SITUATION, ORIENTATION AND SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE IN THE COMING TIME

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1. Number of grass-fed cattle in the period of 2018-2022

Quantity	Year					Changes in 2021/2018 (%)
	2018	2019	2020	2021	2022	
Total cattle herd	5,802,907	6,060,024	6,325,627	6,365,300	6,339,404	2.34
Beef cattle	5,508,525	5,742,295	5,994,259	6,034,063	6,014,250	2.34
Proportion of crossbred cows (%)	58.51	61.65	64.02	65.3	66.8	-
Dairy cow	294,382	317,729	331,368	331,237	325,154	2.99
Buffalo	2,425,105	2,387,887	2,332,754	2,264,700	2,231,632	-1.7
Goat	2,683,942	2,609,198	2,654,573	2,675,188	2,808,166	-0.08
Sheep	150,022	121,416	114,165	105,794	108,393	-8.36
Rabbit	1044370	1116869	1237006	1,232,089	1,264,928	4.22
Deer	62,790	57,615	61,784	62,865	69,198	0.03

Source: General Statistics Office

2. Grass-fed livestock production in the period of 2018-2022

Year	2018	2019	2020	2021	2022	Biến động 2021/2018 (%)
Buffalo meat (tons)	92,110	125,280	120,250	123,000	**119,678**	7.50
Beef (tons)	334,470	430,690	441,511	466,400	**481,351**	8.67
Fresh milk (tons)	936,000	986,120	1,049,260	1,070,800	**1,124,714**	3.42
Goat, sheep meat (tons)	32,470	36,650	37,560	54,500	**43,978**	13.82
Rabbit meat (tons)	3,440	3,890	4,360	4,571	**4,639**	7.37
Deer meat (tons)	410	340	440	452	**378**	2.47

Source: General Statistics Office

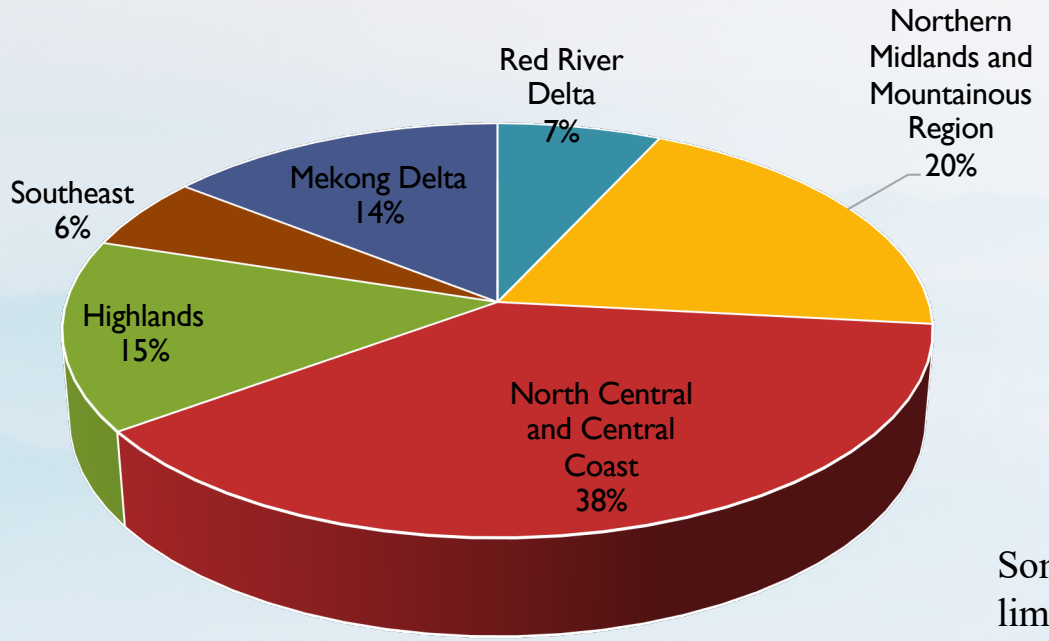
I. SITUATION OF GRASS-FED CATTLE PRODUCTION

3. Total beef cattle herd by regions in the period 2018-2023 (Unit: 1.000 heads)

Regions	Year						Proportion in 2023
	2018	2019	2020	2021	2022	2023	
Red River Delta	487.47	467.67	460.69	446.73	429.31	417.03	6.94
Northern Midlands and Mountainous Region	*1,134.72*	*1,149.51*	*1,173.60*	*1,179.87*	*1,178.20*	*1,186.92*	*19.75*
North Central and Central Coast	**2,351.27**	**2,303.09**	**2,319.90**	**2,315.73**	**2,327.65**	**2,303.31**	**38.33**
Highlands	831.31	840.52	811.53	858.79	827.56	893.78	14.88
Southeast	318.93	312.66	315.25	342.85	342.21	341.16	5.68
Mekong Delta	907.12	886.91	910.40	932.68	910.07	866.30	14.42
Cả nước	**6,030.82**	**5,960.37**	**5,991.37**	**6,076.65**	**6,015.01**	**6,008.50**	**100**

General Statistics Office: In the period 2018-2023, the number of beef cattle has grown stably with the average growth of 0.02%/year.

