Research paper

Population trends and distribution of indigenous pigs in India

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ABSTRACT

Indian indigenous pigs have unique features, including their adaptation for survival under most adverse conditions of nutrition, disease resistance, heat tolerance and ability to produce meat with comparatively less fat. The present status of indigenous pigs was evaluated in terms of their distribution and population trend. It is estimated that population of indigenous pigs will fall to 60.70 lakhs by 2025. Some regions in India still have sizable population of indigenous pigs. North-Eastern region of Assam comprising districts of Dhemaji, Lakhimpur and Sonitpur house about 4.28 percent of the indigenous pig population of India. Bhojpur district in Bihar has the highest population of indigenous pigs (128674) in the country. However, the decreasing population of indigenous pigs *vis a vis* increasing population of exotic and crossbred pigs indicate that the indigenous pigs require immediate care and attention to arrest the declining trend in their population.

Key words: indigenous pig, population trend, geographical distribution
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Received on 26.6.2018

INTRODUCTION

Pigs (*Sus scrofa*) are the most efficient domestic animals in converting domestic and agricultural wastes into edible meat. Due to their high growth rate, better feed conversion ratio and large litter size, pigs produce the cheapest meat among all carcass producing animals that can be afforded by the weaker sections of the society providing an affordable source of good quality protein to poorer people. Pigs, in India, are traditionally reared either by the poorer and weaker sections or the tribal societies rearing mainly indigenous pigs (Bhat et al. 2010, Naskar et al. 2013). Besides indigenous pigs, some exotic breeds like Large White Yorkshire and Landrace and their crosses were introduced due to their better growth rates. Although, the growth rates and feed conversion ratio of indigenous pigs is less than those of the exotic or crossbred pigs (Kumar et al. 1990, Gaur et al. 1997), they have unique features like heat tolerance, disease resistance and ability to produce meat with less fat compared with exotic or crossbred pigs. They are well adapted to survive under most adverse conditions of nutrition and strive well on domestic and agricultural waste (Chhabra et al. 1999, Hetzer and Miller 1973, Naskar et al. 2013). However, in the last decade the population of indigenous pigs as well as total pig population of our country has shown a declining trend. Only, the population of crossbred pigs has shown an increasing trend. This paper attempts to describe the present status of pigs in India in terms of their population trends and distribution with special emphasis on indigenous pigs.

MATERIALS AND METHODS

Secondary data on pig population was obtained from livestock census (Livestock census 2003, 2012) and state wise population densities were calculated. The district wise census data for indigenous pigs was grouped for population intervals to obtain the number of districts or states with specified minimum population. The regression equation for the population trend was developed (Gupta 2011) using census data from 1992 onwards and the population for the years 2020 and 2025 were estimated by method modified from (Singh *et al*. 1991) as

$$Y' = a+bX'$$

Where, Y´= Estimated population in the year X´

b= Slope in the regression equation Y=a+bX

a = Y, when X=0

RESULTS AND DISCUSSION

Despite its usefulness as a cheap source of good quality meat and its ability to survive on waste materials, pigs are often overlooked by planners and researchers. In the past decade the population of indigenous pigs has declined from 109.39 lakhs in 1992 to 78.37 lakhs in 2012 showing a decline of 28.85 percent (Table 1). Taking into consideration trend since 1992 the population of indigenous pigs is estimated to be mere 69.20 lakhs in 2020 and 60.70 lakhs in 2025. Similar trend is also reflected for the total pig population of the country. It has declined to 102.9 lakhs in 2012, showing a decline of 24.24 percent from their population in 1992. The total pig population is also estimated to decline to 96.32 lakhs in 2020 and 89.17 lakhs in 2025.

However, population of exotic and crossbred pigs has shown an increasing trend and has increased from 18.49 lakhs in 1992 to 24.56 lakhs in 2012 showing an increase of 32.83 percent. The population of exotic and crossbred pigs is estimated to increase to 27.12 lakhs in 2020 and 28.47 lakhs in 2025.

Assam has the largest population (16.36 lakhs) of pigs (Livestock census 2012), possessing about 15.89 percent of the total pig population of the country followed by Uttar Pradesh (12.96), Jharkhand (9.35) and West Bengal (6.30). In terms of population density, Delhi with 51.446 pigs per sq. km has the highest density of pigs followed by Tripura (34.573), Nagaland (30.381) and Meghalaya (24.227) (Table 2).

