

Nagaland at a Glance

District wise production and requirement of food grains, oil, sugar, vegetable, fruit and livestock in Nagaland (Production and Requirement in MT)

Kohima population - 2,70,063				
Commodities	Req.kg /person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	42399.89	41400.00	+999.89
pulses	7.5	2025.47	2930.00	-904.53
oil	18.25	4928.65	5580.00	-651.35
sugar	3	810.19	9150.00	-8339.81
vegetable	21.9	5914.38	5000.00	+914.38
fruits	10.95	2957.19	300.00	+2657.19
meat	182	49151.47	Information not available	NA
milk	150ml	40509.45 l		
egg	55	14853465.0		
Peren population - 94954				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	14907.78	38240.00	+23332.22
pulses	7.5	712.16	1480.00	+767.85
oil	18.25	1732.91	4690.00	+2957.09
sugar	3	284.86	21750.00	+21465.14
vegetable	21.9	2079.49	3500.00	+1420.51
fruits	10.95	1039.75	250.00	-789.75
meat	182	17281.63	Information not available	NA
milk	150ml	14243.10 l		
egg	55	5222470.00		
Dimapur population - 379769				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	59623.73	119130	+59506.267
pulses	7.5	2848.26	1860	-988.2675
oil	18.25	6930.78	8480	+1549.21575
sugar	3	1139.30	48800	+47660.693
vegetable	21.9	8316.94	4000	-4316.9411
fruits	10.95	4158.47	250	-3908.47055
meat	182	69117.95	Information not available	NA
milk	150ml	56965.35 l		
egg	55	20887295		
Mokokchung population - 193171				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	30327.84	26560	-3767.847
pulses	7.5	1448.78	1780	+331.2175
oil	18.25	3525.37	7750	+4224.62925

sugar	3	579.51	21800	+21220.487
vegetable	21.9	4230.44	4900	+669.5551
fruits	10.95	2115.22	280	-1835.22245
meat	182	35157.12	Information not available	NA
milk	150ml	28975.65 1		
egg	55	10624405		
Zunheboto population -141014				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	22139.19	25890	+3750.802
pulses	7.5	1057.60	5460	+4402.4
oil	18.25	2573.5055	12660	+10086.5
sugar	3	423.042	19360	+18936.95
vegetable	21.9	3088.2066	4900	+1811.8
fruits	10.95	1544.1033	220	-1324.10
meat	182	25664.548	Information not available	NA
milk	150ml	21152.1 1		
egg	55	7755770		
Wokha population - 166239				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	26099.523	49440	+23340.5
pulses	7.5	1246.7925	2650	+1403.20
oil	18.25	3033.86175	8360	+5326.14
sugar	3	498.717	36640	+36141.28
vegetable	21.9	3640.6341	4900	+1259.4
fruits	10.95	1820.31705	300	-1520.32
meat	182	30255.498	Information not available	NA
milk	150ml	24935.85 1		
egg	55	9143145		
Tuensang population - 196801				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	30897.757	48890	+17992.24
pulses	7.5	1476.0075	8610	+7133.99
oil	18.25	3591.61825	5520	+1928.38
sugar	3	590.403	15210	+14619.6
vegetable	21.9	4309.9419	4000	-309.94
fruits	10.95	2154.97095	220	-1934.97
meat	182	35817.782	Information not available	NA
milk	150ml	29520.15 1		
egg	55	10824055		

Kiphire population - 74033				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	11623.181	33160	+21536.81
pulses	7.5	555.2475	4580	+4024.75
oil	18.25	1351.10225	2900	+1548.89
sugar	3	222.099	6960	+6737.90
vegetable	21.9	1621.3227	3900	+2278.68
fruits	10.95	810.66135	180	-630.66
meat	182	13474.006	Information not available	NA
milk	150ml	11104.95 1		
egg	55	4071815		
Longleng population - 50593				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	7943.101	17630	+9686.89
pulses	7.5	379.4475	2910	+2530.55
oil	18.25	923.32225	2640	+1716.67
sugar	3	151.779	5220	+5068.22
vegetable	21.9	1107.9867	3500	+2392.01
fruits	10.95	553.99335	160	-393.99
meat	182	9207.926	Information not available	NA
milk	150ml	7588.95 1		
egg	55	2782615		
Mon population - 250671				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	39355.347	50950	+11594.65
pulses	7.5	1880.0325	3170	+1289.96
oil	18.25	4574.74575	8190	+3615.25
sugar	3	752.013	22230	+21477.98
vegetable	21.9	5489.6949	4000	-1489.69
fruits	10.95	2744.84745	200	-2544.84
meat	182	45622.122	Information not available	NA
milk	150ml	37600.65 1		
egg	55	13786905		
Phek population - 1632974				
Commodities	Req.kg/person/year	Req in MT	production(MT)	Defi (-)/Surplus(+)
cereals	157	25637.158	52660	+27022.84
pulses	7.5	1224.705	3290	+2065.29

oil	18.25	2980.1155	6660	+3679.884
sugar	3	489.882	10890	+10400.11
vegetable	21.9	3576.1386	4900	+1323.86
fruits	10.95	1788.0693	180	-1608.06
meat	182	29719.508	Information not available	NA
milk	150ml	24494.11		
egg	55	8981170		

