

IMPROVING THE CAPACITY OF INPUT PROVISION SERVICES FOR PHARMACEUTICAL MATERIAL INDUSTRY IN LAO CAI PROVINCE

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SUMMARY

Medicinal plants are important non-timber forest products which receives high priority in investment and development in many northern mountainous provinces, especially Lao Cai province. Planting medicinal herbs has contributed significantly to the income of local ethnic minorities. The demand for input services such as seeds, agricultural materials and credit is increasing. The quality of medicinal herbs also depends much on the quality of input provision services. This study was conducted to evaluate the service delivery capacity of service providers for the medicinal material industry in Lao Cai province. The study was conducted through interviews, group discussions, expert consultations, and field observations in two districts of Bat Xat and Bac Ha of Lao Cai province in 2020. Research results showed that farmers growing medicinal herbs in Lao Cai have an increasing need for loans to invest in growing medicinal herbs but was not yet willing to borrow capital to develop and expand the area of medicinal herbs. Cooperatives and businesses currently have short-term revolving loan needs, and do not have a plan to borrow long-term investment capital. The demand for technical services and other input materials in the development of medicinal herbs increases following the expansion of medicinal material areas. However, the provision capacity of the existing agencies is still very limited. Therefore, it is necessary to pilot and implement the service delivery model in line with the market system development approach in which the suppliers will participate in co-investment with farmers, production and processing cooperatives to ensure sustainability, efficiency, mobilizing resources of the private sector to develop medicinal herbs, expanding product consumption markets, thereby encouraging farmers to invest in expanding and improving production and production quality medicinal products.

Keywords: capacity, input services, Lao Cai, pharmaceutical materials, solutions.

1. INTRODUCTION

Lao Cai province has approved the planning on development of medicinal herbs to 2020 with a vision to 2030 according to the decision No. 4478/QĐ-UBND dated December 14, 2016. Accordingly, the area is planned in 05 districts of Sa Pa and Bat Xat, Bac Ha, Si Ma Cai and Muong Khuong are 25,449 ha. As of June 2020, Lao Cai province has 2,264 hectares of medicinal plants. In which, the group of perennial medicinal plants is 1,201 ha such as Sa nhân tím (*Wurfbainia longiligularis*), Chè dây (*Ampelopsis cantoniensis* (Hook. et Arn)), Hôi or anise (*Illicium verum*), Tam thất (Himalayan ginseng), and other medicinal plants on annual land is 1,063 ha such as Artichoke, Female ginseng (*Angelica sinensis*), Xuyên khung (*Ligusticum striatum*), Đan sâm (Red sage), Đẳng sâm (*Codonopsis sp.*), Yacón (*Smallanthus sonchifolius*) (People's Committee of Lao Cai province, 2020). Lao Cai Provincial People's Committee has developed a plan from 2020 to 2030 to expand the Lao Cai medicinal herb area to reach 3,700 ha with 22 types of medicinal herbs. In which, over 60% of the area of medicinal herbs and medicinal

products meets the standards of Good Agricultural and Collection Practices of medicinal plants of the World Health Organization WHO - GACP (Lao Cai Provincial People's Committee, 2016).

Lao Cai province has implemented many models of development of production of medicinal plants using different funding sources. Each funding source has a different level of support and construction, both central investment and local investment. The development support policies and the investment of the authorities at all levels have created a significant push for the development of medicinal plant production in the province in recent years. According to the provincial pharmaceutical development plan to 2020 with a vision to 2030, 100% of herbal medicinal products are produced following value chain model from production to consumption and 100% of the area of medicinal herbs meets WHO-GACP standards. Thus, it is necessary to improve input services such as production materials for farmers, preliminary processing for cooperatives and businesses, and technical services according to WHO-GACP standards. However, for the pharmaceutical industry to

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develop sustainably, the provision of services needs to be in operation following the mechanism of the market system development. The market system principles will ensure that service providers and service users will cooperate on the basis and principles of the market. On that basis, with the support of the GREAT program sponsored by the Australian Government, this study was conducted to assess the capacity of providing input services and propose solutions for the pharmaceutical industry in Lao Cai province. The objective of the study is to analyze the current status of supply and use of input services in the pharmaceutical industry in Lao Cai province in order to propose recommendations for the development of a linkage model to provide input services in the pharmaceutical industry following to the market system development approach.