4. Beef cattle herds by regions in 2023 (%)

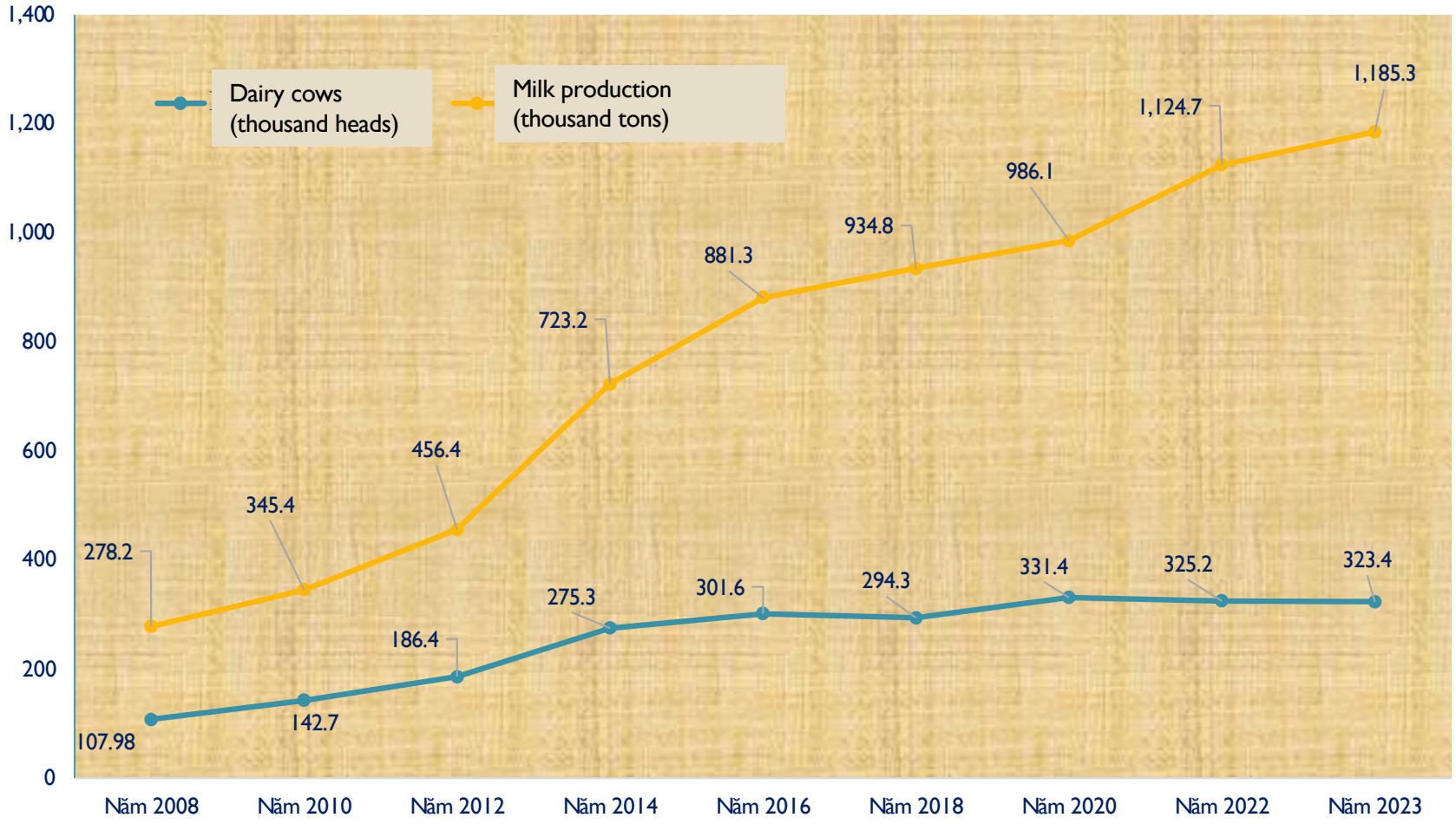


Some provinces with the most developed beef cattle herds are: Nghe An, Gia Lai, Son La, Binh Dinh, Quang Ngai, Dak Lak, Thanh Hoa, Tra Vinh, Ben Tre, Binh Thuan

Some provinces have limited beef cattle herds: Bac Kan, Binh Duong, Hai Duong, Kien Giang, Da Nang City, Hai Phong, Hau Giang, Can Tho, Bac Lieu, Ca Mau

Part 1: SITUATION OF DAIRY COW PRODUCTION IN 2008-2023 PERIOD

1. TOTAL DAIRY COW HERD AND MILK PRODUCTION in 2008-2023 period



Rejection rate: 10-25% (Low productivity, slow birth, disease)

