

Original Research Article

Relevance of Assamese Folk Song, *Bihu Geet* in practicing natural farming in the traditional *Baree* (~~Homestead garden~~ Homestead Garden) System of Assam

ABSTRACT

Aim: The study was undertaken to understand the relevance of Assamese folk songs or *Bihu geet* in the management of traditional Assamese *baree* system in view of natural farming.

Study design: The data obtained from group discussion and personal interview method have been tabulated as described by [7]

Place and duration of Study: The study was conducted in a total of 24 villages from six districts viz. Nalbari, Baksa, Dhemaji, Lakhimpur, Golaghat and Sivsagar during the period January, 2021 to January, 2022

Methodology: From three agro-climatic zones of Assam, two districts were selected and from each district four villages were selected. From each village 10 farmers above 60years of age were selected randomly thus making a sample size of 240 respondents. Data was collected by using group discussion method and personal interview method using semi structured interview schedule.

Results: A total of 36 *Bihu geet* reflecting natural farming practices in the traditional *baree* system and its role in the management of the *baree* have been documented

Conclusion: From this study, it can be concluded that *Bihu Geet* forms an indispensable part of the Assamese *Baree* system and its scientific validation should be studied further as these are based on practical observation over a long period of time and can form a basis for natural farming.

Key words: *Baree*, Folksongs, Natural farming, Diversification

1. Introduction

The initiation of modern agriculture can be traced back to the subsistence production system that started in small plots around the households. Homestead garden or *Baree* has been an integral part of the Assamese people since time immemorial. Most of the household from Assam has a homestead land adjoined to their house. The homestead is well fenced, mostly having irrigation source. The *Baree* system plays a vital role in providing food and income for the family. *Baree* in Assam is also a traditional land use practice, mostly around the dwelling house where different plant species including fruit, ~~vegetables,~~ ~~spices~~ vegetables, spices, herbs, ornamental along with other components of farming system like livestock, poultry, fishery, sericulture, bee-keeping etc are maintained by the members of the farm family with the primary objective to fulfil their various household needs.

Assam is characterized by diverse eco system like hot humid sub-tropical climate with varied topography and has many rivers and their tributaries and due to its climatic condition, a ~~wide numbers~~ wide number of flora and fauna are available in this region. Home garden system in this region has evolved successfully over the centuries enduring and adjusting to the eco system with challenges of change in time and need. The *Baree* system in Assam has been prevalent since time immemorial as documented by different visitors such as Hiuen Tsang, the Chinese scholar, Sahabuddin Talesh, historian of Mughal era who came to Assam in 1662 AD.

However, the *Baree* was standardized and upgraded in the Brahmaputra valley during the rule of Ahom kings. During the reign of Swargadeu Pratap Singh (1603-1641 AD), the most famous Chief of the Revenue Office, Momai Tamuly Borbaruah reconstituted villages for enhancing revenue collection and developed *Baree* into self-sufficient system for economic upliftment as well as self-dependence of the farm families. Multi functionality is a characteristic feature of *Baree*. It has natural potentiality to provide food, fuel, fodder, green manure, timber resources etc. *Baree* can ~~improved~~ improve food security and increased availability of food, provide better nutrition through diversification, enhanced income and rural employment, decreased risk due to diversification, numerous environmental benefits [8] ~~(Landon Lane, 2011)~~. *Baree* provides food security to the household by increasing availability, accessibility, and utilization of food products. Food items from *Baree* vary from horticultural crop to live stock products. The diversity of food items ~~lead~~ leads to an overall increase in dietary intake and helps in bioavailability and absorption of essential nutrients. Besides food and nutritional security *Baree*

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contributes tremendously towards income generation, livelihood improvement, and economic welfare of household, entrepreneurship and rural development. *Baree* plays a major role in biodiversity conservation of an area. [The study was undertaken to understand the relevance of Assamese folk songs or *Bihu geet* in the management of traditional Assamese *baree* system in view of natural farming.](#)

