



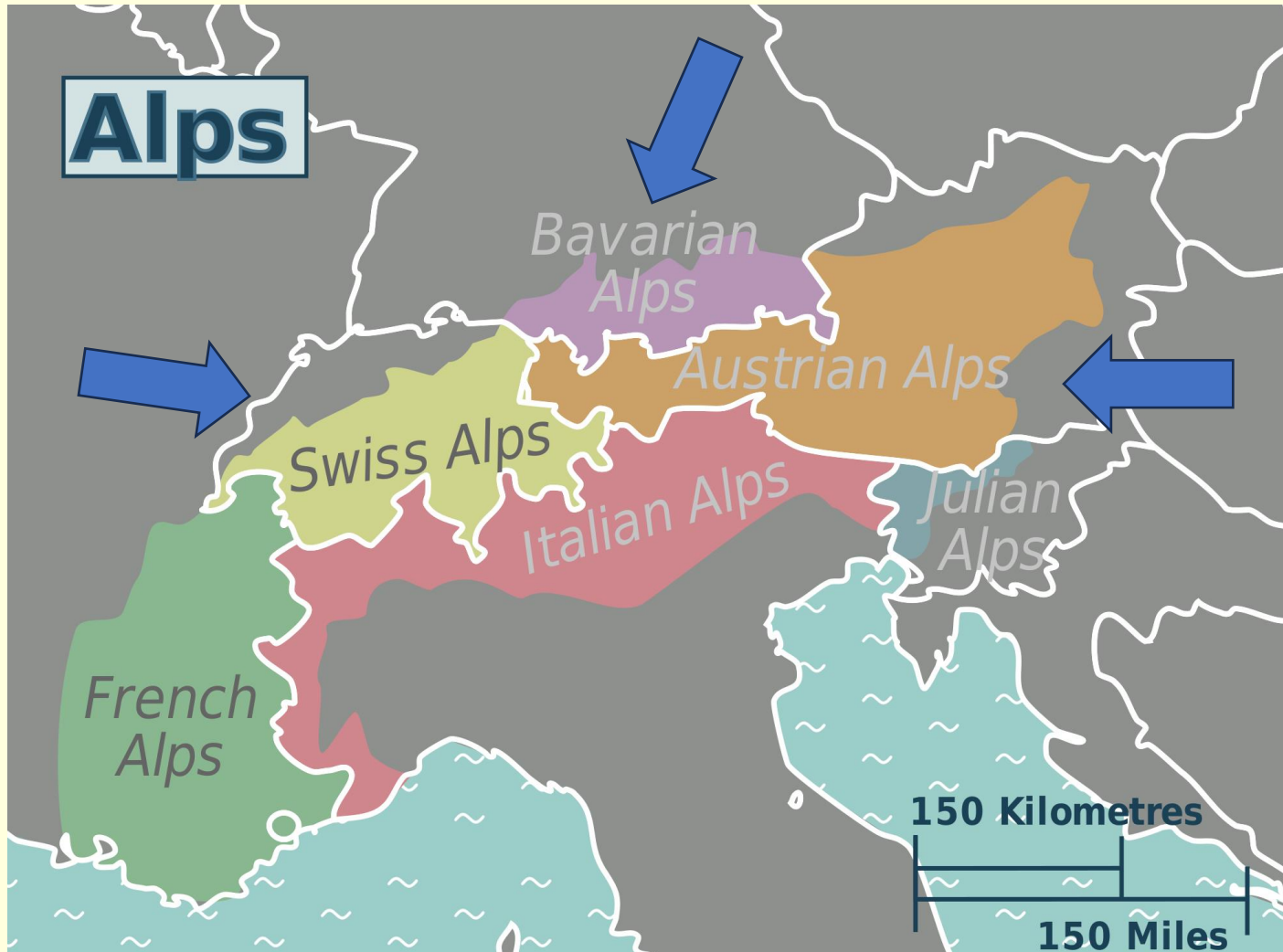
Systems of Transhumance in the Alps of Austria, Germany, Switzerland



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Society for the Conservation of Old and Endangered Livestock Breeds (GEH) Germany

