

Featured horticulture products in Tabanan district, Province of Bali, Indonesia

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Abstract

Fruit and flower crops based on the secondary data were the types of featured horticultural products analyzed and identified in this study sourced from *BPS* of Bali Province and *BPS* of Tabanan district. Location Quotient (LQ) was used for identification of featured fruit and flower plant product of sub-district in Tabanan district. The localization of the featured product was analyzed using the localization coefficient (α) and regional specialties using the specialization coefficient (β). The results of the analysis showed that the featured fruit products from Tabanan district are orange, guava, water guava, pineapple, papaya, banana, jackfruit, *duku*, zallaca, mangoesteen and durian, being cultivated in Pupuan and Penebel subdistrict. Fruits are not localized in one district. Although the fruit products are superior, but Tabanan district is not specialized in producing fruit plants, which is indicated by a coefficient of specialization that is smaller than one. Featured flower plant products are mainly cultivated in Marga and Baturiti subdistricts. Flower plant products are not localized in one subdistrict shown by the localization coefficient which is smaller than one. However, based on the specialization coefficient, Tabanan district is specialized in producing heliconia flowers with a specialization coefficient greater than one.

Key words: Featured, fruits, horticulture, magosteen, flower plant, location quotient, specialization coefficient.

Introduction

In order to support the development and empowerment of Micro, Small and Medium Enterprises (MSMEs), especially MSMEs in agriculture, featured agricultural products (bases) in general and featured horticultural products, especially in an area, must be identified. The development of MSMEs in agriculture means indirectly supporting the development of sustainable agriculture (Antara and Sumarniasih, 2018).

If the featured horticultural sector or sub-sector or product is developed extensively and intensively, the production will be surplus, because it is supported by suitable agroecosystems and adequate resources. This means that production is not only able to meet the needs of local communities, but also be available for trade or export outside the region thus generating income or foreign exchange for the community or local government. Therefore, each region must identify the products of featured (bases) in their respective regions, to explore and develop their potential, both physical potential such as land and agroecosystems, as well as human resource potential.

Research concerning the determination of featured commodities has been carried out by several researchers with different regions, commodities and methods. Leo *et al.* (2014) conducted a research on Determination of Agricultural Commodities with the Analytical Hierarchy Process (AHP) method and found that the featured commodity of agriculture in Parbuluan Subdistrict located in Dairi district-North Sumatera is coffee commodity with a weight value of 0.238 (23.8 %), while the value of the weight of other commodities sequentially is chili with a weight value of 0.162, sweet potatoes with a weight value of 0.156,

cabbage with a weight value of 0.126, potatoes with a weight value of 0.123, oranges with a weight value of 0.103, tomatoes with weight value 0.092.

Ahdan and Suparman (2015) conducted an analysis of the determination of featured commodities in the agricultural sector in Central Sulawesi's, Toli-Toli district, using LQ analysis to identify featured agricultural commodities and the Analytical Hierarchy Process (AHP) to rank identified featured commodities. The results of his research indicate that the plantation subsector is the featured subsector in the agricultural sector in Tolitoli district based on the results of the Analytical Hierarchy Process (AHP) analysis of the choice of policy makers/experts in Tolitoli district with eigenvalues/priority weights of 0.2927. The position of the plantation sub-sector is considered to be a featured sub-sector compared to other agricultural sub-sectors because of its potential to be featured to the criteria of contribution to the economy, the regional economic bases sector, renewable, raw materials, capital, technology, and price criteria. The results of the Location Quotient (LQ) analysis in the period 2009-2013 also showed that the estate subsector is the only bases subsector and is the power of the Tolitoli district to export its products outside the area concerned. The estate subsector is the bases subsector with a value of $LQ = 1.3694$ or $LQ > 1$, while the other agriculture sub-sectors are non-bases subsectors.

Kasuba *et al.* (2015) found that South Halmahera district had the potential of featured commodities in the horticultural crops like chili, *duku* fruit and durian, which could be developed because it was supported by the potential of very fertile land. The structure of featured commodity growth in the horticultural subsector based on the localization coefficient shows that the commodity is not

localized or concentrated, while the Specialization Coefficient analysis show that the subsector is not specialized or not yet devour themselves to a type of horticultural commodity.