2. RESEARCH METHODOLOGY

Input supply services will include both public and private services. The participation of actors in the value chain is divided into two groups for services: (i) Service users and (ii) Service providers. Service users in the value chain of medicinal herbs include: (a) Households growing medicinal herbs; (b) Household collectors/traders; and (c) Cooperative/Medical Enterprise. Corresponding to each service user, there will be services provided by different actors. To lay the foundation for the assessment, the analytical framework is defined with the following criteria for assessing the quality of services available in the pharmaceutical value chain: (i) The level of responsiveness in terms of diversity and suitability the needs of the services provided; (ii) The credibility of the supplier as well as the reliability of the service provided; (iii) Accessibility, related to creating favorable conditions for customers in accessing services.

In assessing service quality in the pharmaceutical value chain, this study uses methods such as: (i) Household survey using questionnaires; (ii) Group discussion; (ii) In-depth interviews with the businesses and enterprises; (iii) In-depth interviews with value chain actors and managers; (iv) Field observations and visits to related models and businesses. The survey was conducted on 5 communes, namely Na Hoi, Y Ty, Lung Phinh,

Ta Van Chu, Trinh Tuong in two districts of Bat Xat, Bac Ha of Lao Cai province. The total number of research samples includes a survey with 89 households growing medicinal herbs, 05 group discussions (10 people/group) in 05 communes with a group of households growing medicinal herbs, 11 in-depth interviews, of which 05 in-depth interviews with representatives of state management agencies (Agriculture Department, Center of Agricultural Services), 04 in-depth interviews with representatives of processing and purchasing pharmaceutical enterprises and 02 in-depth interviews with purchasing households and traders. The field study period was from June to December 2020.

Qualitative information from in-depth interviews and group discussions of stakeholders was aggregated into information files. Quantitative data is entered into an excel sheet for data processing and cleaning, and then extracted into tables. Quantitative data were used in combination for descriptive statistical analysis in parallel with in-depth analysis based on qualitative data collected from in-depth interviews and group discussions.

3. RESULTS AND DISCUSSION

3.1. Demand for the services

In the period from 2016 to 2020, the demand for seeds, fertilizers and pesticides for medicinal herbs has increased steadily over the years. In 2016, the total investment demand was 720,364,770 VND, in 2017 the total investment demand increased to 950,268,420 VND. From 2017 to 2018, total investment demand skyrocketed to VND 1,636,913,988, up 72% over the same period last year. In 2019, total investment demand continued to increase to VND 1,853,534,316, the rate of increase was slower than the period of 2017 and 2018 but still increased by 13% over the same period last year. The year 2018 - 2019 is the year that shows the change in both quality and quantity of the Lao Cai pharmaceutical industry in the direction that there will be many WHO-GACP standard service providers participating, not only businesses in the province but also businesses outside the province. Regarding the demand for input services of households participating in the study, 51% of survey respondents have the need to use all 3 types of

credit services, agricultural input services and agricultural materials services and agricultural extension techniques.

3.2. Current situation of services provision and use

3.2.1. Medicinal plant growing groups

Regarding the ethnic composition and the ratio of men and women: 37% of the surveyed people belong to the Ha Nhi ethnic group, of

which 60% of the respondents are female. 33% of respondents are of the Hmong ethnic group, of which 8% are female. 15% of respondents are Nung ethnic group, of which 61% are female. 5% of respondents are Tay ethnic group, in which 100% of respondents are female. 9% of respondents are Kinh ethnic group, in which, 57% of respondents are female (Figure 1).