Underutilized crops and fruits: The crops, which are neither grown commercially on large scale nor traded widely, may be termed as underutilized horticultural crops (UUHC). These crops are cultivated, traded and consumed locally. They are easier to grow and hardy in nature, producing a crop even under adverse soil and climatic conditions.

Nagaland state, being rich in plant diversity, has a very large number of nontraditional or underutilized horticultural crops. Different agro-ecological/phyto-geographical regions hold rich diversity in both the cultivated and the wild horticultural crops.

***Sechium edule* (Chow-Chow):** A native of tropical America, Chow-Chow is a very popular vegetable in the region commonly called squash and grows abundantly without much care and attention in high Nagaland. Chow-Chow produces large starchy edible roots in addition to fruits. It is a vigorous, scrambling, tuberous-rooted perennial plant, grown for its starchy, edible fruit and seeds. This climber can spread to fifty feet, producing huge tubers. It looks like a large, green pear, but having a number of deep folds in the skin. Some varieties have smooth skins, while others have dots of prickly spines on the surface. The flesh is crisp and white with a large white oval seed in the center. Chow-Chow is a fruit but most often used as a vegetable. It is often used in the place of potato.

***Canavalia ensiformis* (Jack bean):** It belongs to family papilionaceae and cultivated on limited scale in the North Eastern region (CSIR, 1950). It is a bushy, semi-erect, annual herb, 2 m tall and the tips of its branches tend to twine under shade. Leaves are trifoliate and shortly hairy. Pods are sword shaped, 2-30 cm long and 2-2.5 cm broad. Young green pods are eaten as a cooked vegetable. The young leaves may be cooked and eaten as a potherb. The dried beans are good source of protein and starch.

***Vicia faba* (Broad Bean):** It is a cool-season crop in high altitude areas, grown on a limited extent in the north eastern region. Broad bean is an annual legume botanically known as *Vicia faba* L. Plants are erect annuals reaching 60-125 cm in height, very leafy with robust stems. The plant has compound leaves with toothed stipules at the base, and conspicuous white flowers with the wings smeared in black. The fruit is a pod, reaching 10 cm in a length and pubescent. Seeds are 3 cm in length. It is used as green-shell, the seeds removed from the pod before maturity, or as dry beans. It is the principal protein source for poor people in this region. The protein content of bean seeds is high, amounting to about 20-25%. It is a nitrogen fixing plant.

***Parkia roxburghii* (Tree Bean):** It is one of the most common multipurpose tree species of Mimosaceae family in the north eastern region of India, especially in Manipur and Mizoram. Locally called “Yongchak” in Manipur and Yontak” in Assam, its tree commonly grows in every household of hill region. Tree bean is a much-branched legume of medium height (10-12 m) with bipinnate leaves. The inflorescence head or capitulum’s arise terminally with clusters of yellowish white tiny flowers, hanging at the top of long stalks from the branches.

The fruits in early stages are soft, tender and bright green in colour. They turn blackish when fully mature in March-April. Pods are formed in clusters of 10-15, each measuring 25-40 cm in length and 2-4 cm in breadth. The long tender pods of tree bean are most popular and delicious vegetable in Manipur, Assam, Nagaland, Tripura and Mizoram. Based on local preference, the pods are consumed at different stages of maturity, either fresh or processed. The tender and matured beans are used in various dishes.

Fruit crops

***Myrica farquhariana* (Soh-phie-nam):** It is a moderate sized and ever green tree, which belongs to family Myricaceae. It is quite common in Sibsagar (Dikho valley), Naga hills, Khasi hills and Jaintia hills. The leaves are lanceolate, ovate nearly entire or serrate, male spikes sometimes with male flowers at the top. Fruits are about 2.5 cm ellipsoidal or ovoid reddish or cheese colour at ripening. The ripe fruits are edible and used for making refreshing drink. The bark is used externally as stimulant for rheumatism and in the preparation of yellow dye.