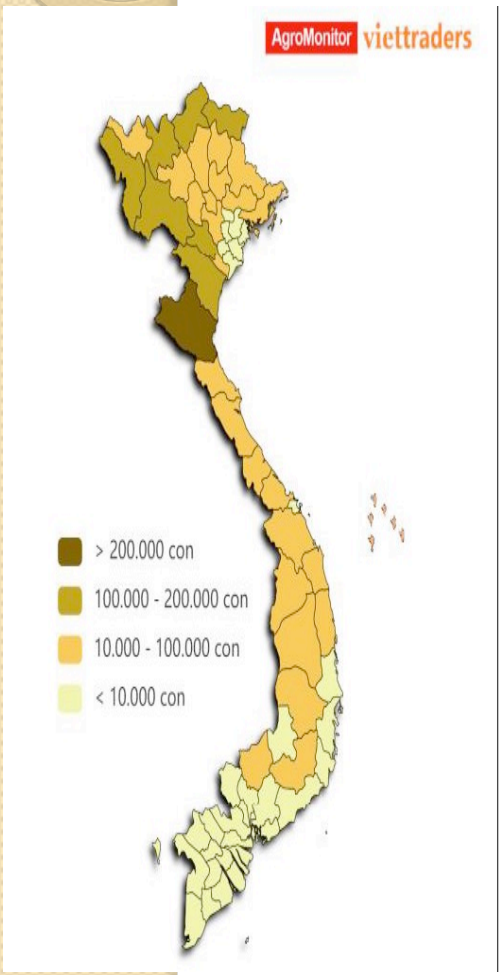
5. DAIRY COW HERD AND MILK PRODUCTION BY REGIONS IN 2023

	Whole country	Red River Delta	Northern Midlands & Mountainous Region	North Central & Central Coast	Highlands	Southeast	Mekong Delta
Herd of cows (1000 heads)	6,331.90	460.16	1,221.75	2,405.37	937.35	413.24	894.03
%	100.00	7.27	19.30	37.99	14.80	6.53	14.12
Of which:							
- Dairy cows (1000 heads)	323.40	43.13	34.83	102.05	43.57	72.08	27.73
%	100.00	13.34	10.77	**31.56**	13.47	22.29	8.57
- Milk production (1000 tons)	1,185.29	126.36	126.39	**422.31**	146.59	**300.19**	63.45
%	100.00	10.66	10.66	**35.63**	12.37	**25.33**	5.35

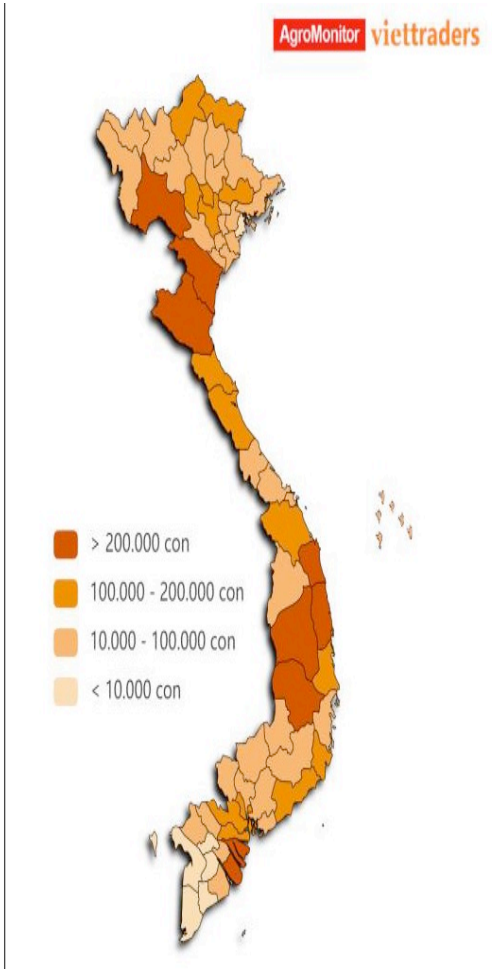
TT	Province	Milk production (tons)	Proportion (%)
	Whole country	**1 185 290**	
	Production of 10 provinces	**1 029 941**	**86.89**
1	Nghe An	314,583	
2	Ho Chi Minh City	247,372	
3	Lam Dong	110,684	
4	Son La	91,035	
5	Vinh Phuc	58,994	
6	Thanh Hoa	54,680	
7	Ha Noi	44,050	
8	Tay Ninh	38,461	
9	Gia Lai	35,869	
10	Tuyen Quang	34,213	