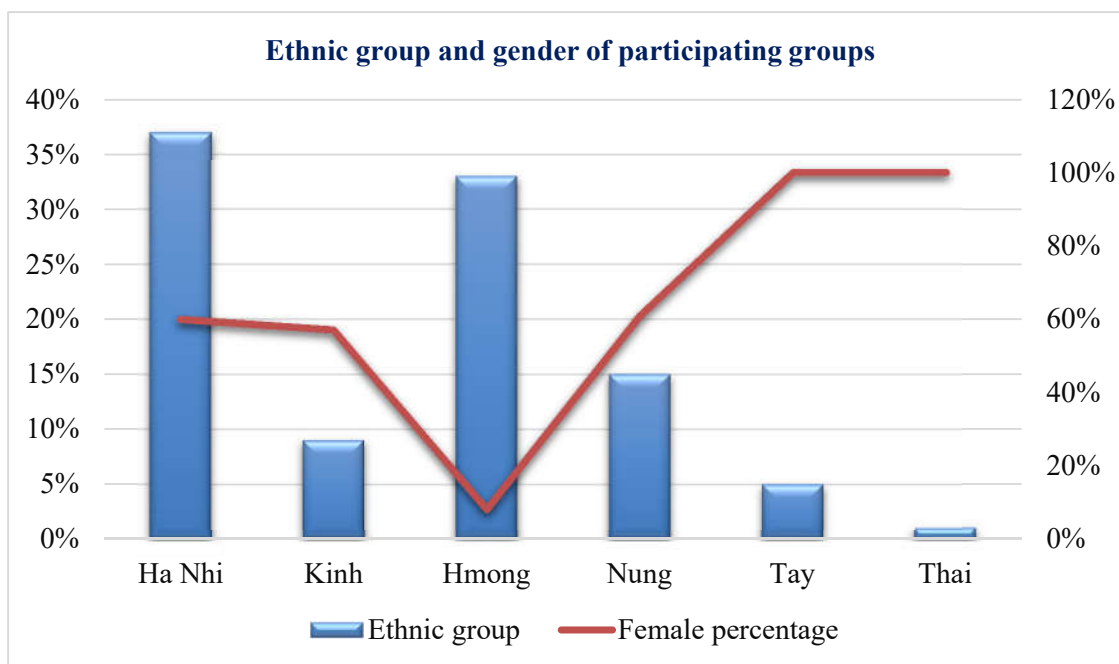


Figure 1. Ethnic group and gender of participating groups

Research shows that 63% of interviewees have less than 5 years of growing medicinal herbs. 21% of interviewees have years of growing medicinal herbs from 5 to 9 years. 12%

of interviewees have 10 to 15 years of growing medicinal herbs. Only 4% of interviewees have 15 years or more of growing medicinal herbs (Figure 2).

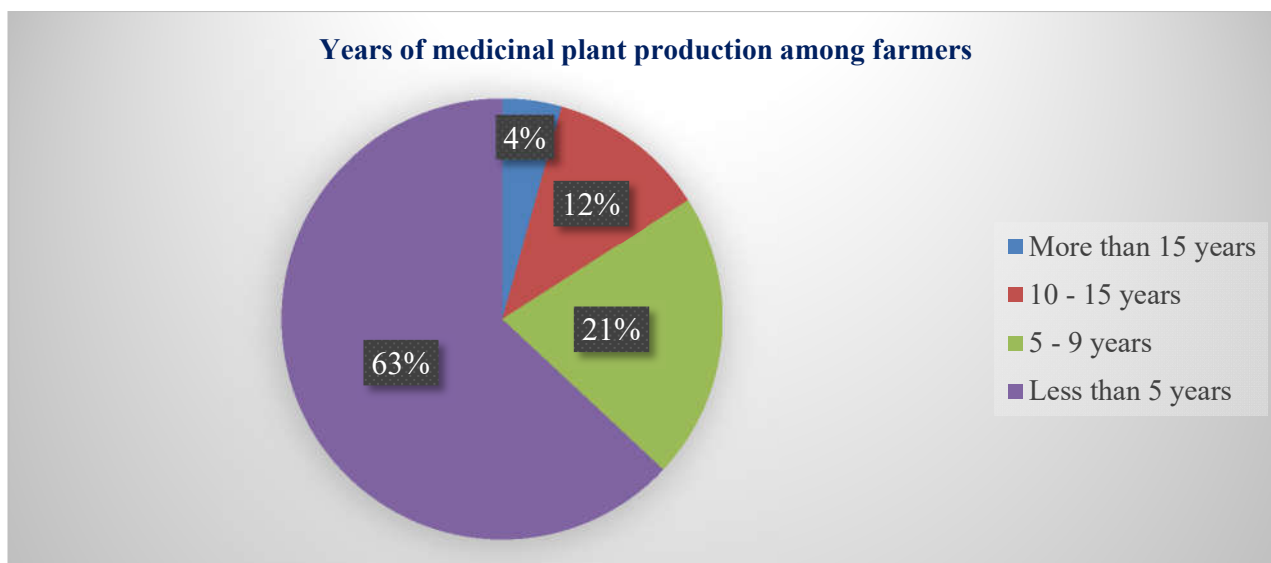


Figure 2. Years of medicinal plant production among farmers

3.2.2. Service provision capacity

The input service providers for the pharmaceutical industry in Lao Cai province includes the private sector and the public service sector. In general, agricultural extension training services are being provided by public service units and NGO projects, there is no private sector unit involved in providing services. The service provision has a high market opportunity and has strong participation from both public service providers and private

enterprises with a focus on agricultural input services and access to credit. For agricultural material service providers, the households providing seeds in communes and districts is being seen as the one that best meets the demand for fertilizers, pesticides, and pesticides with 76% of service user trust. Licensed plant seed suppliers in the province account for 15% of users of the trust service. The rest are from projects, accounting for 9% of service users choosing to trust.