1.1 Assamese Folk Song *Bihu Geet* and the Baree (~~Homestead garden~~Homestead Garden) System

Folk songs in relation to agriculture are one of the traditional wealth for the state of Assam. Folk songs like *Bihu Geet* are an integral part of the festival which is close to the heart of Assamese people. These songs depict the different aspect of nature in general and agriculture in particular for understanding different aspect of agriculture. It simply shows the close relation of nature with the common people. The traditional *Bihu Geet* reflects the various aspects of agricultural concept and practices. These *Bihu geets* serve as a source of ITK and guides the community to follow different agricultural aspects and to follow natural farming. ITK is fruitful for sustainable development of the community and country as a whole [11]. [In](#) Assamese culture, many popular *Bihu Geet* are prevalent which reflects the Assamese traditional *Baree* system and these helps the common people in managing their *Baree*. These *Bihu geets* are serves as a basis for natural farming that encourages the use of every living organism in the farm and avoids the usage of any external chemical or organic fertilizers. Keeping this in view an effort was made to study the relevance of few *Bihu Geets* related to Assamese *Baree* system which is a resource of Assamese villagers and the impact of these *Bihu Geets* on the traditional knowledge of our society in the field of horticulture.

2. Material and Methods

The study was conducted in three different agro-climatic zones of Assam viz. Upper Brahmaputra Valley Zone (UBVZ), Lower Brahmaputra Valley Zone (LBVZ) and North Bank Plains Zone (NBPZ), [India](#). Two districts from each zone were selected on the basis of cultural and linguistic practices and from each district four villages were selected that adds up to 24 villages. From each village ten farmers of the age group 60 years and above were selected randomly making a sample size of 240 respondents. Data for the relevant study was collected by

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using group discussion method and personal interview method using semi structured interview schedule. The relevant data were documented and the rationale drawn from the folksongs have been presented in Table 1.

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Results and Discussion

From the present investigation, it has been found that the Assamese folksongs or *Bihu geet* are known to a majority of the farmers belonging to the age group of 50 years and above. But now all *Bihu geets* are related to the field of horticulture. Altogether 36 nos. of *Bihu geets* were identified and have been mentioned in the table below. It has been found that 4 *Bihu geets* are related to lay out and planning of the *Baree*, 3 *Bihu geets* are related to planting method of the horticultural crops, 1 *Bihu geet* is related to plant spacing, 3 *Bihu geets* are related to cropping system, 1 *Bihu geet* is related to fertilization of the crops, 18 *Bihu geets* are related to crop diversification, 3 *Bihu geets* are related to crop management and 3 *Bihu geets* are related to post harvest management. In order to figure out the science behind the *Bihu geet*, a remark has been presented for each of the *Bihu geets* in Table 1. The remarks are based on literature and provide an insight on the scientific cause behind the *Bihu geet*.

Table 1: Assamese *Baree* system in traditional Bihu Geet: Lay out and planning

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Table 2. Assamese *Baree* system in traditional Bihu Geet: Planting method

Table 3. Assamese *Baree* system in traditional Bihu Geet: Plant spacing and Cropping system

Table 4. Assamese *Baree* system in traditional Bihu Geet: Fertilization

[Table 5. Assamese Baree system in traditional Bihu Geet: Crop diversification: Vegetable](#)

[Table 6. Assamese Baree system in traditional Bihu Geet: Crop diversification: Fruits](#)

[Table 7. Assamese Baree system in traditional Bihu Geet: Crop diversification: Flowers](#)

[Table 8.](#)

[Table 9.](#)