The Alps – Eight different Countries



The highest Mountain in the Alps
is the Mont Blanc (France)
4805 meters

Alpine Area in the Countries

Country	Alpine Area in km ²	Alpine Area in %	Inhabitants Alpine Area	Inhabitants Alpine Area in %
Germany	11.100	5,8	1.380.000	10,1
France	40.800	21	2.450.000	18,0
Italy	52.000	27	4.100.000	30,1
Liechtenstein	160	0,08	35.000	0,2
Monaco	2	0,001	33.000	0,1
Austria	54.600	29	4.010.000	29,4
Switzerland	24.850	13	1.740.000	12,8
Slovenia	6.800	3,5	640.000	4,7
Total	190.900*	100	13.600.000**	100,0

Transhumance and Alpine Farming

Transhumance has differences to the summer grazing or alpine farming:

Summer grazing is widespread in the high alpine regions and north of the Alps, while transhumance is the Mediterranean region and in the warmer and drier regions of Europe.

In transhumance people move with the animals between regions where the fodder plants grow at different times.

In alpine farming ruminants use the grass of the mountain pastures in summer, while the grass in the valley is saved for the winter. Snow prevents the animals from grazing in winter and the animals are stalled in many places for more than 200 winter fodder days.

Where livestock migrates twice a year, manure regularly enters the soil and stops the scrub of entire areas of land, which thus is served as a habitat for numerous animal and plant species.

Different Typs of Animal Keeping in the Alps of Austria, Germany and Switzerland

Country	Types of Animal Keeping	Periode
Austria	Summer Pasture in the Mountains	May - September
	Summer Pasture in different Altitudes (Three Stage System)	April - October
	Transhumance between Italy and Austria	June - September
	Stable keeping	200 Days
Germany	Summer Pasture in the mountains	May - September
	Stable keeping	200 Days
Switzerland	Summer Pasture in the Mountains	May - September
	Three Stage System	April - December
	Stable keeping	200 Days

Summer Grazing in the Alps in Austria

In Austria there are 7,901 alpine Areas which are used during summer for the livestock.

There are different types how the alpine pastures are used, depending from the altitude, water-resources, tourism and carnivores

Tabelle 2: Almtypen nach Almhauptregionen 2018, Quelle: BMNT – INVEKOS 2019

Almhauptregion	Zahl der Almen insg.	davon in %											
		Galtviehalmen	Gemischte Almen	Melkalmen	Pferdealmen	Schaf-/Ziegenalmen	Hochalmen	Mittelalmen	Niederlalmen	Nicht zugeordnet	Einzelalm	Gemeinschaftsalmen	Servitut
Westliche Hochalpen	3.808	44	17	18	8	13	31	49	18	2	69	31	0
Östliche Hochalpen	1.567	76	7	3	6	9	42	47	10	1	75	23	2
Nordöstliche Hochalpen	678	80	7	2	6	5	6	42	51	1	44	29	26
Alpenostrand – Südliche Kalkalpen	1.857	91	2	1	5	1	17	59	24	1	86	13	2
Gesamt	7.910	64	11	10	7	9	28	51	21	1	72	25	3

The Pathes of the Sheeps - Transhumance in the Austrian Alps

The "paths of the sheep" between South-Tyrol (Schnalstal-Valley, Italy) and Ötztal-Valley (Austria) with a herd size of approximately 5,000 sheep are unique in this form.

They are part of a millennia-old still living shepherd culture, one of the few examples of cross-border, probably the last migration of large flocks of sheep over glaciers and ice.