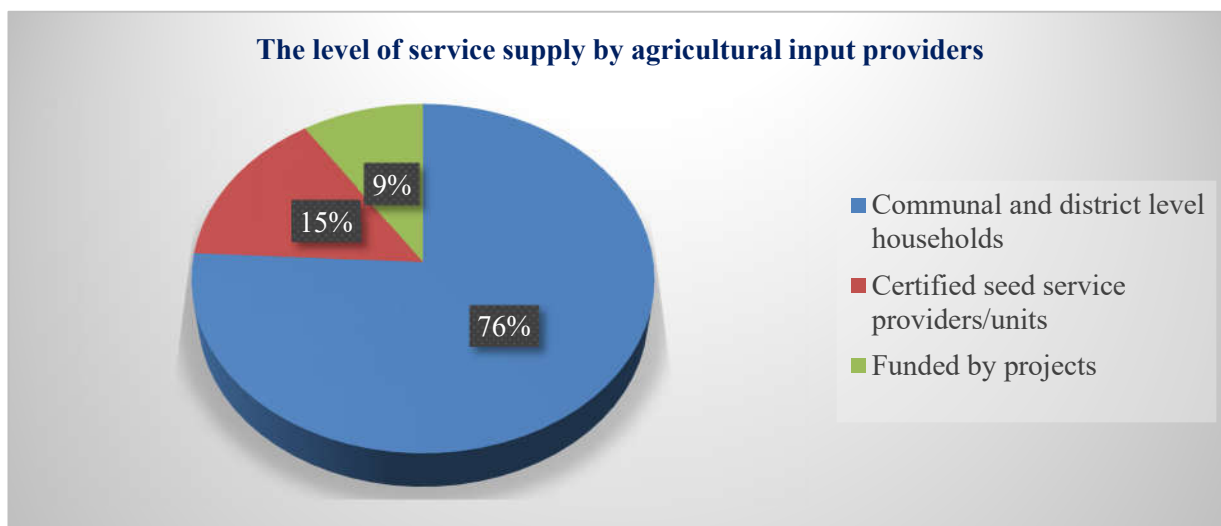


Figure 3. The level of service supply of agricultural input providers

For the credit service providers, currently, 20% of the medicinal herb growing households have access to credit services in two districts of Bat Xat and Bac Ha. Credit service users considered Social and Policy Bank as the one that best meets service needs (37% of users

chose). The second best in terms of service demand for credits in medicinal herbs growing areas are business establishments, herbal processing households in the region (26% of service users selected). For banks, only 8% of service users ranked as of satisfaction.

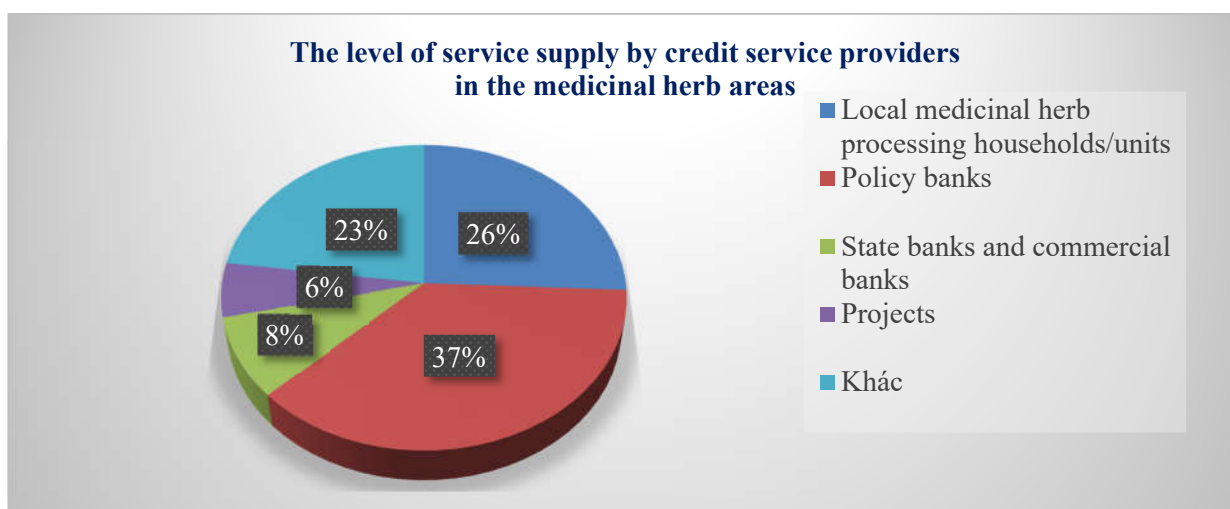


Figure 4. The level of service supply by credit service providers in the medicinal herb areas