<i>Bihu geet</i>	Meaning in English	Remarks
Lay out and planning		
<p><i>Aagbari suani Kakini Tamule Pachbari suan Paan Barghar suani Gabharu suali Uliai dibaloi taan.</i></p>	<p>The front orchard looks beautiful by tall arecanut (<i>Areca catechu</i> L.) plants and the back orchard by betelvines (<i>Piper betel</i> L.). The main house is beautified by grown-up girls. It's sad to give them away.</p>	<p>Areca-nut plants and betel-leaf creepers are a part of the rural Assamese homestead and the nuts and the leaves play an important role in the social life of the people—in worship, in social ceremonies, in day-to-day courtesy, in lovemaking, and, of course, as a minor addiction [10]. Arecanut gives us income and one can be able to get money as and when necessary, by selling the arecanut and betel vine leaves planted in the homestead garden.</p>
<p><i>Barir pisfale oou gos ejupi Lole bor moue baah Rati bau xxat haal dinot nai ehali o Paribor nai tur xaah</i></p>	<p>Elephant apple (<i>Dillenia indica</i>) tree at back of the orchard where the bee colony makes hive; At night speak about ploughing with seven pair bullocks but not a single pair at morning. Honey from the</p>	<p>The perennial and tall plant like elephant apple is planted at the back of the orchard where the wild bee colonies can make hive. After someday the honey may be harvested from the wild bee hives taking necessary precautions.</p>
<p><i>Dhapore thereju kolakoi pokise Pokise mirika tenga Tumak log pabolo pukhurir paroloi digholkoi melisu bengal</i></p>	<p>The thereju fruits (<i>Prunus jenkinsii</i>) have ripened into black, also the Mirika tenga (<i>Parameria polyneura</i>) fruits have ripened, To meet you near the bank of the pond I have taken a leap.</p>	<p>The plants like <i>Prunus jenkinsii</i> and <i>Parameria polyneura</i> are planted at the boundary of the orchard adjacent to the fish pond which is integrated with other another component. These trees flower during August-September.</p>

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<p><i>Piralir amita pate pahikota</i> <i>Chingile chitike atha</i> <i>Bihure talite tumak dekhara</i> <i>pora</i> <i>Bukutkihori janu betha</i></p>	<p>Papaya tree at the raised bed adjacent to the house, when cut oozes out gum, After seeing you at the Bihu, I feel pain in my heart.</p>	<p>The papaya plant is sensitive to the water stagnation; therefore, it is planted at raised area adjacent to the house</p>
<p>Planting method</p>		
<p><i>Bharalar tupate Kerela bagale</i> <i>Komora bogale salat</i> <i>Jibane marane neriba</i> <i>Lahari Neriba bipadar kalat</i></p>	<p>Bittergourd(<i>Momordica charantia</i> L.) climbs on the top of the traditional store house and ash gourd (<i>Benincasa hispida</i> Cogn.) climbs in the roof. Do not leave me alone during my lifetime, nor leave at the time of stress.</p>	<p>Bitter gourd climbs on the top of the traditional store house and ash gourd climbs in the roof gives vegetables to the family when there is some problem in getting foods from other sources. So, people of Assam always grow these two crops for meeting requirement of vegetables at the time of scarcity.</p>
<p><i>Junor puhori pori salore kumura</i> <i>jilike jun jen hoi</i> <i>tiyohor hedali hawuli</i> <i>porise japi diya nokoi</i></p>	<p>The moonlight falls on the ash gourd (<i>Benincasa hispida</i> Cogn.) growing in the roof top Shines like the moon. The cucumber (<i>Cucumis sativus</i> L) support is falling down and needs repairing.</p>	<p>Ash gourd, cucumber etc are most commonly grown vegetables in the rooftop and homestead gardens of Assam.</p>
<p><i>Sopora matite dherua xisilu</i> <i>Kitira kitiri hol</i> <i>Monore Kathati kom buli xasute</i> <i>Monote molongi gol</i></p>	<p>Dheruwa seeds (<i>Raphanus raphanistrum</i> sativus) when sown in heavy compact soil. The growth was poor Preserved my feelings in my heart And these remained inside my heart</p>	<p>Seeds of <i>Raphanus raphanistrum</i> sativus should be sown in well drained fine tilth soil instead of heavy compact soil so that the underground growth is not hampered -[2]</p>
<p>Plant spacing</p>		