As regards indigenous pigs, Uttar Pradesh has the largest population of indigenous pigs (11.52 lakhs), possessing about 14.70 percent of the total indigenous pig population of the country followed by Assam (10.22 lakhs), Jharkhand (9.21 lakhs) and Bihar (6.26 lakhs). In terms of population density, Delhi has the highest density of 45.664 indigenous pigs per sq. km followed by Meghalaya (18.268), Tripura (14.199) and Assam (13.034).

Only nine states (Delhi, Tripura, Nagaland, Meghalaya, Assam, Manipur, Jharkhand, Goa and Mizoram) have overall pig population density of more than 10 pigs per sq. km. While, only six states (Delhi, Meghalaya, Tripura, Assam, Jharkhand and Goa) have the indigenous pig population density of more than 10 pigs per sq. km.

Among states with total pig population of at least 10000, Odisha has the highest percentage of indigenous pigs (98.57) followed by Bihar (96.6), Telangana (95.16) and Chhattisgarh (94.9). Sikkim has the highest proportion of crossbred and exotic pigs (93.1) followed by Kerala (91.07), Mizoram (86.94) and Nagaland (75.60) (Table 3). Among the states having total pig population of at least 10000, four states, viz Meghalaya, Tripura, Mizoram and Delhi, have shown increase in indigenous pig population during 2003-2012. Sikkim has shown maximum decrease in indigenous pigs with a decline of 89.47 percent followed by Kerala (80.77), Meghalaya (56.54) and Manipur (54.11) (Table 4). Overall, India has registered a decline of 30.89 percent in the indigenous pig population and an increase of 12.66 percent in exotic and crossbred pig population during 2003 and 2012. Meghalaya has registered maximum increase in exotic and crossbred pig population showing an increase of 378.57 percent followed by, Arunachal Pradesh

Table 1: Population trend of pigs in India

Census-year	Indigenous pigs		Exotic and crossbred pigs		Total pigs	
	Population (in lakhs)	Percent change from previous census	Population (in lakhs)	Percent change from previous census	Population (in lakhs)	Percent change from previous census
1992	109.39	-	18.49	-	127.88	-
1997	110.41	0.93	22.49	21.63	132.91	3.93
2003	113.40	2.71	21.80	-3.07	135.19	1.72
2007	87.44	-22.89	23.89	9.59	111.33	-17.65
2012	78.37	-10.37	24.56	2.80	102.93	-7.55
2020 (Estimated)	69.20	-10.37	27.12	10.42	96.32	-6.42
2025 (Estimated)	60.70	-11.70	28.47	4.98	89.17	-7.42

Table 2: Total population and population density of pigs in the states of India as per 2012 livestock census

State	Indigenous Pigs			Exotic/crossbred pigs			Pig-overall		
	Total population	Density per square km	Percent of their total population in India	Total population	Density per square km	Percent of their total population in India	Total population	Density per square km	Percent of their total population in India
Assam	1022354	13.034	13.04	613668	7.824	24.98	1636022	20.858	15.89
Uttar Pradesh	1152441	4.783	14.70	181951	0.755	7.407	1334392	5.539	12.96
Jharkhand	920625	11.549	11.75	41742	0.524	1.70	962367	12.073	9.35
West Bengal	595964	6.715	7.60	52147	0.588	2.12	648111	7.303	6.30
Bihar	625531	6.643	7.98	22143	0.235	0.90	647674	6.878	6.29
Meghalaya	409758	18.269	5.23	133623	5.958	5.44	543381	24.227	5.28
Nagaland	122969	7.417	1.57	380719	22.964	15.50	503688	30.381	4.89
Chhattisgarh	416916	3.084	5.32	22143	0.164	0.90	439059	3.248	4.27
Tripura	148891	14.199	1.90	213643	20.374	8.68	362534	34.573	3.52
Arunachal Pradesh	318976	3.809	4.07	37369	0.446	1.52	356345	4.255	3.46
Maharashtra	288301	0.937	3.68	37455	0.122	1.52	325756	1.059	3.16
Karnataka	261274	1.362	3.33	43524	0.227	1.77	304798	1.589	2.96
Odisha	276052	1.773	3.52	4264	0.027	0.17	280316	1.800	2.72
Manipur	94669	4.240	1.21	182546	8.176	7.43	277215	12.416	2.69
Telangana	236259	2.108	3.01	12061	0.108	0.49	248320	2.216	2.41
Mizoram	32286	1.532	0.41	212952	10.102	8.67	245238	11.633	2.38
Rajasthan	216589	0.632	2.76	21085	0.062	0.86	237674	0.694	2.31
Tamil Nadu	153190	1.178	1.95	30793	0.237	1.25	183983	1.415	1.79
Madhya Pradesh	161715	0.525	2.06	13538	0.044	0.55	175253	0.569	1.70
Andhra Pradesh	131752	0.809	1.68	14290	0.088	0.58	146042	0.896	1.42
Haryana	77153	1.745	0.98	49792	1.126	2.03	126945	2.871	1.23
Delhi	67765	45.664	0.86	8581	5.782	0.35	76346	51.446	0.74
Kerala	4965	0.128	0.06	50817	1.308	2.07	55782	1.435	0.54
Goa	37611	10.160	0.48	5956	1.609	0.24	43567	11.769	0.42
Punjab	14465	0.287	0.18	17756	0.353	0.72	32221	0.640	0.31
Sikkim	2451	0.345	0.03	27456	3.869	1.12	29907	4.215	0.29
Uttarakhand	12685	0.237	0.16	7222	0.135	0.29	19907	0.372	0.19
India	7837306	2.384	100.00	2456389	0.747	100.00	10293695	3.132	100.00