3.2.3. Credit provision service

For service users as farmers

This study shown that 51% of people need credit loans to grow medicinal herbs. However, the source of capital and credit for medicinal plant growers in Lao Cai is currently mainly from the family's own capital (80%), followed by the Social Policy Bank (7%), other source such as processing units, business households in the region accounts for 6%, credit form programs and projects is 1%. No household has borrowed capital from pharmaceutical enterprises or commercial banks. The evaluation of the response level, accessibility, and trust level of the households growing medicinal herbs participating in the survey showed that 100% of the respondents regarded policy banks as the highest level of trust. Only 25% of farmers believe that loans from processing units, business households, and relatives are reliable. It can be seen that medicinal farmers have a need to borrow capital for production but have not been able to access capital from official credit channels such as commercial banks and credit institutions, thus they use the family's capital or borrow from relatives. The reason for the above situation is that although each raw material area has the participation of enterprises, the trading relationship between farmers and businesses is still loose, making farmers not willing to accept the risk of borrowing from a bank without seeing the guarantee of product output.

For service users as businesses

Businesses that need credit loans, both private

and public, are short-term loans, with few loans for investment in new technology, equipment and machinery. 85% of enterprises interviewed said that they are using short-term loans. 10% of interviewed enterprises do not use both short-term and long-term loans. Only 5% of interviewed enterprises said that they used long-term loans to invest in equipment and machinery for production. The average working capital of cooperatives, companies and enterprises needs to use ranges from VND 500 million to VND 1 billion per year. It can be seen that the outstanding situation of capital use of cooperatives and enterprises participating in the Lao Cai pharmaceutical market is only focusing on short-term loan needs. The reason given is that the cooperatives and pharmaceutical enterprises in Lao Cai are not properly positioning their business models and building business strategies for long-term development. This may limit the province's goal of raising income per unit of medicinal production area and developing the pharmaceutical industry to meet the increasing demands of the domestic and international markets.

3.2.4. Production input service

Regarding the supply of medicinal seeds, there are three main sources of seeds for farmers: (i) households providing seeds in communes and districts account for 50%, (ii) households producing seeds themselves account for 27%. (ii) programs and projects account for 23%, no household buys seeds from local pharmaceutical enterprises (Figure 5).

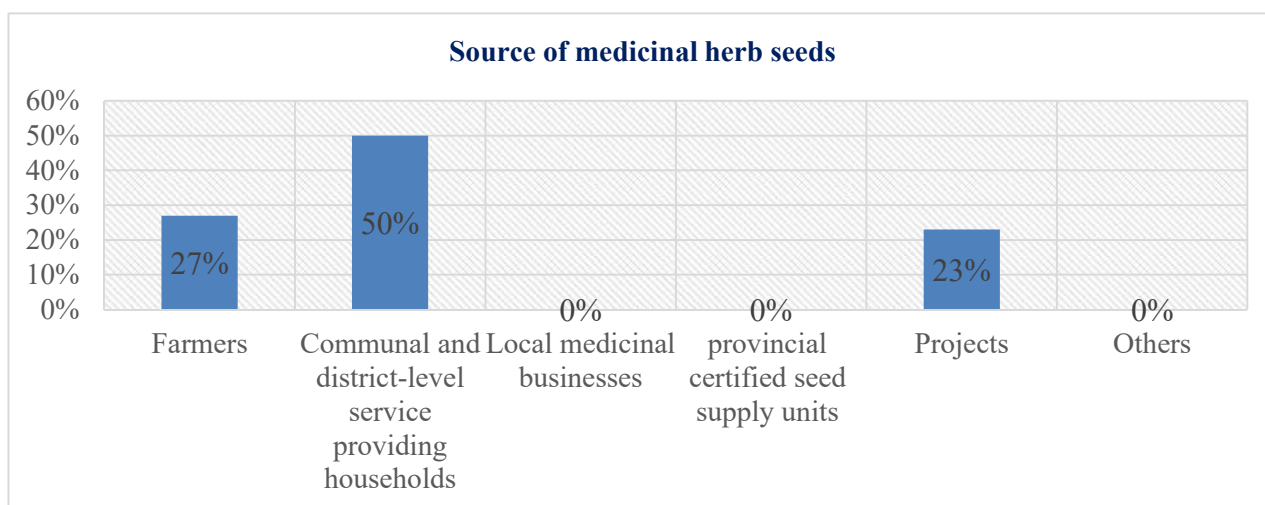


Figure 5. Source of medicinal herb seeds

The most appreciated seed suppliers are currently the households in the commune and district. Regarding the level of response, 84% of people who are using this service think that the seed suppliers in the commune and district have a very diverse source of seeds. 84% of respondents agree that they also have easy access to buy medicinal plant varieties with this group and have high confidence (96%). The second group that has the trust and confidence of herbal farmers is from the project. 91% of households surveyed said that seeds from the project program were diverse, 88%