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<p><i>Narikolor barikhon korisa kenekoi</i> <i>Nai re parore Saruwa mati</i> <i>Lagile nalage Nalagile lage</i> <i>Kothati jane ne tumi.</i></p>	<p>Coconut (<i>Cocos nucifera</i> L.) is cultivated in the river side. Good bearings could be expected if leaves of one plant do not touch those of nearby plants.</p>	<p>Riverine alluvial soil is rich is good for coconut cultivation as it is rich in nutrients. The local people have gained experience in soil management because they know that to address the adverse effect of soil acidity; they have to use compost manure [11]. Coconut should be planted at proper spacing (7.5 m x 7.5 m) for optimum yield. [2]</p>
<p>Cropping system</p>		
<p><i>Lair maje maje</i> <i>lofa dali dali</i> <i>tare majot khutura sak</i></p>	<p>Lai (<i>Brassica rugosa</i> (Roxb.) Prain), lofa (<i>Malva verticillata</i> L.) and khutura xaak (<i>Amaranthus viridis</i> L. are grown together in the kitchen garden.</p>	<p>Leafy vegetables like <i>lai</i>, <i>lofa</i>, <i>khutura</i> are grown as mixed crop in <i>Baree</i> or kitchen garden as an alternate source of food and nutrition and also providing additional income.</p>
<p><i>Tamulot Bagale</i> <i>Barir Jalukjupi</i> <i>Madarat bagale Pan</i></p>	<p>Black pepper (<i>Piper nigrum</i> L.) climbs on arecanut and betel vine (<i>Piper betel</i>) climbs on Modar (<i>Erythrina lysistemon</i> L.)</p>	<p>Black pepper climbing on the arecanut plant gives a very beautiful look to the homestead garden and betel vine also gives beauty along with the <i>Modar</i> plant. It also gives additional income from the same unit of land. In arecanut based multistoried cropping system, blackpepper and betelvine is an important component.[1]</p>
<p><i>Laur xoot bogale sangot oi togori</i> <i>Jika xoot bogale jengot</i> <i>Tumar podulite jopona khulute</i> <i>dhekurai dhorile thengot</i></p>	<p>Vines of cucurbits climbs at bamboo trellis Vines of Ridge gourd climbs at perches After opening your entrance gate, Dhekura (local breed dog) grasped my leg</p>	<p>Cucurbitaceous plants should be grown with suitable climbing support. Bottle Gourd should be grown by using trellis while Ridge gourd requires bamboo perches for support and optimum yield.</p>
<p>Fertilization</p>		
<p><i>Puroi r kojola guti oi lohari</i> <i>puroi r kojola guti</i> <i>jalukor gurite gubor sopai diba,</i> <i>panot sapai diba mati</i></p>	<p>Reddish brown Seeds of Puroi xaak (<i>Bassela alba</i> L.) oh lahari(Sweetie) Reddish brown Seeds of Puroi xaak Do the earthing up in blackpepper with coddung and in beetle vine with soil</p>	<p>Sufficient quantities of cow dung should be applied to the base of the black pepper plant and earthing up with soil in betel vine is to be done each year which will help in supply of nutrients and conservation of moisture near the base of the plant.[4]</p>