I. SITUATION OF GRASS-FED CATTLE PRODUCTION

6. Distribution of grass-fed cattle herds

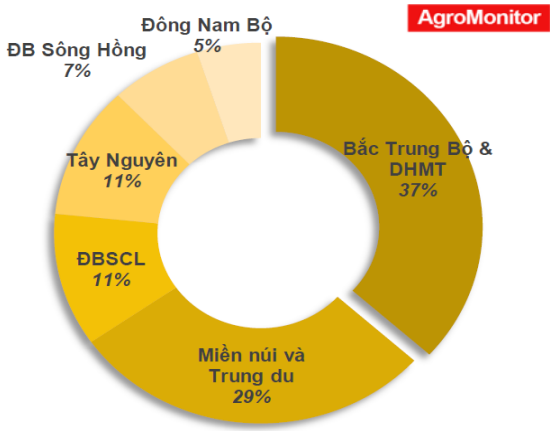


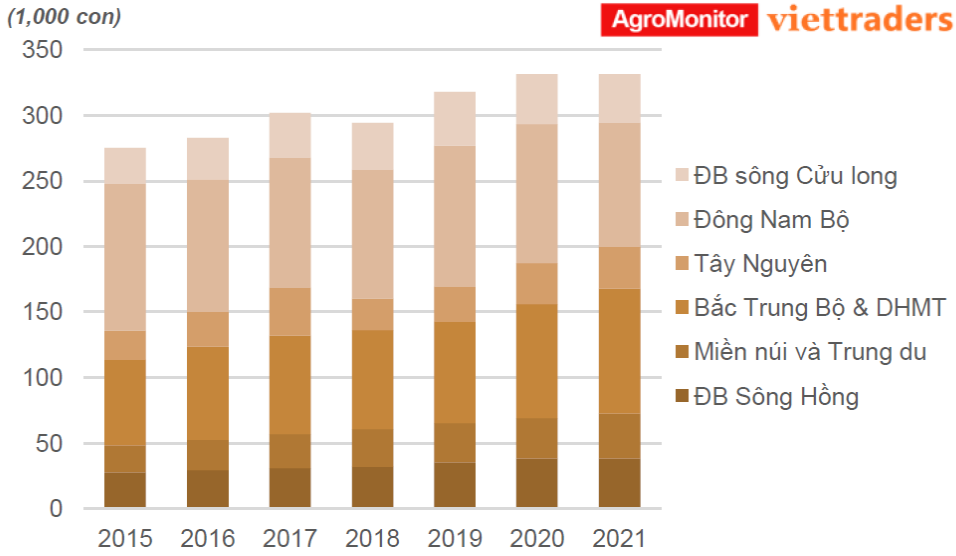
Density distribution of buffalo herds