of people said that it was easy to access seeds from project programs, however, the level of confidence in seed quality of the project provision was lower than that for seed business households in communes, villages and hamlets (82%). For fertilizer supply, medicinal plant households in Lao Cai are using fertilizers from 3 main groups, including business households in communes and districts (56%), self-producing households (29%), only 15% get fertilizer from shops and companies in the province (Figure 6).

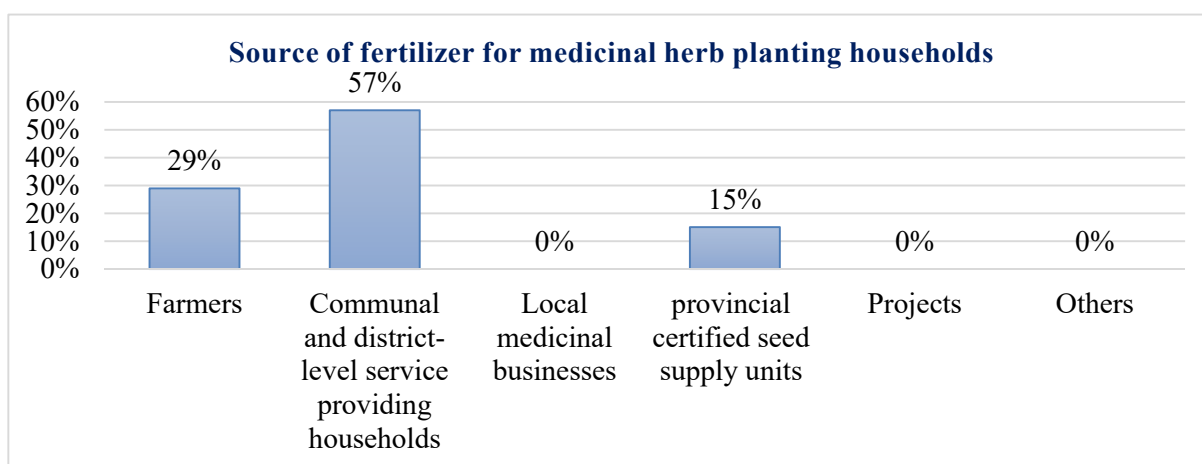


Figure 6. Source of fertilizer for medicinal herb planting households

The study shown that farmers trust current fertilizer supplies. Farmers use 50% of organic fertilizers from their families, 50% of which are purchased at stores in the commune and district. Farmers also believe in fertilizers being purchased from business households in communes and districts, in which 91% of respondents think that fertilizers are diversified, 88% of people think that it is easy to access stores; 92% of people trust the quality of manure purchased from outside. For the service

of supplying pesticides, the households growing medicinal herbs in Lao Cai said that they often use homemade pesticides, only for pests that are too difficult to treat then they have to purchase from dealers. When they have to buy materials, they often choose to buy from households dealing in agricultural materials in the commune or district (70%), if the district store cannot meet the requirements, they will go to the selling point of the company supplying the material (18%) (Figure 7).