*The pig population of Himachal Pradesh, Gujarat and Jammu & Kashmir is <10000.

(362.5), Jharkhand (133.33) and Tripura (125.26).

Eight states (Uttar Pradesh, Bihar, Odisha, Manipur, Rajasthan, Tamilnadu, Madhya Pradesh and Andhra Pradesh) have shown decrease in both indigenous and exotic pig population during 2003 and 2012. During this period, Assam, which houses 15.89 percent of the total pig population of India has shown a decline of 2.85 percent in indigenous pigs and an increase of 25.05 percent in exotic pig population. Uttar Pradesh, Jharkhand and West Bengal, that together hold 28.61 percent of the total pig population of India, have shown 45.09, 15.5 and 51.97 percent decline in the indigenous pig population during this period, respectively (Table 4).

In the eighteen states in India that have about one lakh indigenous pigs, some cluster of districts have high density of the indigenous pigs (Table 5). For example, eight districts of cluster-V of Uttar Pradesh hold 24.93 and 3.6 percent population of indigenous pigs of the state and the country, respectively. Cluster-I in Assam comprising three districts of Dhemaji, Lakhimpur and Sonitpur has 32.80 and 4.28 percent of the indigenous pig population of the state and the country, respectively. Cluster-I in

Table 3: Percentage of indigenous and exotic/crossbred pigs in states of India as per 2012 livestock census

State	Proportion of indigenous pig population (in percentage)	Proportion of exotic and crossbred pig population (in percentage)
Assam	62.47	37.53
Uttar Pradesh	86.36	13.64
Jharkhand	95.64	4.36
West Bengal	91.98	8.02
Bihar	96.60	3.40
Meghalaya	75.37	24.63
Nagaland	24.40	75.60
Chhattisgarh	94.99	5.01
Tripura	41.05	58.95
Arunachal Pradesh	89.61	10.39
Maharashtra	88.62	11.38
Karnataka	85.57	14.43
Odisha	98.57	1.43
Manipur	34.17	65.83
Telengana	95.16	4.84
Mizoram	13.06	86.94
Rajasthan	91.17	8.83
Tamil Nadu	83.15	16.85
Madhya Pradesh	92.05	7.95
Andhra Pradesh	90.41	9.59
Haryana	60.63	39.37
Delhi	88.31	11.69
Kerala	8.93	91.07
Goa	86.36	13.64
Punjab	43.75	56.25
Sikkim	6.90	93.10
Uttarakhand	65.00	35.00
India	76.14	23.86

*The pig population of Himachal Pradesh, Gujarat and Jammu & Kashmir is <10000

Jharkhand comprising seven districts of Dumka, Godda, Pakur, Jamtara, Deoghar, Giridih and Dhanbad has about 37.96 and 4.46 percent indigenous pig population of the state and the country, respectively.

Similarly, 32.6 percent indigenous pig population of Bihar is localized in cluster-I, comprising of Bhojpur, Jehanabad and Nalanda. In Chhattisgarh, 63.24 percent of the indigenous pig population is localized in five Southern districts of Bastar, Dantewara, Kanker, Bijapur and Narayanpur (Cluster I). Districts of Rewa, Satna and Sidhi in Madhya Pradesh has 21.78 percent of the indigenous pig population of the state. In Rajasthan, 78.62 percent of the total pig population is localized in the North-Eastern part of the state (Cluster-I).