Density distribution of cows

Density distribution of buffalo and cow herds 2021

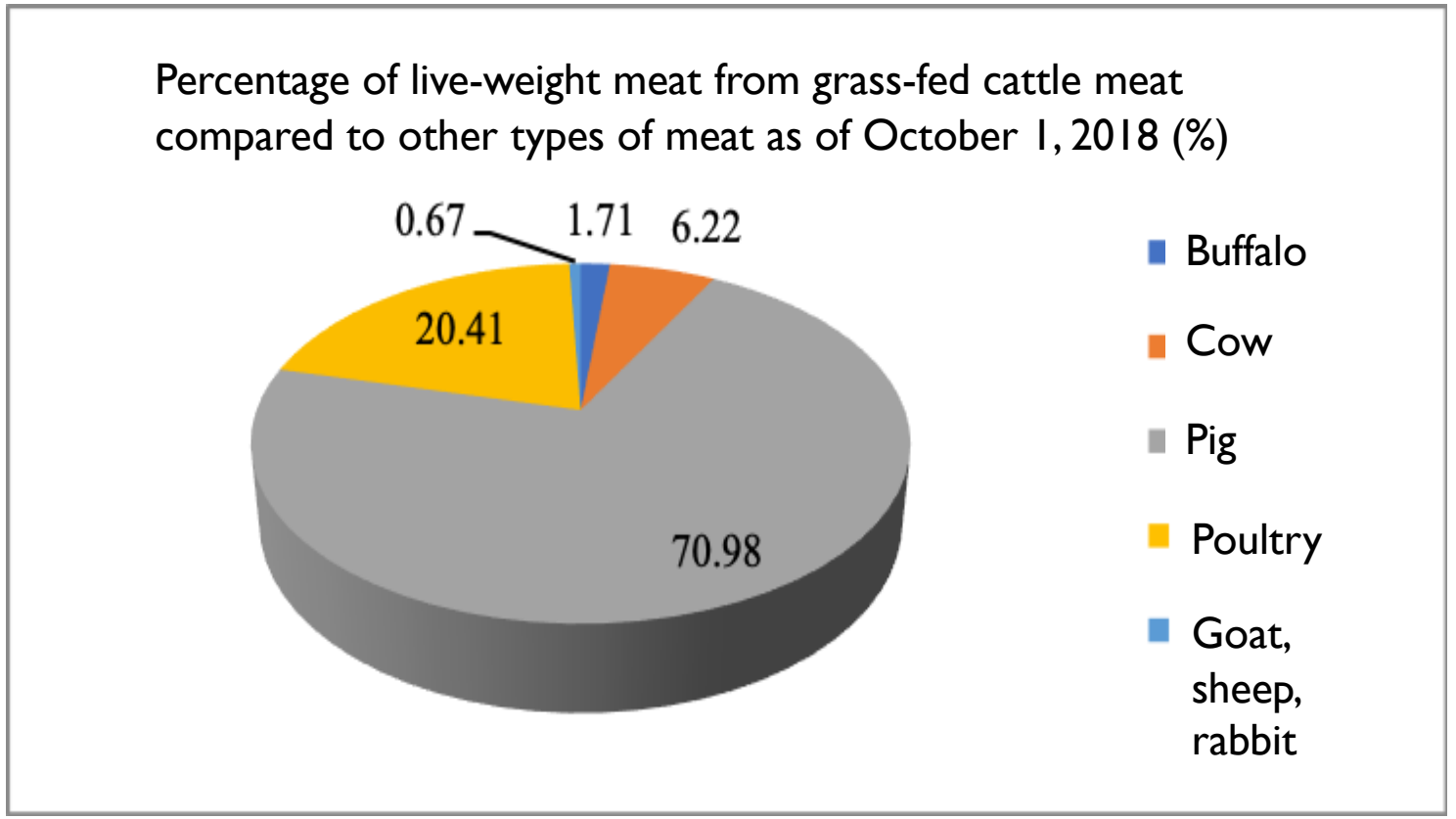




Dairy cow herds by regions

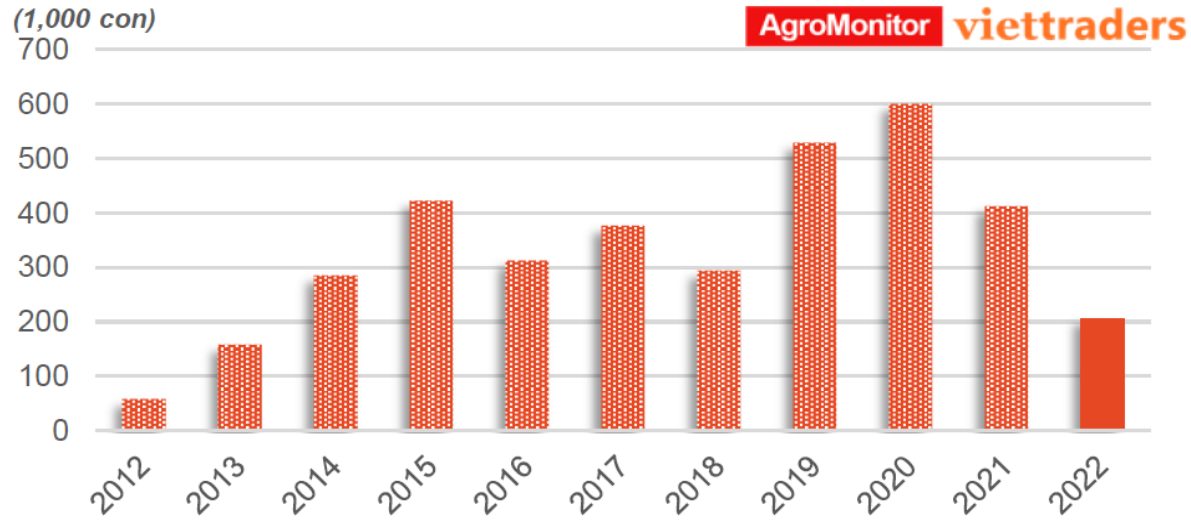
I. SITUATION OF GRASS-FED CATTLE PRODUCTION