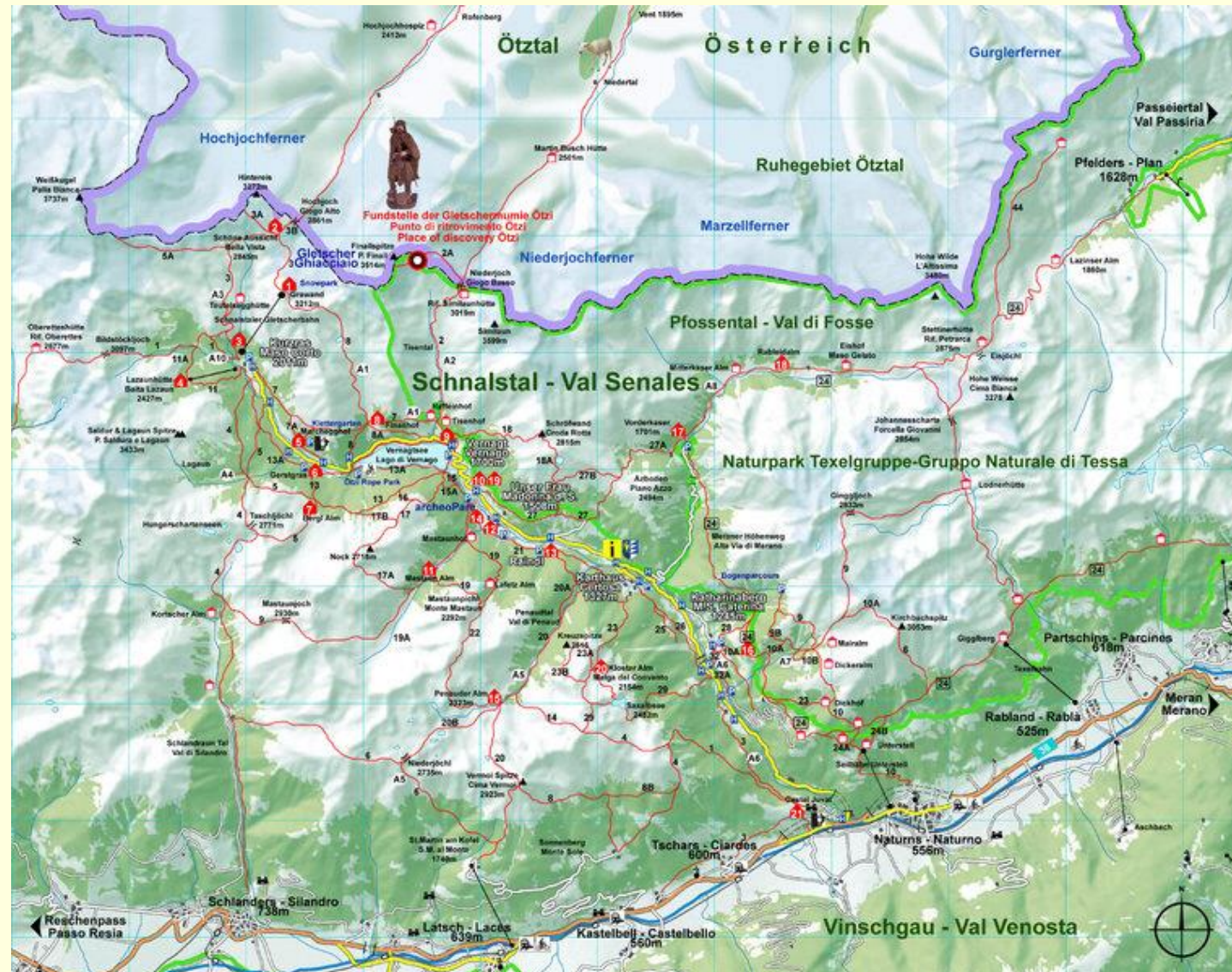


The Area of South-Tyrol (Italy)

Transumance from Schnalstal (Italy) to Tirol (Austria)



Map of Schnalstal with Location of the Ice-Man



Source: <https://de.images.search.yahoo.com/yhs/search?p=Karte+Schnalstal>

Ötzi the Iceman

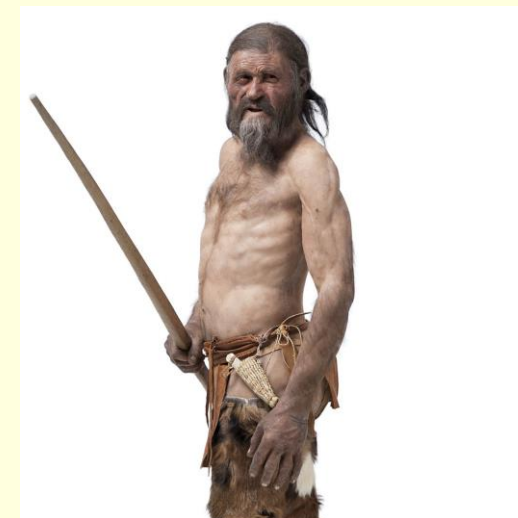
Ötzi is a glacier mummy from the Copper Age, who, thanks to extraordinary circumstances, has been preserved down to the present day.