Ningsih (2010) found that the results of the Location Quotients (LQ) analysis calculation prior to the implementation of regional autonomy in 1997-2000, identified commodities as base commodities in Sukoharjo district, namely the food crops subsector consisting of rice, peanuts and soybeans, subsector plantation is cashew, while the livestock subsector consists of goats and buffalo. While during the implementation of regional autonomy in the period 2001-2007, the commodities identified as base commodities in Sukoharjo district, namely the food crops subsector consisted of rice, peanuts and soybeans, while the plantation subsector consisted of cashew and sugarcane, while the livestock subsector consisted of goats, sheep and broilers. The results show that the bases for commodities prior to regional autonomy tend to be not too different or for 11 years not much different.

Antara and Sumarniasih (2018) conducted a research about Featured Product of Micro-Small-Medium Enterprises (SMSE) in Jembrana district, Bali, Indonesia and found that featured products of SMEs in Jembrana district, namely: (a) The agricultural sector are rice paddy, soybean, banana, coconut, cloves, coffee, cocoa, beef, buffalo, and sea fishing; (b) The manufacturing industry sector are copra and coconut cooking oil, rice milling unit, non machine weaving industry (cagcag weaving), food industry of various chips, powder coffee processing industry, fish canning industry, brick industry, fish processing industry, tempe making industry, and manufacture of tofu industry; (c) The building/construction sector is a building construction contractor; (d) The trade sector, hotels and restaurants are Jasmine Hotel, Mini market and grocery store, trading of agricultural products, stall of craft products, restaurant, food stall, homestay, villa, HP counters, and textile garments (mote and lace); (e) The transport and communications sector are land transportation of goods (trucks), package delivery service, urban and rural passenger transport, bus route, internet cafes; (f) The financial, leasing, and business services sector are Village Credit Institutions (LPD), People Credit Banks (BPR), Savings and Loans Cooperatives (KSP), Village Unit Cooperatives (KUD), and Multipurpose Business Cooperatives (KSU); (g) The services sector are Rambut Siwi temple tourism attraction, West Bali National Park tourist attraction, Bunutan agro tourism attraction, Palasari dam tourist attraction, Madewi Beach tourist attraction, hair bar and beauty salon, laundry service, tour guides, workshop services (cars and motorcycles), and motorcycle taxis.

The similarity of this research with the previous research is in determining commodity or featured MSME in a region while the differences are region, sector type and data analysis method. Previous studies used ranking and score methods based on several criteria and AHP analysis methods, while this study used the Location Quotient (LQ) analysis method of Localization Coefficient, LC (α), and Specialization Coefficient, SC (β).

Horticulture is defined as the cultivation of garden plants or cultivation in the garden, which includes the cultivation of fruit plants (pomology/fruticulture), flower plants (floriculture), vegetable plants (olericulture), and medicinal plants

(biopharmaca). Horticultural products being perishable get easily damaged (Herklots *et al.*, 2020). Horticulture is, at the most basic level, the science or art of cultivating fruits, vegetables, flowers, or ornamental plants. The origin of the term lies in two Latin words: *hortus* (meaning “garden”) and *cultus* (which means “tilling”). Master Gardeners are well-versed in this field, but its full definition actually extends beyond what we would normally think of as gardening or agriculture (Beaulieu, 2020).

The research was conducted in Tabanan district, which consists of 10 sub-districts and is one of nine districts/cities in the Province of Bali. However, the types of featured horticultural products analyzed and identified in this study were fruit and flower plants according to the availability of secondary data sourced from Statistic Central Bureau of Bali Province and from Statistic Central Bureau of Tabanan district. Data on vegetable production is not available, even though Baturiti district is a center for the development of various types of vegetables in Tabanan district and even in Bali because it is supported by a suitable climate. The unavailability of data from Statistic Central Bureau of Tabanan and Bali is because vegetable crops are cultivated by many farmers, planting is not synchronous and harvesting is done at different times, making it difficult for officials to estimate the production of various types of vegetable crops.

Tabanan is one of the districts in Bali Province with an area of 839.33 km² or 14.90 percent of the total area of Bali Province (5,632.86 km²), and the second largest district in Bali Province after Buleleng district. Tabanan district consists of 10 subdistricts, namely Selemadeg (6.20 %), East Selemadeg (6.53), West Selemadeg (14.31 %), Kerambitan (5.05), Tabanan (6.12 %), Kediri (6.39 %), Marga (5.34 %), Baturiti (11.82 %), Penebel (16.92 %), and Pupuan (21.33 % of the area of Tabanan district) (BPS Tabanan, 2018). The topography of Tabanan district starts from the highlands in the north to the lowlands in the south. This results in differences in temperature in each region, which in turn can affect the level of rainfall. As a result of variable topography, geography, temperature and rainfall among districts, Tabanan district is suitable to grow a variety of mainstay agricultural products, ranging from highland agriculture such as various types of vegetables in Bedugul, robusta coffee and various types of fruits in Pupuan and paddy growing districts in the lowlands.