7. Consumption of grass-fed cattle products

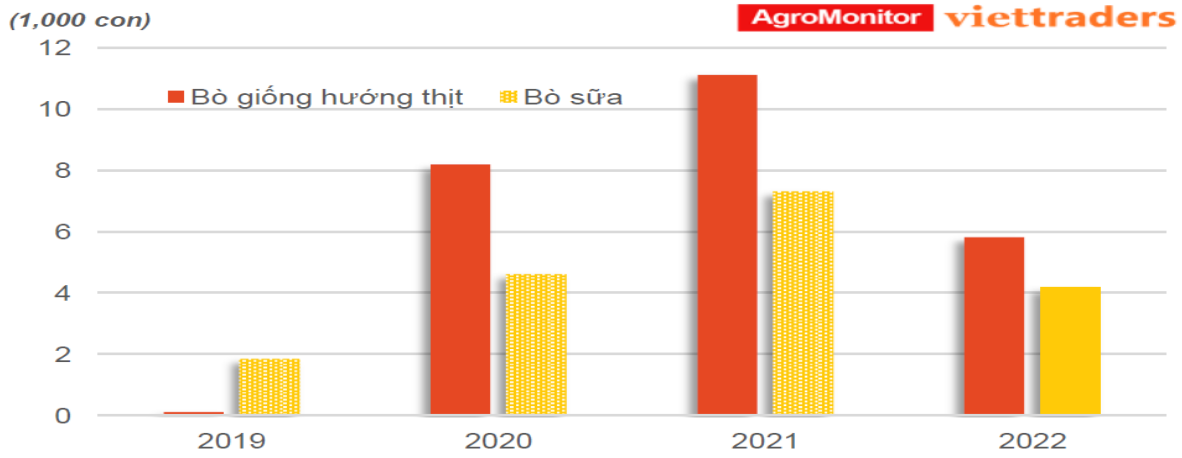


I. SITUATION OF GRASS-FED CATTLE PRODUCTION

8. Import of live bovine animals and buffalo meat and beef



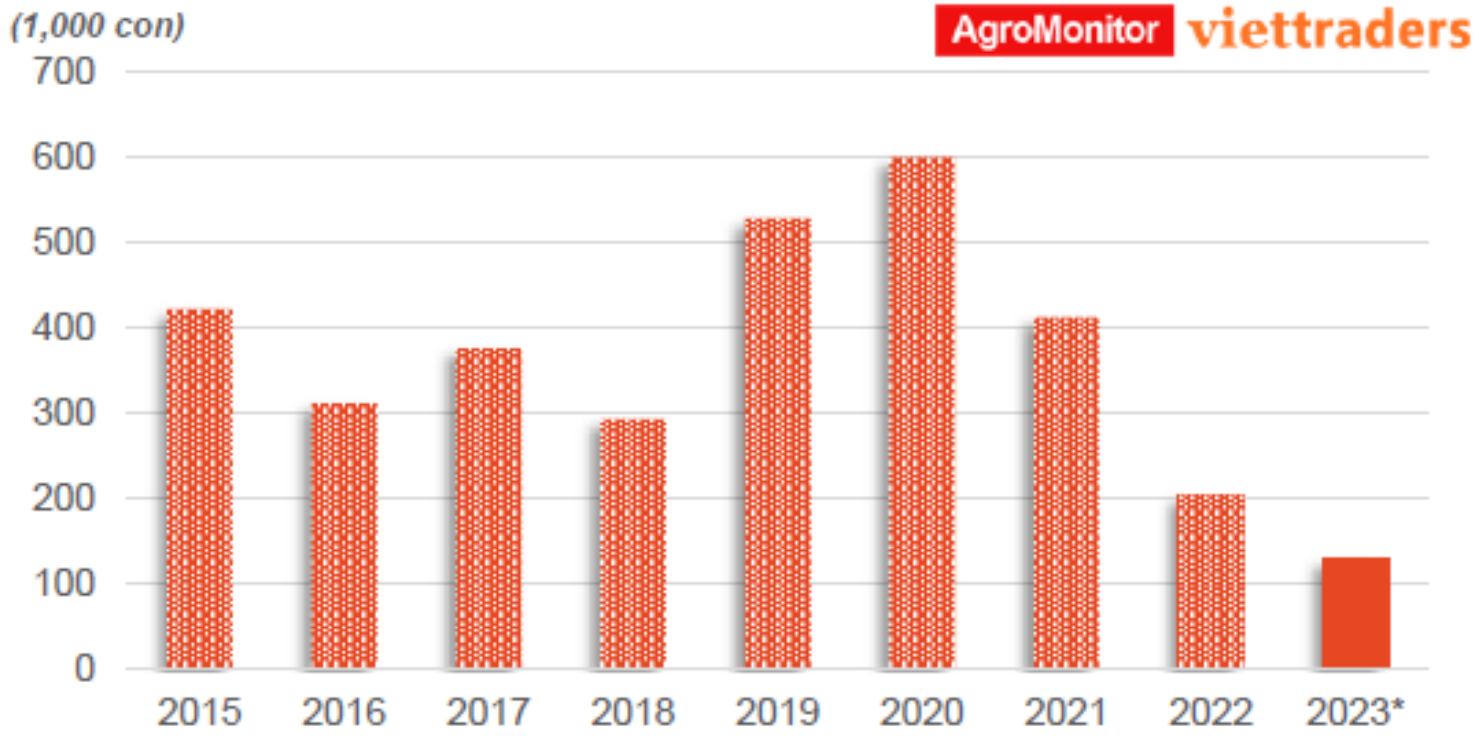
Import of live bovine animals and buffalo meat/beef



Import of breeding cows of 2019 - 2022

9. Import of live bovine animals in 2012-2023 period

Import of live bovine animals in 2012 – 2023 period (thousand heads)



Source: AgroMonitor

I. SITUATION OF GRASS-FED CATTLE PRODUCTION

10. Export of live bovine animals, buffalo meat/beef along border trade (unofficial trade)

- **Export of live bovine animals:**

- Live bovine animals from Vietnam are frequently gathered for export to China via the Northern border gates.
- In 2022, China's border closures halted the export of live bovine animals through unofficial routes.
- With China reopening its borders on January 8, 2023, there is hope that live bovine animals exports would resume in 2023.

- **Export of beef and buffalo meat**

- It is estimated that on average during the 2017-2019 period, Vietnam exported 2 thousand tons of beef.
- Vietnam's buffalo/beef meat export turnover in 2022 will reach over 1.64 million USD, 1.9 times higher than the previous year but 19% lower than the 5-year average (2017-2021).
- Cambodia is the main export market with over 45% market share (calculated by export value).

I. SITUATION OF GRASS-FED CATTLE PRODUCTION

11. Family farms

- In 2016, Vietnam had 8.5 million households in agriculture production, of which: 2.33 million households raised beef cattle (accounting for 27.44%); 1.23 million households raising buffalo (14.52%); 417.19 thousand households raising goats (4.91%) and 28.70 thousand households raising dairy cows (0.34%). The total number of households raising grass-fed catlle accounts for about 47.21% of total agriculture households.
- In 2022, the number of livestock households was about over 2 million (according to data from the Vietnam Livestock Association).