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Crop diversification: Vegetable		
<i>Lao kha, bengena kha Basare basare barhi jaa Mar saru baper saru Toi hobi bar goru</i>	The farmer sings to the cattle as such: Eat bottlegourd (<i>Lagenaria siseraria</i> Standl.), eat brinjal (<i>Solanum melongena</i> L.) Grow up from year to year. Your parents are of small stature, May you be a large one.	On the very first day of the Bohag Bihu, rites are performed to cows or cattle and called <i>Goru Bihu</i> . On this day, the cattle are taken to the banks of the rivers, ponds or water channel for bathing while vegetables like bottle gourds, brinjals, etc. are splashed to them and goaded with the twigs of the <i>Dighloti</i> (<i>Litsea salicifolia</i> Hook.f.), a creeper-like plant. The villagers recite the <i>Bihu geet</i> while bathing the cows.
<i>Aaye tulile kotona dukhere barir alu kachu khai deuta bilania bilai thoi ahile sarai bhangiboloi pai</i>	Mother with painful hardship nurtures us by feeding colocasia (<i>Colocasia esculenta</i> Schott) and yam (<i>Dioscorea spp</i>) from backyard garden. Father being a food distributor in religious functions gets food items for us.	Potato and Yam planted in the backyard become source of food at the time of food crisis. So, it is advised to plant colocasia and yam at backyard of <i>Baree</i> .
<i>Lai lofa chuka paleng aru dhania ataibur botoror sak, titaphulor sakare tumaloi buli randhisu duporoor bhat.</i>	Preparing lunch for you with all the seasonal leafy vegetables like Lai (<i>Brassica rugosa</i> Roxb.), Lofa (<i>Malva verticillata</i> L.), Chuka (<i>Rumex acetosa</i>), Paleng (<i>Beta vulgaris</i> Roxb.) and Dhania (<i>Coriandrum sativum</i> L.) along with Titaphul (<i>Phlogacanthus thrsiflorus</i>).	All the seasonal leafy vegetables are essential part of Assamese diet supplementing nutritional requirement. On the first day of Bohag Bihu festival <i>i.e. Goru Bihu</i> , hundred different kinds of leafy vegetables are consumed as remedial measures against several ailments. It was reported that leaf was the most widely used plant part for medicinal use.[9]
<i>Akaal hole buli dui hate ajuri kenekoi huda bhat khaba barire posola habire dhekia tare emuthi khaba</i>	Though there is famine, but banana (<i>Musa spp</i>) stalk from homestead garden and Dhekia (<i>Diplazium esculentum</i>) can still make a delicious meal.	Assam's <i>Baree</i> system provides all the necessary vegetables in dire time also. It gives an additional income.
<i>Noltenga khutura konkoi bilahi</i>	Noltenga (<i>Tetrastigma angustifoli</i>), Khutura	Food wrapped in banana leaves and further roasting it enhances the taste

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<p><i>Kolakoi kosure thuri</i> <i>Kolpatot nuriyai tuloike</i> <i>thoi disu</i> <i>Dhankheror juite puri</i></p>	<p>(<i>Amaranthus viridis</i>), cherry tomatoes and stems of black colocasia, Wrapped them in banana leaves and roasted them in paddy straw fire only for you.</p>	<p>apart from nutritional benefits.</p>
<p><i>Chote goye goye bohage</i> <i>palehi</i> <i>Phulile bhebeli lata</i> <i>Koinu koi thakile Urake</i> <i>nopare</i> <i>Bohagor Bihure kotha</i></p>	<p>The <i>Chaitra</i> month is going out and Bohag is in. The Bhebeli (<i>Paederia foetida</i> L), a creeper growing in <i>Baree</i> is in bloom, It will not be end about Bohag Bihu, if we say again and again</p>	<p>Bihu songs give a picture of the changing of nature with the season, shrub and trees, put the new leaves and blossoms in the homestead gardens. It also indicates the rich diversity of <i>Baree</i> system.</p>
<p>Crop diversification: Fruits</p>		
<p><i>Barir lisujoopa rongakoi</i> <i>pokise</i> <i>Tumar gal dukhonir dore</i> <i>Goosote dutaman tumaloi</i> <i>xhasisu</i> <i>Raati hole baduli pore</i></p>	<p>The litchi tree (<i>Litchi chinensis</i> Sonn.) of the homestead garden have ripened red just like your cheeks, Have kept a few for you at the tree but Bats attack these during night</p>	<p>Litchi fruit ripens during the month of May-June and the right time to harvest the fruits is when the pericarp turns pinkish red.</p>
<p><i>Tumaloi buli poniol parilu</i> <i>Kaite futile haat</i> <i>Tumi khaba buli pitiki dilu</i> <i>moi</i> <i>Ssitiki porile gaat</i></p>	<p>While harvesting Indian coffee plum (<i>Flacourtia jangomas</i>) just for you Thorns pricked my hand I smashed them for you And got spilled on my body</p>	<p><i>Flacourtia jangomas</i> is a tree that generally grows up to 6-10m. Although the branches of old trees are thornless the young trees have woody thorns. The berries ripe during March to July.[12]</p>
<p><i>Tetelir tolote karnu taate</i> <i>nati</i> <i>Pahori ahilu kusi</i></p>	<p>Beneath the Tamarind tree, someone left their grandchild into sleep.</p>	<p>Tamarind is a leguminous tree and holds plethora of benefits apart from enhancing the soil quality. It is a multipurpose plant with exceptionally large spreading crown that provides shade. Almost all parts of the tree find a place in food, pharmaceutical, timber and textile industry. [17]</p>
<p><i>Narikel gosore sirili pate</i> <i>oi</i> <i>Botahot hale jale</i> <i>Tumaloi buli gamoosa</i> <i>hasute</i> <i>Jopate oiye khale</i></p>	<p>Fronds of Coconut tree Sways in the wind Preserved Gamusa for you But got damaged by termites</p>	<p>From performing holy rites to delicacies coconut forms an indispensable part of every household in Assam. Hence, almost homestead garden in Assam has coconut tree plantation.</p>