Some districts have appreciably high population of indigenous pigs. Bhojpur district of Bihar has the highest population (128674) of indigenous pigs in India which is 1.64 percent of the indigenous pigs of the country and 20.57 percent of the indigenous pig population of the state (Table 5). West Garo district of Meghalaya (125441) has the second highest population of indigenous pigs in the country followed by Sonitpur (124739) and Dhemaji (105399) districts of Assam.

Both Assam and Jharkhand has eleven districts each with indigenous pig population of more than 30000 followed by West Bengal with nine districts and Uttar Pradesh with eight districts. Only twelve districts, Dhemaji, Lakhimpur and Sonitpur in Assam, Bhojpur and Gaya in Bihar, Dantewara in Chattisgarh, Dumka and Pakur in Jharkhand, East Khasi Hills and West Garo Hills in Meghalya and Jalpaiguri in West Bengal have indigenous pig population of more than 75000.

Many of the clusters that have high density of indigenous pig population, also have the exotic and

Table 4: Percent increase or decrease in indigenous, exotic/crossbred and total pig population between 2003 and 2012

State	Percent increase or decrease between 2003 and 2012		
	Indigenous Pig population	Exotic and crossbred pig population	Total Pig population
Assam	-2.85	25.05	6.03
Uttar Pradesh	-45.09	-2.15	-41.59
Jharkhand	-15.50	133.33	-13.08
West Bengal	-51.97	-14.75	-50.23
Bihar	-2.64	-24.14	-3.57
Meghalaya	4.86	378.57	29.83
Nagaland	-56.54	5.25	-21.86
Chhattisgarh	-22.63	57.14	-20.61
Tripura	30.70	125.26	73.68
Arunachal Pradesh	-0.93	362.5	7.88
Maharashtra	-30.77	60.87	-25.97
Karnataka	-9.69	91.30	-2.24
Odisha	-51.24	-95.83	-57.70
Manipur	-54.11	-12.02	-33.01
Mizoram	45.45	8.67	12.39
Rajasthan	-30.00	-25.00	-29.58
Tamil Nadu	-43.54	-36.73	-42.50
Madhya Pradesh	-50.00	-58.82	-50.84
AP and Telangana	-29.50	-45.83	-30.87
Haryana	-9.41	42.86	5.83
Delhi	385.71	-35.71	175.00
Kerala	-80.77	0.00	-27.27
Goa	-54.76	100.00	-49.43
Punjab	-17.65	50.00	10.34
Sikkim	-89.47	42.10	-23.68
Uttarakhand	-51.85	16.67	-39.39
India	-30.89	12.66	-23.87

*The pig population of Himachal Pradesh, Gujarat and Jammu & Kashmir is <10000

crossbred pig population (Table 6). However proportion of the indigenous to exotic and crossbred pigs vary markedly in these clusters. Cluster-A in Assam comprising of three districts (Dhemaji, Lakhimpur and Sonitpur) that has 11.63 percent of the exotic and crossbred pig population of the state, but still 82.45 percent of its total pig population is of indigenous type. Similarly, cluster-A in Meghalaya comprising of East Khasi Hills, Ribhoi, West Khasi Hills and Jaintia Hills districts, possess 80.6 percent of the exotic and crossbred pig population of the state, but still 63.84 percent of its total pig population is of indigenous type. In contrast, 88.56 percent of the total pig population in the Cluster-D of Assam (Baksa, Chirang, Kokrajhar and Udalguri districts), is of exotic and crossbred type. This cluster has contributed 28.63 percent to the exotic and crossbred pig population of the state. Similarly, cluster-B in Tripura comprising districts of Sepahijala, Gomati and South district has 62.76 percent of its total pig population as exotic type, which constitutes 41.86 percent of the exotic and crossbred pig population of Tripura.

Distribution of breeds of indigenous pig

Although previously the indigenous pigs were largely clubbed as non-descript, with only few references to some populations like Desi pigs of North India, Ankamali pigs of Peninsular India, Doom pigs of Assam and Ghoonghroo pigs of West Bengal (Bhat et al. 1981, Bhat et al. 2010, Naskar et al. 2013). But in the last few years many of these populations and some previously undescribed populations have been characterized and registered as new breeds of indigenous pigs at National Bureau of Animal Genetic Resources, Karnal, like Ghoongroo, Niang Megha, Agonda Goan, Tenyi Vo, Nicobari, Doom and Zovawk pigs.