12. Scale of livestock production in 2021

- The whole country has about 13,752 livestock farms/23,662 agriculture farms (accounting for 58.1%).
- Large-scale livestock farms: 61 farms raising cows with 300 cows or more.
- Medium-sized livestock farms: 452 farms raising 30 buffaloes or more; 1881 farms raising 30 cows or more; 2,357 farms raising 20 or more dairy cows.

I. SITUATION OF GRASS-FED CATTLE PRODUCTION

13. Applying high technology in raising grass-fed cattle

- Applying advanced cow semen breeding techniques to selectively produce female offspring has yielded a success rate aligning with the suppliers' suggested range of 87-92%.
- Applying embryo transfer methods, including both conventional and sex-specific embryo techniques, enables the generation of dairy cow embryos, vitro fertilization and embryo splitting techniques facilitates the creation of two embryos from a single one.
- Dairy breed management is enhanced through specialized software tailored for dairy farming and milk processing enterprises, such as AFIMILK and NOA, which support the selection and administration of dairy breeds.

I. SITUATION OF GRASS-FED CATTLE PRODUCTION

13. Applying high technology in raising grass-fed cattle

- Cutting-edge technology, including artificial insemination, in vitro fertilization (IVF), and sex-specific semen usage, is employed in the economic crossbreeding of beef cattle. This involves specialized beef breeds like Charolais, Simmental, Limousin, Hereford, Droughtmaster, and Blanc Blue Belge (BBB), which are crossed with a herd comprising mixed Sind and Brahman breeds.
- Concentrated medium- and large-scale cattle farming has adopted advanced practices in breeding, feeding, and housing; including heat-resistant barns, mist spraying, automatic cooling, and temperature reduction. Additionally, they use TMR (Total Mixed Ration) feed, automated food distribution, and automatic manure removal systems.
- Some dairy farms have applied high technology such as: European and American (Delaval) breeding technology, automatic cool barn system; applying international standards such as Global Gap, ISO 9001, organic farms with European organic standards (TH Milk, Vinamilk)

II. ORIENTATION FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

I. General objective

- Enhance the productivity, quality, and food safety of grass-fed livestock products to meet both domestic and export demands.
- Expand and intensify farming operations to develop livestock and grass-fed products that have potential and comparative advantages, aligning with natural conditions, investment capabilities, consumption markets, and climate change challenges, such as meat, milk, and deer antlers.
- Promote livestock production linked to diverse processing methods to increase the added value of grass-fed livestock products, and foster the growth of the meat and dairy processing industry. Commodity livestock products should primarily be produced on professional farms and by livestock households, ensuring biosecurity, disease safety, environmental sustainability, and humane treatment of animals.

II. ORIENTATION FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

2. Specific objectives (Decision 1520/QĐ-TTg)

- Promote grass-fed livestock development to help achieve the following goals: An average annual production value growth of 4 to 5% from 2021 to 2025, and 3 to 4% from 2026 to 2030.
- Meat production targets: By 2025, grass-fed meat will reach 8 to 10% of total meat output; by 2030, reaching 10 to 11%.
- Milk production targets: By 2025, aim for 1.7 to 1.8 million tons of milk; by 2030, reaching about 2.6 million tons.
- Grass-fed livestock development should also contribute to achieving the target average per capita livestock product consumption per year: By 2025, aim for 50 to 55 kg of meat of all kinds and 16 to 18 kg of fresh milk; by 2030, reaching 58 to 62 kg of meat of all kinds and 24 to 26 kg of fresh milk.

II. ORIENTATION FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

3. Orientation for developing grass-fed cattle production until 2030 (Decision 1520/QĐ-TTG)

- The dairy herd reaches a scale of 650 to 700 thousand heads, of which about 60% of the dairy herd is raised on farms.
- The beef cattle herd is stable at a scale of 6.5 to 6.6 million heads, of which about 30% are raised on farms.
- The buffalo herd is stable at a scale of 2.4 to 2.6 million, of which about 20% are raised on farms.

III. SOME KEY SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

1. Continue to improve the livestock sector institutions

- Review, amend, supplement, and complete legal documents, especially guiding documents on the Law on Animal Husbandry, TCVN, and QCVN following the actual situation.
- Organize effective propaganda of legal documents on livestock production for organizations and individuals operating in the livestock sector.

III. SOME KEY SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

2. Adjusting livestock area planning

- Review, adjust, and enhance socio-economic development planning, including livestock production. Modify the planning of livestock development areas for major livestock to align with products associated with specific local geographical indications. Develop clean, organic, ecological livestock products that are linked to local tourism.
- Review livestock development strategy for each specific sector to adjust the scale according to market demand. Develop concentrated, large-scale livestock farming areas for key products. Establish a roadmap to develop national brands while maintaining and developing advanced livestock farming methods.
- Integrate livestock development planning within clusters of provinces, regions, and the national framework. Provinces should plan regions based on their unique advantages: create grass-fed livestock-raising areas associated with the planting and processing of raw and green food plants. Proactively convert inefficient rice and agricultural lands to grass and animal feed crops. Additionally, focus on processing industrial and agricultural by-products.

