STUDENTS' PERCEPTION ON VEGETABLE PROPAGATION AS A MEANS OF SELF-RELIANCE: A CASE STUDY OF AGRICULTURAL EDUCATION DEPARTMENT FEDERAL COLLEGE OF EDUCATION (SP) OYO

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Abstract
This research was carried out to determine the students' perception on vegetable propagation for self-reliance in Federal college of Education (Special), Oyo. Data was collected from 100 respondents with a structured questionnaire and analyzed using descriptive statistics (frequency, percentages and mean). It was revealed that 80 % of the respondents fell within the age range of 18 years and 60% were male. The result showed that vegetable can be propagated with minimal tools and equipment making it accessible to students and that motivation and encouragement can help to boost their interest towards vegetable production for self-reliance. It was recommended that effective practical programmes should be promoted to equip the students with technical skills among others.

Key words: Students perception, vegetable, propagation, self-reliance

Introduction
A vegetable is any edible part of a plant, such as the leaves and stems, examples are lettuce, celery, roots like carrots, tubers such as potatoes, or even flowers like broccoli. Vegetables are a crucial part of a healthy diet, providing essential nutrients, fiber, and antioxidants (FAO, 2017). Vegetables are a horticultural food crops which may be either annuals or perennials and may be defined as a high-value crop that is intensively managed and requires special care after harvest. "Vegetable" is a term based on the usage of herbaceous plants or portions of plants that are eaten whole or in part, raw or cooked, generally with an entree or in a salad but not as a dessert, that are intensively managed and may require special care after harvest to maintain quality (Esmond , Kenneth & Truswell, 2024). Vegetable production involves the cultivation or the propagation of vegetables for human consumption. It is an essential aspect of agriculture, providing a source of income for farmers and a vital component of a healthy diet for consumers. It is the growing of different vegetables for human consumption (Encyclopedia Britannica, 2015). Vegetable production is a type of crop production that produces crops of different edible parts. The shoot, roots, leaves and fruit of different vegetable are edible and are good for human consumption. Vegetable crops provide vitamins and minerals. It may be leafy such as Lettuce, Cabbage, Spinach and so on, fruit vegetable such as Pepper, Cucumber, Tomatoes etc., Root vegetable like Carrot, Sweet potato; bulb like onion, garlic etc. and Flower

like Cauliflower, Broccoli and so on. Vegetable production is very popular among farmers and it generates income especially during the dry season. The demand for vegetable is high because of it important role in human diet as it is rich in vitamins, minerals and fibers. It can be propagated for fresh consumption, processing or seed production which makes it a great and profitable business (Ine, 2017).

Common vegetable crops include;

- Fabaceae (Pea family) : Pea, Beans, Lentils
- Solanaceae (Night shade family) : Tomatoes, Eggplant, Bell pepper, Potatoes
- Brassicaceae (Mustard family) : Cauliflower, Cabbage, Brussels, Sprouts, Broccoli
- Allium family: Onions, Garlic, Leek, Shallot, chives
- Carrot (Apiaceae)
- Luttuce (Asteraceae)
- Cucurbit family of plants including Melon, Cantaloupe, Cucumber, Calabash, Squash and Pumpkin
- Sweet corn
- Amaranthus
- Corchorus
- Celosia

Classification of vegetables based on uses

- **Potherbs or greens:** Spinach, kale, New Zealand spinach, mustard, chard, collards, dandelion
- **Salad crops**: Celery, chicory, lettuce, watercress, endive
- **Cole crops**: (all are members of Brassica oleracea except Chinese cabbage) Cabbage, Brussels sprouts, cauliflower, kohlrabi, sprouting broccoli, Chinese cabbage
- **Root crops**: refers to crops which have a fleshy taproot like Beet, turnip, carrot, rutabaga, parsnip, radish, salsify, celeriac
- **Bulb crops (Allium spp.):** Onion, garlic, leek, shallot, Welsh onion
- **Pulses or legume:** Peas, beans (including dry-seeded or agronomic forms)
- **Cucurbit:** (all members of the Cucurbitaceae) Cucumber, pumpkin, muskmelon, squash, watermelon, several oriental crops
- **Solanaceous fruits** : members of the Solanaceae ; Tomato, eggplant, pepper, husk tomato.
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Types of Vegetable Production

- Conventional Farming: This is the type of vegetable production which employs the use of synthetic fertilizers, pesticides, and irrigation systems.it is the most common method of propagating vegetables
- Organic Farming: This method avoids the use of synthetic fertilizers, pesticides, and genetically modified organisms (GMOs).
- Hydroponic Farming: This method involves growing vegetables in a nutrient-rich solution rather than soil.
- Greenhouse Farming: This method involves growing vegetables in a controlled environment, using greenhouses to regulate temperature, humidity, and light.