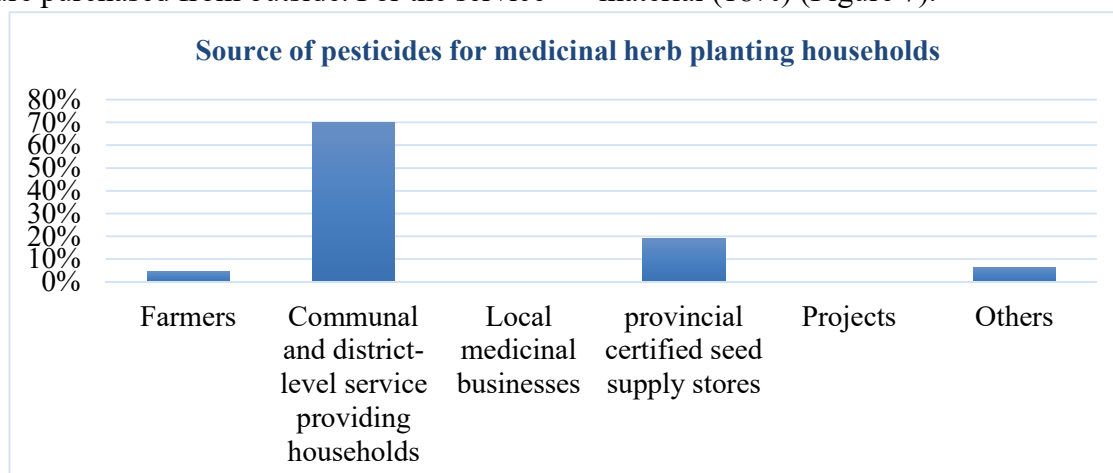


Figure 7. Sources of pesticide provision for medicinal farmers

The level of trust of households for the service of supplying pesticides is very high. 91% of pesticide users think that the variety sold here is diverse, 88% of respondents consider it easy to access, 92% of respondents believe it very much.

3.2.5. Technology and post harvest processing services

Agricultural extension and technical training services in the two studied districts are currently being carried out by actors such as agricultural officers and agricultural extension officers who train farmers in techniques of growing

medicinal herbs according to the province's annual vocational training program, district program, projects, farmers learn from their own experiences and learn from each other. The survey shows that 64% of households growing medicinal herbs in Lao Cai are growing medicinal herbs through family experiences and learning from surrounding households. 16% of households have access to planting and tending techniques for medicinal herbs through agricultural extension workers. 13% access to technology through collectors, traders, and businesses to buy products (Figure 8).

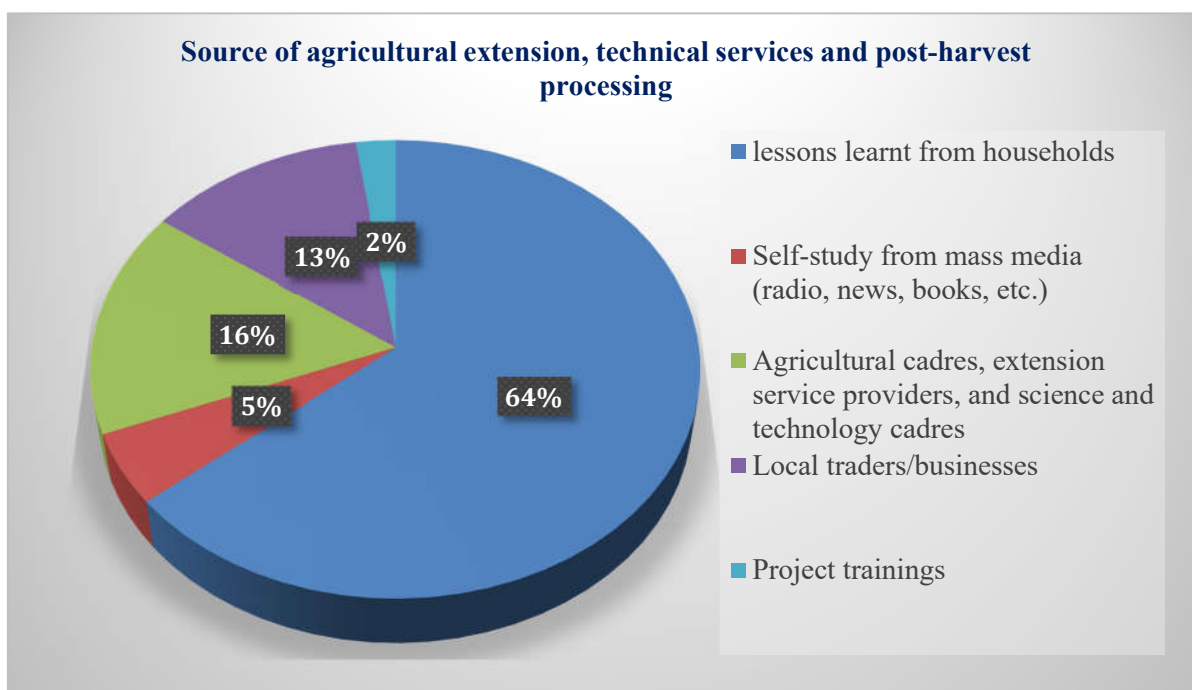


Figure 8. Source of agricultural extension, technical services and post-harvest processing

Although the proportion of farmers in the two medicinal areas self-equipped with planting and caring techniques based on experience, they are not confident in their own experience. Only 31% of respondents believe that the family's planting and care techniques have a diverse level of response, and only 36% people think that they are very confident in the family's planting and care techniques. Meanwhile, they put great faith in programs and projects. 75% of respondents said that the level of response to

training content of programs and projects is very diverse. 75% of farmers surveyed said that they are very confident in the quality of training programs and projects. Farmers' confidence in the training programs of agricultural extension officers is also high (68%). This result shows that farmers growing medicinal herbs want to access training programs on planting and caring techniques from specialized units. For pre-harvest and post-harvest processing services, preliminary processing techniques are at a very

rudimentary level, drying or drying according to traditional methods in the community. Currently, in Bac Ha and Bat Xat, only artichokes of Na Hoi Agricultural Cooperative are preliminarily processed. Bac Ha Agricultural Service Center collects and does simple preliminary processing such as drying and drying to sell to pharmaceutical companies. However, at present, the preparation and processing of medicinal herbs is still limited.