Tabanan district is famous as the rice barn of Bali Province, because Tabanan district has the largest rice fields in Bali and is the largest rice producer in Bali. Tabanan is also famous for its robusta coffee produced in Pupuan Sub-district. Later Tabanan became famous as a mangoesteen exporter to China which was produced in Selemadeg sub-district and Pupuan Sub-district. But of the various types of agricultural products cultivated by farmers in Tabanan, not all of them are economical, which means they are not able to produce a surplus of production. This shows that the featured agricultural products in Tabanan district have not yet been identified. On the contrary, the agricultural products of a region are not always superior. In a certain period this may be subject to change. Agricultural products that became superior five years ago, may not currently be featured anymore, due to changes in leading indicators, such as prices, potential market demand, potential areas, employment, etc., so that the area and the production of this product has decreased and its contribution to the local economy has also declined. On the other hand, there

might be new products that are cultivated by farmers that are considered prospective, so they might become featured products. For example, mangoesteen might not have been featured ten years ago, but now Tabanan district's mangoesteen is exported to China, mangoesteen may be currently a featured product. Therefore, periodically at least every five years, it is necessary to identify a featured product in an area.

The research objectives were: (1) Identifying the types of featured fruit products, localization and specialization in each sub-district in Tabanan district; (2) Identifying featured flower plant products, localization and specialization in each sub-district in Tabanan district.

Material and methods

The research location in Tabanan district, Bali Province, was determined based on several considerations. Data analysis methods used in this study were Location Quotient Analysis (LQ), Locality Coefficient, and Specialization Coefficient.

Location Quotient (LQ): LQ analysis was initially used to identify leading or superior or featured sectors or sub-sectors (bases) and not superior (non-bases) in the economy of a region or region, either district, province or country as long as there are two data groups available, namely lower hierarchy data and higher hierarchy data (Bendavid, 1974; Hoover, 1975; Azis, 1994; Issard *et al.*, 1998; Tarigan, 2005; Pranoto, 2008). However, in this study LQ analysis was appropriate and suitable to be used to identify featured horticultural products (fruits and ornamental/flower plants) in each district in Tabanan district.

This analysis method compares the ability of an area (sub-district) to produce a fruit or flower plant with a wider area (district) producing the same commodity. The concept can be formulated as:

$$LQ = \frac{Si/S}{Ni/N}$$

Where,

LQ= Location Quotient of horticultural (fruit or ornamental/flower) products (featured or not featured).

Si= Production of the i-th horticulture (fruit or ornamental/flower) product in a sub-district

S= Total production of horticulture (fruit or ornamental/flower) products in a sub-district

Ni= Production of the i-th horticulture (fruit or ornamental/flower) product at the district level (Tabanan)

N= Total production horticulture (fruit or ornamental/flower) products at the district level (Tabanan).

Locality Coefficient (α): Locality coefficient (α) number formula was used to analyze the localization or distribution of agricultural products (in this study are horticultural products) featured in an area, so that the level of agglomeration is known (Pranoto, 2008). The formula used was:

$$\alpha = \left\{ \left(\frac{Si}{N} \right) - \left(\frac{S}{N} \right) \right\}$$

Where,

α = Locality Coefficient

Si= Production of the i-th horticulture (fruit or flower) product in a sub-district

S= Total production of horticulture (fruit or flower) products in a sub-district

Ni= Production of the i-th horticulture (fruit or flower) product at the district level (Tabanan)

N= Total production horticulture (fruit or flower) products at the district level (Tabanan).

The number α gives the following indications:

$\alpha \geq 1$, Indicates the location of centralized horticulture product activities in a sub-district.

$\alpha < 1$, Indicates the location of activities of horticulture products to spread in a sub-district.

Specialization Coefficient (β): Used to determine the specialization of an area (in this research is Tabanan district) in food commodities (in this study are horticultural products) (Pranoto, 2008).

$$\beta = \left\{ \left(\frac{Si}{S} \right) - \left(\frac{Ni}{N} \right) \right\}$$

Where,

B = Specialization Coefficient

Si = Production of the ith horticulture (fruit or ornamental/flower) product in a sub-district

S = Total production of horticulture (fruit or ornamental/flower) products in a sub-district

Ni = Production of the ith horticulture (fruit or ornamental/flower) product at the district level (Tabanan)

N = Total production horticulture (fruit or ornamental/flower) products at the district level (Tabanan).