Stages of Vegetable Production

There are different stages involved in production of vegetable which are listed below:

- Land Preparation: Preparing the soil for planting, including tilling, fertilizing, and pest control.
- Seeding: Planting seeds in the prepared soil.
- Irrigation: Providing water to the plants, either through rainfall or irrigation systems.
- Fertilization: Applying fertilizers to promote plant growth.
- Pest and Disease Management: Controlling pests and diseases that can damage the plants.
- Harvesting: Collecting the mature vegetables.
- Post-Harvest Handling: Handling and storing the harvested vegetables to maintain quality.

For optimum propagation, one needs to consider the following:

1. Land : which must be well prepared to achieve good result
2. Seed: seed for planting must be viable, of good quality and healthy
3. Planting time: proper timing as regards planting of seed is very important
4. Method of planting: good method of planting should be adopted to achieve the best

Statement of the problem

The economic situation of the Country today has necessitated the need to find a means to equip and develop individuals to determine their strengths and weaknesses in order to be self-reliant for survival. Vegetable propagation could be a viable area that can provide skills and practical knowledge in making individuals to be self-reliant rather than been dependent or looking for white collar job that are not readily available.

Significance of the study

The study will assist the students, educators, teachers and even the government in providing information about vegetable production and how its potentials can be harnessed to empower not only interested students but also teachers to generate an alternative source of income and to make them self-reliant for national development.

Objectives of the study

The main objective of the study is to determine the perception of students' on vegetable propagation as a means of self-reliance.

The specific objectives are to:

- Determine the personal characteristics of the students'
- Analyse the interest of students in vegetable production as a source of income.
- Identify the ways by which vegetable production can assist the students to create jobs to boost the national economy

Research questions

- What are the personal characteristics of the students' in the study location?
- Are students interested in vegetable production as a source of income?
- How can vegetable production assist the students to create job to boost the national economy?

Methodology

A survey research design was employed for the study .The population for the study comprised of 100, 200 and 300 level students of the department of Agricultural Education of Federal College of Education (Special), Oyo in the 2022/2023 academic session. 100 students were randomly sampled for the exercise and a structured questionnaire was used for the data collection. Face and content validities of the instrument were determined by a group of experts in the field. Reliability test of the instrument was carried out using test re-test method at an interval of two weeks. The value of 0.78 was adjudged satisfactory. The data collected was analyzed using frequency, simple percentages and mean.

Results and Discussion of the findings

Table 1: Personal data of the respondents (students)

Characteristics	Frequency	Percentage
Sex		
Male	60	60%
Female	40	40%
Total	**100**	**100**
Age range		
15-17yrs	20	20%
18yrs & above	80	80%
Total	**100**	**100**
Level		
100	40	40%
200	10	10%
300	50	50%
Total	**50**	**100.0**

Source: Field Survey, 2023.

Table 1showed that the sample consisted of 60(60%) Males and 40(40%) Females respondents (N=100). The age distributions of the respondents was also indicated in the table that 20(20%) were between the ages of 15-17 years while 80(80%) fall between 18years and above. This indicated that majority of the respondents were 18years and above. Also, the level of education of the respondents were indicated as 40(40%) 100 level, 10(10%) 200 level, 50(50%) were in 300 level.

Table 2: Perception of the students on vegetable propagation

SN	ITEMS	SA 4	A 3	D 2	SD 1	TOTAL	MEAN X	DECISION
1	The knowledge gained during practical period enable me to have interest in vegetable production	40 160	60 180	-	-	100 340	3.4	Agreed
2	Students' with this skill can	20	80	-	-	100	3.2	Agreed

	be self employed	80	240			320		
3	Agricultural Education has developed our community through practical skills	50 200	40 120	10 20	-	100 340	3.4	Agreed
4	Vegetable production is time consuming	10 40	10 30	40 80	40 40	100 190	1.9	Disagreed
5	One can sustain him/herself when propagating vegetable	40 160	40 120	20 40	-	100 320	3.2	Agreed
6	Vegetable production requires lots of capital to setup	10 40	20 60	50 100	20 20	100 220	2.2	Disagreed
7	Lack of equipments and tools affect students to participate actively	30 120	-	50 100	20 20	100 240	2.4	Disagreed
8	Teacher motivates and encourage some of us who have special interest in vegetable production	30 120	60 180	10 20	-	100 320	3.2	Agreed
9	I am willing to introduce vegetable production to people	40 160	30 90	20 40	10 10	100 300	3.0	Agreed
10	Profits from this production enable individual to pay much attention	30 120	50 150	20 40	-	100 310	3.1	Agreed
11	Marketing of vegetables is very easy	30 120	50 150	10 20	10 10	100 300	3.0	Agreed
12	Getting white collar job does not stop me from planting vegetables	40 160	50 150	10 20	-	100 330	3.3	Agreed
13	Field trip & visit to different farms enable students' to have interest in vegetable farming	30 120	70 210	-	-	100 330	3.3	Agreed
14	Vegetable can be propagated throughout the year	30 120	50 150	10 20	10 10	100 300	3.0	Agreed
15	Land use for vegetable is very easy to get	40 160	60 180	-	-	100 340	3.4	Agreed