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<p><i>Tulashir tole Mriga pahu chare, Take dekhi Ramachandrai Hara dhanu dhare.</i></p>	<p>The deer beneath the tulshi (<i>Ocimum tenuiflorum</i>) plant grazes. Seeing this, Ramachandra gets ready with his bow and arrow.</p>	<p>Some simple hymn-like songs are sung on the occasion of Kati Bihu at the time of praying in front of sacred <i>Tulshi</i> plant in the evening. In Hinduism culture, <i>Tulshi</i> plant is very secret and auspicious. They pray for the blessing and good health of their crops.[5]</p>
<p>Crop diversification: Flowers</p>		
<p><i>Krisnai murate bakul phool epahi, Niyar pai mukali hol O' Govindai Raam.</i></p>	<p>The <i>bakul</i> (<i>Mimusops elengi</i>) flower coming in contact with dew unfolded its petals on the head of Krishna(God)</p>	<p>The men villagers form the bands in their area and visit households with folk musical instruments for performing <i>Husori</i> at the time of <i>Bohag Bihu</i>. They start with chanting and dance-like movements, forming a ring sung songs called <i>Husori Ghosha</i> which have a Vaishnava flavour.</p>
<p><i>Deotar podulit gondhase madhuri Keteki molemolai O' Gobindai raam</i></p>	<p>The fragrance of Madhuri flower (<i>Quisqualis indica</i> L.) and Keteki flower (<i>Pandanus odoratissimus</i>) at the gateway of my Father's home feels Godly</p>	<p><i>Quisqualis indica</i> L. has a sweet fragrance and it is generally planted at the gateway of the house. Similarly, <i>Pandanus odoratissimus</i> also has a sweet fragrance and is cultivated at the boundary of the homestead garden. Apart from beautification of the area, these flowers also possess some medicinally active phytochemical constituents responsible for pharmacological activities.[15]</p>
<p><i>Kunjalata Kopowful fuli ase Nasoni bhanik dhuliai mati ase Nahu buli nokoba beya pabo Siro dinor karone nematibo</i></p>	<p>The orchids (<i>Rhynchosyilis retusa</i>) are in full bloom The drummers are seeking for the dancers. Please don't say you won't come Won't talk forever</p>	<p><i>Rhynchosyilis retusa</i> is an epiphytic orchid and the plant is considered as a symbol of merriment, fertility and love among the youth in Assam.[16]</p>
<p><i>Tumar barite phulile Indrajit-Malati Mur barit parile chaa, Dinare dintu tumaloi dhauti</i></p>	<p>The chrysanthemums (<i>Chrysanthemum morifolium</i> Ramat) blossom in your garden. Their shadow falls on mine. All</p>	<p>Bihu songs are specifically meant to be sung at Bihu time in the company of peers and have a sort of ritualistic significance about them. Accompanied by the lusty drumming</p>