4. CONCLUSIONS

The research results show that the demand of farmers, cooperatives and other actors for input services for the development of medicinal herbs in Lao Cai province is increasing with the increase of the existing area and the size of the plant. planning the medicinal growing area of Lao Cai province. Demand for technical services, credit, processing and storage technology is increasing. However, the supply capacity of the units in the province is still very limited. Therefore, it is necessary to pilot and deploy the service delivery model according to the market system development approach, in which the suppliers will participate in co-investment with farmers, production and processing cooperatives to ensure sustainability, efficiency, mobilizing resources of the private sector to develop medicinal herbs, expanding product consumption markets, thereby encouraging farmers to invest in expanding and improving production and production quality medicinal products. In the first stage, it is advisable to focus on supporting the development of a business model in each district, creating a connection between enterprises - local cooperatives - production groups and farmers. The operation of this linkage model will help solve farmers' problems related markets, production techniques; agricultural materials ensure safety standards, cheaper prices; at the same time, it also helps to

solve the difficulties of pharmaceutical enterprises in zoning medicinal herbs, ensuring the commitment of people in supplying raw materials for enterprises. The next stage will be plans to replicate the model implemented in parallel with business capacity development trainings.

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CẢI THIỆN NĂNG LỰC CUNG CẤP DỊCH VỤ ĐẦU VÀO CHO NGÀNH DƯỢC LIỆU TỈNH LÀO CAI

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TÓM TẮT

Cây dược liệu là một loại lâm sản ngoài gỗ quan trọng được nhiều tỉnh miền núi phía Bắc ưu tiên phát triển trong đó có tỉnh Lào Cai. Trồng dược liệu cũng đóng góp đáng kể vào thu nhập của đồng bào dân tộc thiểu số địa phương. Nhu cầu sử dụng các dịch vụ đầu vào như giống, vật tư nông nghiệp, tín dụng là rất lớn. Chất lượng dược liệu cũng phụ thuộc rất lớn vào chất lượng cung cấp các dịch vụ đầu vào như giống, vốn tín dụng, phân bón và kỹ thuật. Nghiên cứu này được thực hiện nhằm đánh giá năng lực cung cấp dịch vụ của các đơn vị cung cấp dịch vụ cho ngành dược liệu tỉnh Lào Cai. Nghiên cứu được thực hiện qua phỏng vấn, thảo luận nhóm, tham vấn chuyên gia, quan sát thực tế tại 02 huyện Bát Xát và Bắc Hà tỉnh Lào Cai năm 2020. Kết quả nghiên cứu cho thấy nông dân trồng dược liệu Lào Cai có nhu cầu vay vốn đầu tư trồng dược liệu nhưng chưa mạnh dạn vay vốn phát triển mở rộng diện tích trồng dược liệu. Các hợp tác xã, doanh nghiệp hiện có nhu cầu vay vốn xoay vòng trong ngắn hạn, chưa có kế hoạch vay vốn đầu tư dài hạn. Nhu cầu về dịch vụ kỹ thuật như tập huấn về trồng, chăm sóc dược liệu cũng tăng. Nhu cầu về vật tư đầu vào trong phát triển dược liệu cũng tăng theo xu hướng chung của vùng. Tuy nhiên, năng lực cung cấp giống của các đơn vị trong tỉnh còn rất hạn chế. Do đó cần thí điểm và triển khai mô hình cung cấp dịch vụ theo phương pháp tiếp cận hệ thống thị trường đó là đơn vị cung cấp vật tư sẽ tham gia đồng đầu tư cùng với nông dân, các HTX sản xuất và chế biến để đảm bảo sự bền vững, hiệu quả, huy động được nguồn lực của khối tư nhân vào phát triển dược liệu, mở rộng thị trường tiêu thụ sản phẩm, từ đó khuyến khích nông dân đầu tư mở rộng và nâng cao chất lượng sản xuất, sản phẩm dược liệu.

Từ khoá: Dịch vụ đầu vào, dược liệu, giải pháp, Lào Cai, năng lực.

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