Source: Field survey, 2023
Decision: 3.5-SA, 2.5-A, 1.5-D, 0.5-SD

The Analysis of data from table 2 revealed that all the questions were agreed upon by the respondents at various mean value except items 4, 6 and 7 which were disagreed upon. It was discovered that majority of the respondents agreed that practical's enabled them to have interest in vegetable production (X=3.4) and that the skill can make them to be self-employed (X=3.2). This is in line with Kolb and Kolb (2005) who were of the opinion that theoretical knowledge should be reinforced with practical experience. Majority of the respondents' agreed that One can sustain him/herself when propagating vegetables (X=3.2). This is also supported by FAO (2017)

that "Vegetable production can provide a sustainable source of income for small-scale farmers." IFAD (2019) was also of the opinion that Vegetable production can be a viable livelihood option for small-scale farmers and the National Gardening Association (2020) also stated that "vegetable production can be a viable livelihood option for small-scale farmers. Also, Item 6 indicated that the respondents disagreed with the statement that Vegetable production requires lots of capital to setup at mean (X=2.5) which is in line with the statement of AIPH (2020) that "starting a vegetable production business, initial investment costs can be low, and simple tools and equipment can be used"

The respondents disagreed with the statement that "lack of equipment and tools affect students to participate actively "as indicated in item 7 of the questionnaire which is in line with FAO (2017) which stated that "simple, low-cost tools and equipment can be used for vegetable production, making it accessible to small-scale farmers." IFAD (2019) also stressed that "local, low-cost materials can be used to construct simple tools and equipment for vegetable production. The National Gardening Association (2020) is also of the opinion that you do not need a lot of expensive equipment to start constructing simple tools and equipment for vegetable production. This shows that vegetable production can be done with minimal equipment and tools, making it accessible to students and small-scale farmers. The importance of teacher's motivation and encouragement in promoting interest and engagement in vegetable production among students cannot be overlooked as the majority of the respondents' agreed that Teachers motivate and encourage some of them who have special interest in vegetable production (X=3.2). Teachers and extension agents play a crucial role in motivating and encouraging farmers, especially youth, to engage in sustainable agriculture practices (FAO, 2017). IFAD (2019) added that "Motivation and encouragement from teachers, extension agents, and peers can help farmers overcome challenges and improve their productivity." Likewise, National Gardening Association (2020) which is of the opinion that "Having a mentor or teacher can be helpful in getting started with vegetable gardening." AIPH (2020) also added that "Teachers and trainers can provide motivation and encouragement to students and farmers, helping them to develop the skills and knowledge needed for successful vegetable production. More so, having a white-collar job does not preclude one from engaging in vegetable gardening or farming. Many people with white-collar jobs are successfully combining their careers with vegetable production as a hobby or additional source of income. This was in line with findings of the study where majority of the respondents (X=3.3) were in agreement. Vegetable gardening can be a rewarding hobby for people of all ages and occupations, including those with white-collar jobs (National Gardening Association, 2020). Many urban residents, including those with white-collar jobs, are engaging in vegetable production as a hobby or to supplement their income ((FAO, 2017; AIPH, 2020).World Bank (2018) also added that urban agriculture, including vegetable production, can provide an additional source of income and food security for urban residents, regardless of their occupation."

Conclusion

Based on the findings above, it can be concluded that vegetable production can be done with minimal equipment and tools, making it accessible to students and small-scale farmers. And through practicals, motivation and encouragement, students can develop skills and knowledge needed for the propagation of vegetable. Also, trips and visits to different farms should be encouraged as it will enable the students to gain more experience and learn new innovations that

will encourage them to promote vegetable production to eradicate youth unemployment and reduce poverty in the society.

Recommendations

The following are recommended for optimum and successful vegetable propagation:

- Vegetable propagation should be revitalized to make it attractive to students
- Effective practical programmes should be promoted at different institutions of learning to enrich and equip the students effectively.
- Students should be exposed to modern methods and innovative ways of growing vegetables especially in urban areas.
- Also, the use of hydroponics in growing of vegetables should be explored.
- Use of natural and sustainable methods to produce vegetables.
- Development and use of new vegetable varieties with desirable traits, such as disease resistance and improved nutrition should also be explored.

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