The β number gives the following indications:

$\beta \geq 1$, shows a district (Tabanan) that specializes in the activities of an horticulture product.

$\beta < 1$, shows a district (Tabanan) there is no activity specializing in a horticulture product.

Result and discussion

Featured fruit products in Tabanan district: Tabanan district in the Province of Bali, not only is a tourist destination for *Tanah Lot* Temple, which is well known to foreign countries, but in recent years it is also known as a producer of fruit products. From the results of the analysis of Location Quotient (LQ) of various types of fruit products in 10 sub-districts in Tabanan district, it was found that citrus (Jeruk), guava (Jambu Biji), water guava (Jambu Air), pineapple (Nenas), papaya (Pepaya), banana (Pisang), jackfruit (Nangka), grief (Duku), zalacca (Salak), mangoesteen (Manggis) and durian are featured fruit products in Pupuan Sub-district, and sawo fruit products is featured in Penebel sub-district which is shown by Location Quotient of more than one ($LQ > 1$) (Table 1). However, based on the results of the study by Antara and Sumarniasih, (2019), Tabanan district also has featured commodities of rice, soybeans, pork, goat meat, freeze meat, meat laying hens, broiler chicken meat, duck meat, eggs, featured vegetables namely: cabbage, chinese cabbage/mustard greens, leeks, and carrots.

There is need to produce the featured fruit products extensively and intensively, so that the excess production can not only able to meet local needs, but can also be sent outside Tabanan, so that it can generate income for local entrepreneurs, and even can bring foreign exchange to the country if sent abroad (for example mangoesteen export).

Localization or concentration of a commodity or product production (in this study are fruits and flower plant) in an area (sub-district/district/city) can be determined by using the localization coefficient (α) (Pranoto, 2008). Localization coefficient (α) in each region (sub-district/district/city) is obtained by adding up the total value of α for each commodity or product (fruits or flower plant) that is positive. Localization coefficient (α) with a value greater than or equal to one (≥ 1) in a region, means that there is a commodity whose production location is concentrated in that

Table 1. Featured fruit products in Tabanan district, province of Bali, Indonesia

Subdistrict	Location Quotient Coefficient (LQ) of fruit products in Tabanan district											
	Orange	Guava	Water apple	Sawo	Pineapple	Papaya	Banana	Jackfruit	Duku	Zallaca	Mango-steen	Durian
Selemadeg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Selemadeg Timur	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Selemadeg Barat	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kerambitan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tabanan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kediri	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Marga	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Baturiti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Penebel	0.000	0.000	0.000	6.642	0.000	0.000	0.480	0.000	0.000	0.000	0.000	0.000
Pupuan	1.001	1.001	1.001	0.958	1.002	1.002	1.001	1.002	1.002	1.002	1.000	1.000

Sources: Processed from fruit production data per subdistrict, sourced from 'Kecamatan dalam Angka 2018, Badan Pusat Statistik Kabupaten Tabanan. Note: LQ value is calculated from fruit production of the subdistrict. LQ value is the average LQ of the last four years (2014-2017) according to the data availability 'Kecamatan dalam Angka 2018', BPS Kabupaten Tabanan 2018.

If $LQ > 1 \rightarrow$ Featured Product has $LQ > 1$; If $LQ < 1$ is not a featured product. Bold figures indicate featured ($LQ > 1$)

region. On the contrary, the localization coefficient (α) smaller than one (<1) in a region, shows that there is no commodity or any product whose production location is centered in that region. The data used in the analysis of localization coefficient (α) in this study is the annual production of each fruit product during the period 2014 to 2017. The results of the analysis indicated that although orange, guava, water guava, pineapple, papaya, bananas, jackfruit, grief, zalacca, mangoesteen and durian are featured fruit products in Pupuan sub-district and Sawo fruit products is featured in Penebel Sub-district, it does not mean that the featured products of these fruits are localized in Pupuan Sub-district, because they are also cultivated in other sub-districts, but did not become the featured. As a comparison, Antara and Sumarniasih (2019) found that rice became the featured commodity in Tabanan district, but the localization coefficient was smaller than one (<1), meaning that rice commodity was not localized in Tabanan, but spread also in other district in Bali.