***Passiflora edulis* (Passion fruit):** The northeastern region has a tremendous potential for the production of passion fruit. Recently, its cultivation has been extended to some areas of North-eastern region like Mizoram, Manipur, Nagaland and Sikkim. It is locally called Sohbrab in Meghalaya. The purple passion fruit (*P. edulis*) is a woody perennial vine with robust climber. The stems, tendrils and leaves are clear green without any trace of reddish or pinkish colour. The fruit is round or oval, 3 to 5 cm in diameter and deep purple when ripe. The yellow passion fruit (*P. edulis f. flavicarpa*) vine is much like that of the purple variety but is a more vigorous grower. It is distinguished by the suffusion of reddish, pinkish or purplish colour in stems, leaves and tendrils. Passion fruit juice can be boiled down to a syrup, which is used in making sauce, gelatin desserts, candy, ice cream, sharbat, cake icing, cake filling, etc. There is a preference for the purple variety as fresh fruit and the yellow one for juice-making.

***Phyllanthus acidus* (Star aonla):** It belongs to family *Euphorbiaceae*. This is an ornamental tree, 2-9 m in height with spreading, dense, bushy crown of thickish, rough, main branches. It is particularly found in Mizoram. Fruit is oblate with 6 to 8 ribs and 1-2.5 cm wide; pale-yellow to nearly white when fully ripe; waxy, fleshy, crisp, juicy and highly acidic. For consumption, flesh is sliced from the stone, or the fruits are cooked and then pressed through a sieve to separate the stones.

Important livestock

Nagaland has a good production of pigs, cattle, goat, mithun and poultry. Traditional mix farming practices, dietary behavior and social habits have influence this animal stock reserves. Livestock and poultry provide great deal of support towards sustaining livelihood. Meat consumption in the state is higher as compared to other states of the country. However, the present production is low and cannot meet the requirement. Systematic rearing of livestock, production of organic meat following the prescribed norm can be viewed as another possibility to check the high demands.

Population status of livestock in Nagaland (district wise)

	Koh ima	Dim apur	Per en	Phe k	Mokok chung	Wo kha	Zunhe boto	Kip hire	Long leng	Mo n	Tuen sang	total
Co w beef	376 87	2088 28	163 02	159 84	33055	365 67	47245	112 14	8189	274 01	2734 6	469 818

Co w milk												
Buff alo milk								89	14			103
Buff alo beef	154 6	1786 1	688 8	214 5	2168	905	445			269 7	203	348 58
Poul try laye r												
Poul try egg												
Duc k	123 45	3608 0	938 5	143 39	10587	110 28	13627	245 0	3175	293 1	1362 7	129 574
Pig	741 16	1545 90	282 75	674 46	66032	866 42	88017	249 96	1603 4	400 97	8801 7	734 262
Goa t	908 2	6790 9	529 5	652 0	8704	308 84	22579	879 7	1306	719 8	5154 6	219 820
She ep	640	190	720	185	48	210	1350	57	22	184	43	364 9
Mit hun	586 8	65	212 7	447 2			6973	284 6	1633	266 4	6973	336 21

FISHERY PRODUCTION

Fish production in the state is still in its nascent stage. The present fish production is not sufficient to meet the needs of the rural areas therefore, the urban dwellers has to depend almost entirely on import for their requirement attempt to meet the demands for fish can be achieved through development of fisheries.

FISHERY PRODUCTION (2011-12)

Name District	Area(000 ha)	Production (MT)	Productivity (kg/ha)
Kohima	11.00	229.00	0.05
Dimapur	77.00	3837.00	0.02
Mokokchung	20.00	473.00	0.04
Tuensang	14.00	252.00	0.06
Zunheboto	6.00	214.00	0.03
Mon	7.00	89.00	0.08
Wokha	12.00	795.00	0.02
Phek	21.00	314.00	0.07
Peren	12.00	355.00	0.03
Kiphire	5.00	176.00	0.03
Longleng	6.00	106.00	0.06
TOTAL	191.00	6840.00	0.03

Indigenous technologies and farming system

The two main agricultural systems practiced in the state are shifting cultivation TRC/WRC but the major land used pattern continues to be shifting cultivation known as jhum. Though often considered primitive and unproductive, jhum is a complex agricultural system that is well adapted under certain conditions which require exhaustive comprehension of the environment. The major challenge continuing to face Nagaland is how to adapt its land used pattern and production systems to the increased population and changing life style, making them biologically and economically sustainable.

- 1) Mix cropping is mainly practiced in the state in the form of shifting cultivation so called jhum. It is an age old system which is still practiced by 90% of the total population, who are subsistence farmers. Some of the most common crops in this system are rice, maize, millets pulses, colocasia and vegetables.
- 2) Integrated farming system involves farming of fish along with livestock like pig, poultry, duck, goat and agricultural crops are also common in the state. Poultry birds like ducks are raised in pond and pond-dykes are used for horticultural and kitchen garden and animal rearing. Pigs are also reared by constructing shades above the pond and their waste are utilized/recycle by the fish.