Little by little, he has imparted genuine stores of knowledge. He was discovered accidentally by hikers in 1991, together with his clothing and equipment, on the Schnalstal/Val Senales Valley glacier and has been the subject of intensive research ever since.

His clothes are made out of wool from the old and still existing sheepbreed Alpines Steinschaf which means Alpine Stonesheep

Ötzi and his artefacts have been exhibited at the South-Tyrol Museum of Archaeology in Bolzano, Italy since 1998

Source: <https://www.iceman.it/en/the-iceman/>



Special Form of Transhumance in Austrian Alps

There are two major and one smaller crossings with a total of almost 5,000 sheep from the Schnalstal Valley (South-Tyrol) to the Ötztal Valley (Tyrol) and back to South Tyrol.

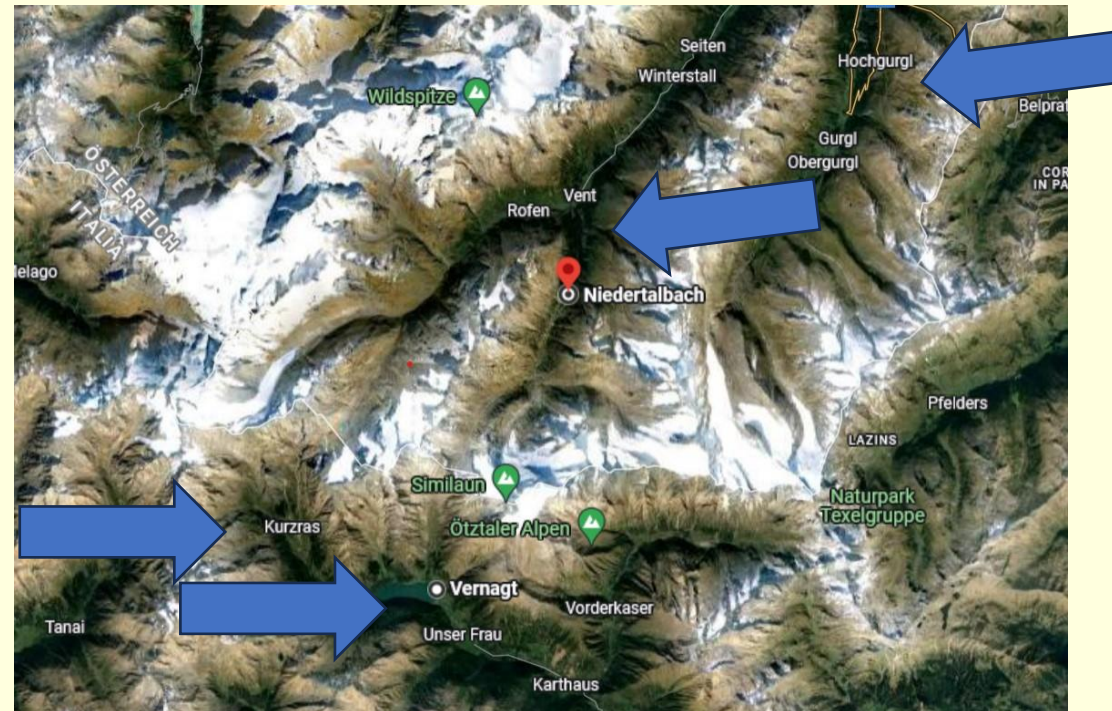
There are three groups:

Schnalstal Valley (Italy) to Ötztal Valley Vent
Kurzras Village to Rofental Valley near Vent
Passeirer Valley to Ötztal Valley

2.000 animals over Hochjoch (3019 m)
1.500 animals over Niederjoch (2770 m)
1.500 animals over Timmelsjoch (2509 m)



Source: <https://www.oetztal.com/de/sommer/events-oetztal/die-sommerfrische-der-schafe.html>



Source: google-maps



Source: <https://www.oetztal.com/de/sommer/events-oetztal/die-sommerfrische-der-schafe.html>

The Pathes of the Sheeps

The tradition of sheep migration, also known as transhumance, is probably 6000 years old.