Specialization of an area potential (sub-district/district/city) in producing a commodity or agricultural product can be analyzed using the coefficient of specialization (β). The coefficient of specialization in principle looks for the difference in the ratio of the production of a commodity to a group of commodities in the region reduced by the ratio of the production of a commodity to a group of commodities in the above level. The magnitude of the specialization coefficient (β) in each region is obtained by adding up the positive value of each commodity in the region. Specialization coefficients (β) with a value greater or equal to one (≥ 1) in an area, means that the region specializes in producing a type of an agriculture commodity. On the contrary, the coefficient β smaller than one ($\beta < 1$) in a region, indicate that the region does not have a specialization in producing a type of agriculture commodity. The data used in the analysis of specialization in this study were fruit production during the period 2014 to 2017. The results of the analysis showed that Tabanan district was not specialized in producing fruit products, because the coefficient of specialization (β) was smaller than one. Other district in Bali which are also fruit producers are Buleleng, Karangasem, and Bangli.

One of the types of fruit is mangoesteen products in Tabanan district, originating from Pupuan sub-district has been recognized by the consumers outside Tabanan and abroad, especially China because of its sweetness. Chinese importers are very fond of mangoesteen from Tabanan and there is always shortage of products to export. The mangoesteen harvest season occurs in January to May. Mangoesteen fruit harvest season in Pupuan sub-district can be used as a tourist attraction for tourists, packaged into a harvest agro-tourism package and enjoy the mangoesteen fruit and at the same time bring souvenirs of the mangoesteen fruit back to the hotel where tourists stay. Mangoesteen-producing villages in Pupuan Sub-district Munduktemu, Belatungan, Bantiran, Pajahan, Kebon Padangan and in the western Selemadeg Sub-districts, the villages are Lumbung, Tiyang Gading, Yeh Silah and Nyuh Gading, Mundeh Kangin, and Jelijih Punggang and many more. In addition to mangoesteen, Tabanan district is also a producer of avocado, durian and zallaca.

As a comparison Suryani *et al.* (2016) conducted a study on "Analysis of determination of commodity of fruits in Sigi Regency, Central Sulawesi" and classified avocado as superior commodity with an average value of LQ 5.48, jackfruit with an average value of LQ 1.04, pineapple with an average value of LQ 1.10, papaya with an average value of LQ 1.29, rambutan with an average value of LQ 1.56 and water guava with an average value of LQ 1.63.

However, Kasuba *et al.* (2015) conducted a research on "Potential Horticultural Agribusiness Featured Commodities and Their Development Strategies in South Halmahera district" and found that South Halmahera district had the potential of featured commodities in the horticultural sub-sector of chili, duku fruit and durian, which could be developed because it was supported by the potential of very fertile land. The structure of featured commodity growth in the horticultural subsector based on the localization coefficient shows that the commodity is not localized or concentrated, while the Specialization Coefficient analysis also indicate that the subsector is not specialized or not yet devour themselves to a type of horticultural commodity.

Featured flower plant products in Tabanan district: Tabanan districts is not only a producer of fruit plants, but also a producer of flower to supply the needs of hotels, villas and households in Badung district, Gianyar district and Denpasar city. The center of the development and producer of flower plant products in Tabanan district is spread in five districts namely, Tabanan, Kerambitan, Marga, Baturiti, and Pupuan. The types of flower plant produced by these five districts are orchid (Anggrek), flowers anthurium (Anthurium Bunga), leaf anthurium (Anthurium Daun), cordyline, dracaena, heliconia, ixora, chrysanthemum (Krisan), roses (Mawar), palm (Palem), philodendron, sansevieria (Pedang-Pedangan), and Sedap Malam.

From the results of the LQ analysis of flower plant products in five sub-districts of Tabanan district, it was found that Orchid products were the featured product cultivated in Marga sub-district ($LQ=1.34>1$) and Baturiti sub-districts ($LQ=1.11>1$). Flower Anthurium is a featured cultivated in Baturiti sub-district ($LQ=1.16>1$). Cordyline ($LQ=43.03$) and Dracaena ($LQ=20.03>1$) are only cultivated in Marga sub-district. Heliconia is featured product cultivated in Kerambitan sub-district ($LQ=3.53>1$), Marga sub-district ($LQ=2.46>1$) and Pupuan sub-district ($LQ=3.53>1$). Ixora is featured product cultivated in Marga sub-district ($LQ=43.29>1$). Chrysanthemum ($LQ=1.16>1$) and rose ($LQ=1.12>1$) are featured product in Baturiti sub-district. Palm is the featured in Marga sub-district ($LQ=43.29>1$). Philodendron ($LQ=43.03$) and Sansevieria (Pedang-Pedangan) ($LQ=45.06>1$) are featured in Marga sub-district. Sedap Malam is featured in Tabanan sub-district ($LQ=60.88$) (Table 2). Based on the analysis of the localization coefficient (α) it was found that most of the flower plants has the localization coefficient (α) less than one ($\alpha<1$), only heliconia flower plant has the localization coefficient more than one ($\alpha=1.7388 > 1$). This means that the heliconia flower plant is localized or centralized in three sub-districts namely Kerambitan, Marga and Pupuan sub-district. However, based on the specialization coefficient (β), Tabanan district is not specialized in producing flower plant showed by all of the