Table 5: States of India with sizeable population of indigenous pigs and districts with indigenous pig population of about 30000 or more

S. N.	State	Population of Indigenous pigs	Clusters of districts with sizable population of indigenous pigs (Total population in the Cluster)	Districts in the state with about 30000 or more indigenous pigs population
1.	Uttar Pradesh	1152441	Cluster I: Agra, Mathura, Aligarh, Firozabad, Etah, Mainpuri, Bulandshahr, Kashiram Nagar, Mahamayanagar (146365) Cluster II: Meerut, Muzaffarnagar, Saharanpur, Bijnor, Moradabad, Bareilly, Badaun, Shahjahanpur, Sambal (130421) Cluster III: Jalaun, Hamirpur, Banda, Chitrakoot, Mahoba, Auraiya (96196) Cluster IV: Kanpur-Dehat, Kanpur-Nagar, Unnao, Lucknow, Hardoi, Sitapur, Bahraich, Barabanki, Kannauj, Kheri (229773) Cluster V: Rae-Bareli, Fatehpur, Allahabad, Pratapgarh, Jaunpur, Mirzapur, Amethi, Kaushambhi (287307) Cluster VI: Gorakhpur, Maharajganj, Deoria, Azamgarh, Mau, Ballia (87951)	Agra (32819), Allahabad (42513), Amethi (29211), Fatehpur (49333), Kanpur-Nagar (53682), Kaushambhi (39981), Pratapgarh (34450), Rae-Bareli (55758)
2.	Assam	1022354	Cluster I: Dhemaji, Lakhimpur, Sonitpur (335348) Cluster II: Tinsukia, Dibrugarh, Sivasagar, Jorhat, Golaghat, Karbi-Anglong (156961)	Baksa (45014), Dhemaji (105399), Dibrugarh (56129), Golaghat (69442), Jorhat (60858), Karbi-Anglong (91146), Kokrajhar (45005), Lakhimpur (105210), Sivasagar (60936), Sonitpur (124739), Tinsukia (39896)
3.	Jharkhand	920625	Cluster I: Dumka, Godda, Pakur, Jamtara, Deoghar, Giridih, Dhanbad (349494) Cluster II: Gumla, Simdega, Ranchi, Khunti (174530) Cluster III: Palamu, Hazaribagh, Chatra, Latehar, Garhwa (221904)	Chatra (60748), Dhanbad (34564), Godda (35558), Gumla (46047), Hazaribagh (42684), Latehar (44934), Pakur (94540), Palamu (42378), Ranchi (53107), Sahibganj (58140), Simdega (54347)
4.	Bihar	625531	Cluster I: Bhojpur, Patna, Jehanabad, Nalanda (203900) Cluster II: Gaya, Nawada, Banka, Jamui (162392) Cluster III: Kishanganj, Katihar, Purnia, Araria, Saharsa, Madhubani, Supaul (102147)	Bhojpur (128678), Gaya (82297), Jamui (31447), Patna (37421)
5.	West Bengal	595964	Cluster I: Darjiling, Jalpaiguri, Koch-Bihar (139465) Cluster II: Uttar Dinajpur, Dakshin Dinajpur, Maldah (105610) Cluster III: Murshidabad, Birbhum, Bardhaman (113927) Cluster IV: South Twenty Four Parganas, North Twenty Four Parganas, Hugli (51981) Cluster V: Bankura, Puruliya, Pashchim Medinipur (175432)	Bankura (50614), Bardhman (71952), Birbhum (30378), Dakshin-Dinajpur (31670), Darjiling (34452), Jalpaiguri (89324), Maldah (51707), Pashchim medinipur (69058), Purulia (55760)