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<i>Rati pure mure gaa.</i>	the daylong I think of you. My body burns at night.	and dancing, these songs are marked by youthful vigorous and fastness of movement. [6]
<i>Eibeli Bihuti ramake jamake Nahar phul phulibar batar, Naharor gundh pai laharir tat nai Gasakat bhangi jai jatar.</i>	Bihu this year is so glorious. The Nahar (<i>Mesua ferrea</i>) is in bloom. Its perfume makes my sweetie restless. She crushes her spinning wheel under her steps	It is Bihu time which gives an opportunity for marriageable young men and women to meet and exchange their feelings and even to choose their life partners. The joyfulness of the festival is echoed in the Bihu songs
<i>Hauli tulilu nador panitupi Jukari tulilu laai, Matu matu buli matibo pora nai Aasu tumar mukhole sai</i>	Bent forward to draw water from the well And Harvested Lai xaak (<i>Brassica rugosa</i> (Roxb.) with a slight shake Hesitating to call you I stare at your face	<i>Brassica rugosa</i> Roxb. should be harvested with a gentle shake so that the roots are not disturbed and the growing point is kept intact for subsequent flushes to grow.
<i>Barire dhapore mitha aam ejupi Tate bohi binale kuli</i>	The sweet mango tree at the boundary of the homestead garden Where the Cuckoo bird sits and chirps	Mango trees should be planted at the boundary of the homestead garden. Doing so serves the purpose of wind break and also provides shade to the house.
Crop Management		
<i>Kothalor gosote raghumola bogale Rox pom pelale xuhi Tumar sintate kami haar ulale dehau gol johi khohi</i>	<i>Raghumola</i> (<i>Tolypanthus involucre</i> Roxb.), a parasitic plant climbs on the Jackfruit tree, And sucks the sap of the plant And so does my health deteriorates in thoughts of yours	Parasitic weed crops are a major problem in perennial fruit crops. They suck the sap of the plant which deteriorates the health of the crop.
<i>Pokakoi aamore mithakoi roxe oi Tokali pari toi khabi Aamore xahore temi xaji dime Tate mansada thobi</i>	The sweet juice of a ripe mango, Eat it with delight Will design a container with the mango endocarp To store tobacco in it.	The endocarp of Mango is hard and people in ancient times use this as a container to store items like Tobacco. Such containers can be made air tight and easy to use.
<i>Maalbhog khutura borali bhokuwa Gojil gakhroti bon</i>	Malbhog banana (<i>Musa paradisiaca</i>), Khutura (<i>Amaranthus viridis</i>), Borali	The Homestead garden serves as a basket of resources with naturally

