

ALPACA, one of two domesticated breeds of South American camel-like ungulates, derived from the wild huanaco or guanaco. Alpacas are kept in large flocks which graze on the level heights of the Andes of southern Peru and northern Bolivia, at an elevation of from 14,000 to 16,000 ft. above the sea-level, throughout the year. They are not used as beasts of burden like llamas, but are valued only for their wool, of which the Indian blankets and ponchos are made. The colour is usually dark brown or black and the coat of great length, reaching nearly to the ground. In stature the alpaca (*Lama huanacos pacos*) is considerably inferior to the llama, but has the same unpleasant habit of spitting.

In the textile industries "alpaca" is a name given to two distinct things. It is primarily a term applied to the wool, or rather hair, obtained from the Peruvian alpaca. It is, however, more broadly applied to a style of fabric originally made from the alpaca wool but now frequently made from an allied type of wool, viz. mohair, Iceland, or even from lustrous English wool. In the trade, distinctions are made between apacas and the several styles of mohairs and lustres, but so far as the general purchaser is concerned little or no distinction is made.

The four species of indigenous South American wool-bearing animals are the llama, the alpaca, the guanaco and the vicuña. The llama and the alpaca are domesticated; the guanaco and the vicuña run wild. Of the four the alpaca and the vicuña are the most valuable wool-bearing animals: the alpaca on account of the quality and quantity, the vicuña on account of the softness, fineness and quality of its wool. In the early days of the 19th century, the usual length of alpaca staples appears to have been about 12 in., this being a three years' growth; but to-day the length is little more than about half this, i.e. a one to two years' growth, although from time to time longer staples are to be found. The fleeces are sorted for colour and quality

by skilled native women. The colour of the greater proportion of alpaca imported into the United Kingdom is black and brown, but there is also a fair proportion of white, grey and fawn. It is customary to mix these colours together, thus producing a curious ginger-coloured yarn, which upon being dyed black in the piece takes a fuller and deeper shade than can be obtained by piece-dyeing a solid-coloured wool. In physical structure alpaca is somewhat akin to hair, being very glossy, but its softness and fineness enable the spinner to produce satisfactory yarns with comparative ease.

The history of the manufacture of this wool into cloth is one of the romances of commerce. Undoubtedly the Indians of Peru employed this fibre in the manufacture of many styles of fabrics for centuries before its introduction into Europe as a commercial product. The first European importations would naturally be into Spain. Spain, however, transferred the fibre to Germany and France. Apparently alpaca yarn was spun in England for the first time about the year 1808. It does not appear to have made any headway, however, and alpaca wool was condemned as an unworkable material. In 1830 Benjamin Outram, of Greetland, near Halifax, appears to have again attempted the spinning of this fibre, and for the second time alpaca was condemned. These two attempts to use alpaca were failures owing to the style of fabric into which the yarn was woven—a species of camlet. It was not until the introduction of cotton warps into the Bradford trade about 1836 that the true qualities of alpaca could be developed in the fabric. Where the cotton warp and mohair or alpaca weft plain-cloth came from is not known, but it was this simple yet ingenious structure which enabled Titus Salt (*q.v.*), then a young Bradford manufacturer, to utilize alpaca successfully. Bradford is still the great spinning and manufacturing centre for alpacas, large quantities of yarns and cloths being exported annually to the continent and to the United States, although the quantities naturally vary in accordance with the fashions in vogue, the typical “alpaca-fabric” being a very characteristic “dress-fabric.”

The following statistics, taken from Hooper's *Statistics of the Woollen and Worsted Trades of the United Kingdom*, give an idea of the extent of the trade in yarns and fabrics of the alpaca type; unfortunately statistics for alpaca alone are not published.

Alpaca, Vicuña, and Llama Wool imported into the United Kingdom.

Year.	Peru.		Chile. ¹	
	lb	£	lb	£
1854	1,247,015	124,946	15,573	1,557
1860	2,334,048	263,635	520,402	58,443
1870	3,324,454	388,969	563,782	65,996
1880	1,412,365	98,644	890,627	64,621
1890	3,114,336	190,703	564,606	30,694
1900	4,236,566	205,839	1,148,694	51,116
1902	5,038,998	259,927	1,028,171	47,610
1905	2,301,522	119,321	2,302,650	112,367

Note.—In 1840 the imports into, exports from, and consumed in the United Kingdom of mohair, alpaca, vicuña, &c., amounted to £50,000.

Exports of Mohair and Alpaca Yarns for 1905.

Russia	1,288,800 lb	£168,596
Germany	9,851,200 „	1,145,795
Belgium	316,400 „	40,409
France	2,006,700 „	223,605

Exports of Alpaca from the United Kingdom to the United States.

1881	£1,256	1900	£30,631
1890	—	1905	4,954

Owing to the success in the manufacture of the various styles of alpaca cloths attained by Sir Titus Salt and other Bradford manufacturers, a great demand for alpaca wool arose, and this demand could not be met by the native product, for there never seems to have been any appreciable increase in the number of alpacas available. Unsuccessful attempts were made to acclimatize the alpaca goat in England, on the European continent and in Australia, and even to cross certain English breeds of sheep

with the alpaca. There is, however, a cross between the alpaca and the llama—a true hybrid in every sense—producing a material placed upon the Liverpool market under the name “Huarizo.” Crosses between the alpaca and vicuña have not proved satisfactory.

The preparing, combing, spinning, weaving and finishing of alpacas and mohairs are dealt with under Wool. (A. F. B.)

¹ Grown in Peru but shipped from Valparaiso.