S. N.	State	Population of Indigenous pigs	Clusters of districts with sizable population of indigenous pigs (Total population in the Cluster)	Districts in the state with about 30000 or more indigenous pigs population
6.	Chhattisgarh	416916	Cluster I: Bastar, Dantewara, Kanker, Bijapur, Narayanpur (263638)	Bastar (69346), Bijapur (34893), Dantewara (79402), Jashpur (37540), Narayanpur (34523), Sarguja (37210), Kanker (45474)
7.	Meghalaya	409758	Cluster I: East Khasi Hills, West Khasi Hills, Ri-Bhoi, Jaintia Hills (190036) Cluster II: East Garo hills, South Garo Hills, West Garo Hills (219722)	East Garo Hills (65257), East Khasi Hills (78590), Jaintia Hills (40386), South Garo hills (29024), West Garo Hills (125441), West Khasi hills (54602)
8.	Arunachal Pradesh	318976	Cluster I: Changlang, Tirap, Lohit, Anjaw (72858) Cluster II: East Siang, West Siang, Upper Siang, Lower Dibang Valley (96348) Cluster III: East Kameng, Lower Subansiri, Upper subansiri, Kurung Kumey, Papun Pare (142058)	East Kameng (29446), East Siang (29867), Kurung Kumey (34341), Papun Pare (34804), West Siang (38477)
9.	Maharashtra	288301	Cluster I: Ahmednagar, Aurangabad, Bid, Nashik, Jalgaon, Dhule, Jalna (128896)	Dhule (30198), Gadchiroli (38654)
10.	Odissa	276052	Cluster I: Koraput, Malkangiri, Rayagarha, Gajapati (103637) Cluster II: Sundergarh, Sambalpur, Mayurbhanj, Kendujhar (92707)	
11.	Karnataka	261274	Cluster I: Bidar, Gulbarga, Bijapur, Belgaum, Bagalkot, Raichur, Koppal, Yadgir (172341)	Koraput (30251), Malkangiri (40911), Sundargarh (48349)
12.	Telangana	236259	Cluster I: Khammam, Warangal, Karimnagar, Nalgonda (111383) Cluster II: Nizamabad, Medak, Rangareddy, Mehbubnagar (115914)	Bagalkot (33078)
13.	Rajasthan	216589	Cluster I: Ajmer, Alwar, Jaipur, Bhilwara, Kota, Dausa, Bharatpur, Baran, Sawai Madhopur, Tonk , Bundi, Karauli (165953)	Karimnagar (29247), Mehbubnagar (54396), Warangal (36787)
14.	Madhya Pradesh	161715	Cluster I: Rewa, Satna, Sidhi (35224)	Nil
15.	Tamilnadu	153190	Cluster I: Salem, Cuddalore, Vilupuram, Namakkal, Tiruvannamalai, Vellore (81953)	Nil
16.	Tripura	148891	Cluster I: North district, Unakoti, Dhalai, Khowai, West District (95832) Cluster II: Sipahijala, Gomati, South District (53059)	Nil
17.	Nagaland	122969	Cluster I: Mon, Tuensang, Kiphire, Wokha, Zunheboto (94483)	Nil
18.	Manipur	94669	Cluster I: Senapati, Ukhrul, Imphal East, Thoubal, Tamenglong (66615)	

Table 6: States of India with sizeable population of exotic and crossbred pigs and districts with exotic and crossbred pig population of about 20000 or more

S. N.	State	Population of Indigenous pigs	Clusters of districts with sizable population of indigenous pigs (Total population in the Cluster)	Districts in the state with about 30000 or more indigenous pigs population
1.	Assam	613668	Cluster A: Dhemaji, Lakhimpur, Sonitpur (71382) Cluster B: Tinsukia, Dibrugarh, Sivasagar, Jorhat, Golaghat, Karbi-Anglong (210392) Cluster C: Kamrup, Goalpara (88182) Cluster D: Baksa, Chirang, Kokrajhar, Udalguri (175722)	Baksa (35598), Chirang (46908), Dibrugarh (60821), Goalpara (46444), Kamrup (41738), Karbi-Anglong (71149), Kokrajhar (43404), Lakhimpur (26033), Nagaon (19617), Sivasagar (26034), Sonitpur (31835), Tinsukia (24448), Udalguri (49812)
2.	Nagaland	380719	Cluster A: Mon, Tuensang, Kiphire, Zunheboto, Mokokchung, Wokha (213278) Cluster B: Kohima, Dimapur, Phek, Peren (159449)	Dimapur (58689), Kiphire (25898), Kohima (50160), Mokokchung (50920), Mon (28573), Phek (38205), Tuensang (33596), Wokha (34660), Zunheboto (39631)
3.	Tripura	213643	Cluster A: North district, Khowai, Dhalai, Unakuti, West district (124215) Cluster B: South district, Sepahijala, Gomati (89428)	Dhalai (33977), Gomati (34915), Khowai (31972), North district (24831), Sepahijala (24929), South district (29584), West district (25170)
4.	Mizoram	212952	Cluster A: Aizal, Kolasib, Mamit, Champhai (150901) Cluster B: Langlei, Lawngtlai, Saiha, Serchip (62051)	AizalAizawl (76009), Champhai (32249), Kolasib (20614), Mamit (22029)
5.	Manipur	182546	Cluster A: Senapati, Ukhrul, Imphal East, Tamenglong (69066) Cluster B: Imphal West, Bishnupur, Thoubal, Churachandpur, Chandel (113480)	Churachandpur (24538), Senapati (25661), Thoubal (43388)
6.	Uttar Pradesh	181915	Cluster A: Allahabad, Pratapgarh, Amethi, Rae-Bareli (36994)	Nil
7.	Meghalaya	133623	Cluster A: East Khasi Hills, Ribhoi, West Khasi Hills, Jaintia Hills (107645)	East Khasi Hills (53000), Jaintia Hills (21650), West Khasi Hills (20495)