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<p><i>Kopalor ghame toi matite pelaiso</i> <i>Kaloinu xasiso dhon</i></p>	<p>(<i>Barilius barila</i>), Bhokuwa (<i>Labeo catla</i>)Gakhiroti bon (<i>Euphorbia hirta</i>) germinated in the homestead garden For whom are you working Sweat and toil and saving your hard<u>hard-earned</u> money.</p>	<p>growing herbs rich in nutrients. Moreover<u>Moreover</u>, with the integration of a fishery and horticultural crops like Banana, one can easily meet his daily dietary needs and be self –sustainable in the long run.</p>
<p>Post harvest management and marketing</p>		
<p><i>Poka tamul thook pari moi anilu</i> <i>Gaatot gooraboloi buli</i> <i>Aaora aaora kori kaipoon holnu</i> <i>Goniba nuwara tumi</i></p>	<p>I harvested the ripen arecanut to preserve it underground But you could not count the total yield</p>	<p>In Assamese culture, Arecanut form an inevitable part of every ritual. Ripe arecanuts are harvested preserved in thick layers of mud to elicit a moist chewing feel when consumed and this product is popularly known as “Bura tamul”. [14]</p>
<p><i>Pooka tamul kipun pisfalor sootalot</i> <i>Gaat khandi gooralu moi</i> <i>Take nu besi o’ suta aani dime</i> <i>Tiyoni boi dibi toi</i></p>	<p>I preserved the ripe Areca nuts<u>undergroundnuts</u> <u>underground</u> in the backyard of my house After selling them, I will buy you yarn to weave clothes for me</p>	<p>The fermentation of areca nut is done to preserve it for a long time and give a specific taste. A pit of 2.5 feet is dug and leaflets of areca nut are placed surrounding the side and bottom of the pit. Then the pit is filled with arecanuts and covered with soil. In this way the arecanuts can be preserved upto 8-9 months. After the due fermentation time, the areca nuts are taken out from the pit and used for various purposes. [13]</p>
<p><i>Poota buha tamul putate herale</i> <i>Bisari napalu gaat</i> <i>Aamar morom seneh kotenu herale</i> <i>Xomondhat melile faat</i></p>	<p>Could not find the spot where I preserved the ripen arecanuts underground When did our relations fall apart?</p>	<p>Ripe Arecanuts are preserved underground by digging the soil upto a certain depth and then covered with soil. In most of the cases, the spot where the arecanuts were preserved becomes unrecognizable in course of time. Hence, after filling up the pit with soil, the soil should be raised upto<u>up to</u> a certain height like the carapace of a turtle. This also helps prevent water stagnation near the pit.</p>

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I suggest that the authors increase the scientific quality by discussing the results with scientific research already published. I suggest adding a few paragraphs like these:

Many farmers use local perception and ancestral knowledge to manage their activities, they use information from their perception of certain meteorological variables to make decisions at the time of sowing, harvesting and even the application of pesticides, as reported by studies in indigenous territories. tropical [18, 19, 20]. In tropical conditions, the development of productive systems responds mainly to the environmental, cultural and ecological conditions of an area. For many agricultural area's monoculture predominates, with little genetic diversity, low management practices and high dependence on the season of greatest rainfall [21, 22, 23]. Additionally, the local and ancestral perception has great strength, due to its deep roots in the experiences and personal experiences of agricultural communities [24, 25, 26].

Studies carried out in tropical areas [27, 28, 29, 30, 31] establish that they contribute to current and future research, as well as support specialists who study the potential impacts of climate variability and change on the production of crops such as corn [32], tomatoes [33] and other tropical crops [34, 35, 36, 37] based on cultural and local knowledge [38, 39, 40].

In general, farmers indicated certain conclusions about the evolution of community activity, as indicated by the studies by [41, 42, 43, 44]. Seen in this way, the foregoing allows us to infer that the recognition of knowledge, beliefs and local practices that rural agricultural communities have regarding these factors, contribute to providing valuable, diverse and complementary information to the scientific one, for the construction of policies. associated with the development of alternatives for sustainable natural agriculture.

Conclusion

The traditional *Bihu Geet* reflects the various aspects of horticultural concept and practices. Many of these knowledge and technologies associated with these *Bihu geets* are backed by scientific reasons and have provided the Assamese community with comfort and self-sufficiency in various ways. *Bihu geets* can form a strong base of knowledge for researchers and development professionals in planning and executing their research strategy and experimental procedure. By blending them with modern technologies, an integrated farming approach can be formulated which also serves the purpose of social acceptance. By inculcating these *Bihu geets*

while practicing natural farming, the dependence of farmers for purchase of critical inputs can be reduced. At a time when the agrarian community is gaining a momentum towards Natural farming, it becomes very essential to preserve and validate these *Bihu geets* as they are eco-friendly and sustainable.

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