

Bunching Onion Production

Introduction

Bunching onion (*Allium fistulosum* L.) or “murang sebuyas” is a perennial herb usually cultivated as an annual or biennial. It either develops a small, elongated bulb that is similar to leek, or grow slender, elongated pseudostems or tillers to form a vigorous clump. It requires a cool climate, but can also grow in areas without extremes of heat and cold, and excessive rainfall.

Uses and Nutritional Value

In Southeast Asia, the thick pseudostems and the green tops of bunching onion are used in salads or as pot herbs to flavor soups and other dishes. In processed form, it is used as an additive to pre processed foods such as instant noodles. The young inflorescence is sometimes deep-fried and eaten as snack.

Bunching onion is said to reduce or prevent white ant infestation in gardens. In China, diluted pressed juice is used against aphids. The therapeutic qualities attributed to bunching onion are many, especially in Chinese medicine, where it is known to improve eyesight, and promote longevity. It is also believed to enhance metabolism, and the function of internal organs. It is further reported to enhance recovery from common colds, headaches, wounds and festering sores.

The composition of green tops and blanched pseudostems differs, with green tops being more nutritious. Each 100 g edible portion of green tops contains:

Nutrient	Amount
Water	90.0 g
Protein	1.7 g
Fat	0.2 g
Digestible carbohydrates	5.4 g
Vitamin A	480.0 IU
Vitamin B ₁	60.0 mg
Vitamin B ₂	100.0 mg
Niacin	400.0 mg
Vitamin C	33.0 mg
Calcium	80.0 mg
Iron	1.0 mg
Potassium	200.0 mg
Phosphorus	38.0 mg
Energy Value	105.0 kj

Varieties

- Aqua Green
- Fuyuyo
- Midorikawa

Seedling Production

Use seeds or basal tillers as planting materials. A 350-500 m² seedbed can produce enough seedlings for one hectare. Incorporate 1 kg/m² animal manure, and rice hull or rice straw on top of seedbed to control harmful microorganisms.

Line sow 2-4 kg seeds in rows set across the bed 5 cm apart. Distribute seeds thinly and evenly to control damping off. Cover seeds slightly with compost. Mulch with rice straw or grass clippings. Maintain adequate soil moisture. Do not over-irrigate. Protect seedbed from direct sunlight and rain with nylon net or removable plastic tunnels.

Land Preparation

Thorough land preparation requires 1-2 plowing and harrowing operations. One month prior to land preparation, apply about 30 cm layer of rice hull over entire field, and

burn for about two weeks. Incorporate burnt rice hull during land preparation. Burnt rice hull reduces occurrence of weeds and diseases, and improves soil texture.

Apply 10-15 t animal manure prior to bed preparation. Prepare 1 m wide beds. Fertilize and mulch with rice straw prior to transplanting.

Transplanting

Water seedbeds well. Gently uproot seedlings to prevent root damage. Apply 5-7 bags 14-14-14 as basal fertilizer. Trim top portion of the leaves prior to transplanting to reduce transpiration and increase plant survival. Transplant in seedbeds at a distance of 10 cm x 15 cm. Use markers to provide proper spacing and to facilitate transplanting. Dibbles may be used to make holes. Plant deep enough. Care must be taken not to damage the basal portion of the plant. Press the soil lightly around the basal portion. Make sure that the root is in full contact with the soil. Irrigate the field before and after transplanting.

Fertilization

Apply three bags urea (46-0-0) three weeks after transplanting. Repeat two weeks thereafter if soil fertility is low.

Irrigation

Bunching onion requires adequate moisture to obtain steady, continuous and desirable growth. Irrigate daily during dry season.

Pest and disease Management

Although generally a healthy crop, bunching onion is affected by diseases common to *alliums*, such as purple blotch and downy mildew. To minimize occurrence, the following is recommended; proper irrigation to regulate humidity within the field; eliminate debris from previous crop; remove infected leaves; practice crop rotation; and spray compost tea. Compost tea is prepared by fermenting compost for 10-14 days. The effluent is sprayed to control foliar diseases.

The beet army worm and the American bollworm are the more serious pests. To control, spread rice hull ash over the field and spray hot pepper extract. For onion thrips, use agricultural spreader, or spray with insecticidal soap.

Practice strict sanitation and cultivation to reduce damaging effects of pests and diseases.

Harvesting

Harvest 2½ months after planting, or depending on market preference. For the tillering type, planting material for the next cropping season can be left in the field.

Cost and Return Analysis Per Hectare

	ITEMS	AMOUNT(P)
I.	VARIABLE COSTS	50,645
	A. Labor (150/MD)	
	Plowing	1,500
	Harrowing	1,000
	Bedding	1,500
	Manure application	1,500
	Seedling production (15 MD)	2,250
	Transplanting (20 MD)	3,000
	Fertilization (2x) (20 MD)	600
	Mulching (5 MD)	750
	Weeding (2x) (20 MD)	3,000
	Irrigation (16 MD)	2,400
	Spraying (8 MD)	1,200
	Harvesting (8 MD)	1,200
	Postharvest operations (8 MD)	1,200
	Sub-total	21,100
	B. Materials	
	Seeds (4 kg/ha)	5,400

	Animal manure (10 t)	10,000	
	Fertilizers		
	14-14-14 (5 bags)	1,750	
	46-0-0 (3 bags)	1,395	
	Chemical spray	1,000	
	Fuel and oil	5,000	
	Miscellaneous	5,000	
	Sub-total	29,545	
II.	FIXED COSTS		7,423
	Land Rental	5,000	
	Depreciation		
	5 pcs. scythe (1 yr)	38	
	2 pcs. hoe (3 yrs)	50	
	2 pcs. shovel (3 yrs)	85	
	2 knapsack sprayers (3 yrs)	250	
	Interest on loans at 20% int. p. a.	2,000	
	TOTAL COSTS		58,068
	GROSS INCOME*	175,000	- 250,000
	NET INCOME	116,932	- 191,932

*With marketable yield of 7-10 t/ha at P25/kg

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