The Ghoongroo pigs are black coloured, concave snouted, pendulous eared with a wither height of 66-95 cm in males and 59-92 cm in females. The litter size at furrowing is 8-18. These pigs are distributed in Darjeeling, Jalpaiguri, Cochbehar, North Dinajpur and South Dinajpur districts of West Bengal with an estimated population of approximately 15000 (Breed descriptor, 2013).

The Niang Megha pigs, which are found in Meghalaya, are mostly of black colour with short and erect ears, pot bellies and long snouts. The wither height of these pigs is 48-54 cm in males and 45-52 cm in females. The litter size at forrowing is 3-10. The estimated population of Niang Megha pigs is about 3.9 lakhs (Breed descriptor, 2013).

The Agonda Goan pigs are also mostly black coloured, short and erect eared, short snouted, pot bellied with a wither height of 46-64.5 cm in males and 48.2-74.8 cm in females. The litter size at furrowing is 2-13. These pigs are found in Tiswadi, Bardez and Peenem of North Goa district and Marmugoa, Salcete, Canacona and Quepem taluks of South Goa district with an estimated population of 37556 (Breed descriptor, 2015).

The Tenyi Vo pigs, found in Nagaland, are mostly black coloured with white patches on bellies. They have long and straight snouts that have white patches around nostrils, short and erect ears, concave toplines and pot bellies. The wither height of these pigs is 28-36 cm in males and 23-30 cm in females. The litter size at furrowing is 4-6. They are distributed in Kohima, Peren, Phek and Dimapur districts of Nagaland with an estimated population of 60000-70000 (Breed descriptor 2016).

The Nicobari breed of pigs are mostly black or brown coloured. Small percentage of animals is creamy white, reddish brown or black and brown mixed. These pigs have short ears, short to medium snouts with slight concave conformity, pot bellies of moderate size and concave toplines. The wither height is 51-86 cm in males and 50-82 cm in females. The litter size at forrowing is 4-12. Nicobari pigs are distributed in Nicobar district of Andaman and Nicobar islands, with an estimated population of 1.35 lakhs (Breed descriptor 2016).

The Doom pigs of Assam are black in colour with a concave snout, erect ears and straight toplines. The wither height is 60.4-66.2 cm in males and 65.0-71.0 cm in females. The litter size at furrowing is 5-8. These pigs are found in Agomani, Gauripur, Golakganj blocks and Bilasipara sub-division in Dhubri district and few areas of Bongoigaon and Kokrajhar districts of Assam with an estimated population of approximately 3000 (Breed descriptor 2016).

The Zovawk pigs, which are found in Mizoram, are black coloured, short and erect eared, pot bellied, short and concave snouted pigs. The wither height of these pigs is 45-54 cm in males and 47-50 cm in females. The litter size is 5-12. Zovawk pigs are distributed in Mamit, Kolasib, AizalAizawl, Lunglei, Sahia and Champhai districts of Mizoram with estimated population of about 40000 (Breed descriptor 2017).

CONCLUSION

Although, the total population of indigenous pigs at 78.35 lakhs (Census 2012) seems fairly large, but these pigs have shown steady decrease in numbers during 2003 to 2012. Further, during this period, the population of exotic and crossbred pigs have increased continuously. The exotic and crossbred pigs have already outnumbered the indigenous pigs in the seven states in India. These trends indicate that indigenous pigs require immediate care and attention to arrest the constant decline in their population.

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