III. SOME KEY SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

3. Breed management

- Manage the breed system of ruminant cattle: identify individuals by attaching ear numbers, attaching electronic chips, recording to the breed book, and processing the breed's productivity traits.
- Unify the management system of buffalo, dairy and beef cattle breeds at livestock facilities nationwide associated with artificial insemination and embryo transfer systems.
- Developing the large-scale livestock breeding industry in a synchronized manner: Breeding establishments must meet the conditions for registering livestock breeding production and trading as per the provisions of the Animal Husbandry Law and other relevant documents.

III. SOME KEY SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

4. Policy solutions

- Effectively implement issued policies;
- Maximize socialization and support for private enterprises to develop livestock production. Implement synchronous measures to improve the investment and business environment.
- Execute five priority projects to implement the Livestock Development Strategy for the period 2021-2030, vision 2045 (approved in Decision No. 1520/QD-TTg dated October 6, 2020); Decree supporting sustainable livestock production until 2035.

III. SOME KEY SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

5. Technical solutions

5.1. Solutions to livestock breed

a) Beef cattle breeds:

- Promote the program to improve local cattle herds through the method of using Zebu hybrid bulls for direct breeding in undeveloped livestock areas, scattered livestock, and sparsely populated regions (such as certain provinces in Northern mountainous areas, Central Highlands; difficult and especially difficult areas in localities) to improve the quality of local cattle and gradually increase the rate of cross-bred cows.
- In areas with concentrated livestock farming and developed populations (Red River Delta, lowland districts in midland and mountainous provinces, Southeast provinces...): use the essence of high-yielding cattle breeds such as Red Angus, Droughtmaster, Limousin, Charolais, Blanc Bleu Belge, Wagyu, Senepol, and Blonde d'Aquitaine. These breeds can be bred through artificial insemination with Zebu crossbred cows, local cows, and other suitable breeds,…
- Select and domesticate Zebu cattle breeds and import high-yield meat breeds suitable for the care, nurturing, intellectual, and ecological conditions of each region and locality.
- Importing genetic resources: Importing high-yield bulls to produce frozen beef semen domestically, importing some semen and beef cattle embryos to serve cross-breeding and pure breeding of beef cattle.
- Conducting male productivity testing using advanced and modern methods: Genotyp……

III. SOME KEY SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

b) Dairy Cow Breed

- *For female cows*

- Continuing to cross-breed with high-yield dairy cow semen to create a herd of domestic dairy cows, combined with pure breeding of HF dairy cows.
- Enhance cow production and breeding technology by using high-quality foreign cow semen and sex-separated dairy cow semen for artificial insemination. Implement advanced reproductive technologies such as artificial insemination, embryo transfer, and sex-separated embryo creation in dairy farming centers and enterprises.

c) Buffalo Breed

- Selecting and renovating to improve the quality and quantity of domestic buffalo herds: selecting domestic male and female breeds, especially good buffalo breeds in developed buffalo breeding areas: Yen Bai, Tuyen Quang, Son La, Hoa Binh,…
- Invest in importing semen or male buffaloes to enhance the domestic buffalo herd and diversify the gene pool.
- Strengthen artificial insemination of buffaloes: Importing male breeds, semen, and gender-segregated embryos of high-yielding buffalo breeds, following domestic market demand to freshen blood, improve the quality of domestic buffalo herds, especially importing semen or male buffalo breeds some buffalo breeds in the world to improve the domestic buffalo herd (Nili-Ravi meat buffalo from India and China).

III. SOME KEY SOLUTIONS FOR DEVELOPING GRASS-FED CATTLE PRODUCTION

5.2. Animal feed

- Actively seek and utilize domestic feed raw materials to diversify supply sources, decrease reliance on traditional feed ingredients, and reduce dependence on specific markets;
- Reasonable use of industrial and agricultural by-products such as rice straw, beer residue, soybean residue, fruit and vegetable processing by-products, trace mineral licks, etc. to reduce feed costs for buffaloes and cows.
- Mixed animal feed:

+ Applying food processing technology for complete mixed feed rations (TMR, TMF) in dairy farming and the fattening of beef cattle, meat buffalo, meat goats, and rabbits.

+ Utilize biotechnology, particularly microbial technology, in food processing to improve efficiency and decrease greenhouse gas emissions.

- Green forage: growing high-nutrient grasses and animal feed plants, emphasizing those with a high crude protein content. Concurrently, opt for varieties resilient to drought, cold, and frost for planting. Engage in the selection, breeding, domestication, and importation of several grass species capable of withstanding adverse weather conditions, thus ensuring proactive food availability in regions vulnerable to climate change. Import drought-resistant varieties like Mulato II, Ghine Monbasa, Ruzi, Stylo, and Guatemala to enhance resilience in challenging environments.


THANK YOU!