specialization coefficient (β) of flower plant less than one ($\beta<1$).

So, flower plant products that are featured in some sub-district of Tabanan district, should be developed because the products are not only to meet the needs of the local community, even most of them are marketed outside Tabanan district so that it can generate income for flower plant entrepreneurs. For example, it is evident from the cultivation of flower plant in Petiga village, Marga sub-district that it has an impact not only on increasing the income of the local community, but also on the beauty and coolness of the village environment that is filled and surrounded by nurseries and cultivation of flower plant for trading purposes.

From the results of visits and observations to Petiga village, one of the villages in Marga sub-district, the research team met a farmer named Made Meja who had some kind of flower plant demonstration plot in front of his house. This undertaking works for a reddish-yellow banana type (heliconia) that is ready to be sent to the customer. There are several types of heliconia that are cultivated, namely *Heliconia densiflora* is a pisang-pisangan flower whose shape is like crab claws and yellowish orange. But what is more expensive is *Heliconia rostrata*, a pisang-pisangan flower whose flowers hang like bananas. Generally, residents in this village make thousands of flower plant every day such as croton (*Codiaeum variegatum*), which is a tree with leaves of various shapes and colors.

Based on Suriyani's information (2016), around 1983, a number of residents were surprised to see one of the residents in Banjar Sembangan named I Made Murik filling his house with a number of flower and foliage plants for sale. Its activities of planting flower and foliage plant attracted the attention of local residents because many buyers directly came to Murik's house. Finally, almost all residents in his village have become flower growers.

Featured fruit products in Tabanan district are orange, guava, water guava, pineapple, papaya, banana, jackfruit, duku, zallaca, mangoesteen, durian and sawo, while featured flower plant

Table 2. Featured flower plant products in Tabanan district, Bali province, Indonesia

Subdistrict	LQ-Featured Flower Plant Products in Tabanan district												
	Orchidk Bunga	Anthurium Daun	Anthurium Bunga	Cordyline	Dracaena	Heliconia	Ixora	Krisan	Rose	Palem	Phylo- dendron	Sansevieria (Pedang- Pedangan)	Sedap Malam
Selemadeg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Selemadeg Timur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Selemadeg Barat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kerambitan	0.00	0.00	0.00	0.00	0.00	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tabanan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.88
Kediri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marga	1.34	0.03	0.00	43.03	20.03	2.46	43.29	0.00	0.00	43.29	43.03	45.06	0.00
Baturiti	1.11	1.16	0.00	0.00	0.00	0.69	0.00	1.16	1.12	0.00	0.00	0.00	0.77
Penebel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pupuan	0.00	0.00	0.00	0.00	0.00	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Sources: Processed from production data of flower plant products per subdistrict, sourced from 'Kecamatan dalam Angka 2018' published by Badan Pusat Statistik Kabupaten Tabanan (reconciled with data sources from the agricultural sector, BPS Bali).

Note : LQ value is calculated from the production of flowerproducts per district in the last four years (2014-2017)

If $LQ > 1 \rightarrow$ The i-th flower plant product is a featured product

If $LQ < 1 \rightarrow$ The i-th flower plant product is not a featured product

Bold means the featured ($LQ > 1$)

products are orchid, anthurium, cordyline, dracaena, heliconia, chrysanthemum, roses, palm, philodendron, sansevieria (Pedang-Pedangan), and Sedap Malam. Based on the analysis of the localization coefficient (α) it was found that most of the flower plants had the localization coefficient (α) less than one ($\alpha < 1$), only heliconia had the localization coefficient more than one ($\alpha = 1.7388 > 1$). Its further development can be through intensification efforts and adaption by the growers.

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