase labor from outside the family in order to increase income, because in raising broiler chickens, a lot of labor is needed (Nurjana et al., 2015).

The socioeconomic potential possessed by farmers as individuals who run livestock businesses is an important factor because it can describe the real conditions of the characteristics of farmers and livestock businesses that are run which are further related to the ability to manage and the output produced, the ability of farmers to receive and interpret information and adopt technology. It can be said that the socioeconomic status of farmers is a determining factor in running a farming business, including livestock businesses because it is interrelated and supports each other. The success of the livestock business can be done by maximizing the potential of natural resources and human resources, shifting the typology of the livestock business to the main business, applying technology and creating jobs (Saleh & Nurlaelah, 2018).

The contribution of livestock business income to the household income of farmer farmers is a comparison between the income from the beef cattle business and the household income of farmer farmers. Hasil analysis on research conducted by Setiawan et al. (2014) shows that the contribution of livestock business income to the household income of farmer breeders is 6.8%. This low income contribution is due to the fact that raising beef cattle in Sukolilo Village is a part-time business is not the main business other than that the small number of livestock ownership causes the contribution of farmers' income from the beef cattle business to low household income. Similarly, reported by Suhartina et al. (2017), the average contribution of goat business income to the income of farmer families is on the ownership scale of >10 heads of 25.54%, while on the ownership scale of 5-10 heads of 10.06% and 5.91% on the ownership scale of < 5 heads. The average contribution of goat business income to the income of farmer families is smaller than 30% because the business is only a support for farming/fishing work and other businesses so that it can be classified as a side business. In the business of raising livestock has been able to contribute to family income which in time will be able to affect the purchasing power of the family.

CONCLUSION

The low level of income and weak purchasing power make it possible to overcome eating habits in certain ways that hinder the effective improvement of nutrition especially for children. The food obtained will usually be less varied and small in quantity, especially in ingredients that serve for the growth of children sources of protein, vitamins, and minerals, thus increasing the risk of malnutrition. These limitations will increase the risk of family members experiencing stunting, therefore there is a need for efforts to increase income, including the family farm business. Family farming businesses can provide additional income through buying and selling animals, dairy milk, and compost.

The researchers realize that there are still gaps left here such as proper farming support and how farming goes in different areas. Also, other research discussing factors affecting stunting and rural household income will be worth emerging.

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