The original inhabitants of the Alps led their herds in summer from the dry and arid southern side to the northern side of the Alps with its lush pastures. The pastures of the Schnalstal, Passeirertal and Vinschgau farmers in Ötztal have been documented since the Middle Ages.

The special thing is, that the animals cross the borders and have to walk over Glaciers and ice. The distance is up to 44 km and an altitude with the highest point at the Hochjoch (3019 m).

For the animals from Vinschgau the walk needs 2 days.



Landscape Management and Cultural Heritage

Through proper grazing, shepherds still make a significant contribution to maintaining the ecological balance in their areas.

Construction measures in connection with winter tourism repeatedly pose a threat to transhumance, as this destroys some of the sheep's grazing areas.

Old Sheepbreeds like Schnalser Sheep and Alpine Steinsheep are the perfect livestock and guaranty for the breeders since centuries.

From today's perspective, the Ötztal transhumance is such a unique tradition that it has been on the UNESCO National Register of Austria's Intangible Cultural Heritage since 2011.

The Pathes of the Sheeps in Austria



Schnalser Sheep - the traditional Breed of the Schnals Valley



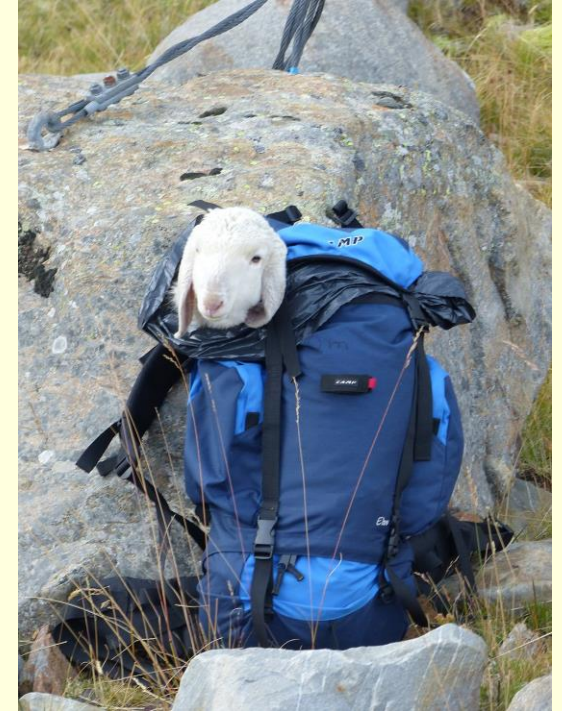
Transhumance of Schnals Sheep
in front of the Niederjoch with
Niederjoch Glacier and Similaun Peak

Picture: [Whgler](https://de.wikipedia.org/wiki/Schaftrieb_%C3%BCber_den_%C3%96tztaler_Alpenhauptkamm#/media/Datei:Schaftrieb_Similaun.jpg)
https://de.wikipedia.org/wiki/Schaftrieb_%C3%BCber_den_%C3%96tztaler_Alpenhauptkamm#/media/Datei:Schaftrieb_Similaun.jpg



Two Breeding Rams of Schnals Sheep

Source: <https://i.pinimg.com/originals/54/51/6e/54516eb7df4c02e5d23c5c141bb7153c.jpg>



Transport of a lamp ...

https://de.wikipedia.org/wiki/Schaftrieb_%C3%BCber_den_%C3%96tztaler_Alpenhauptkamm#/media/Datei:Schaftrieb_Similaun.jpg

Sheepbreed of Schnals Valley - the Schnalser Sheep

The Schnals Sheep is the traditionell sheepbreed in the area of Schnals /Italy. The breed is a type of and old traditionall breed of the area and figures the typical Bergamsaca-typ of the region.

At Novemver 30 th in 2020 the Schnalstal Sheep was integrated into the network of the organisation Slow Food as a regional breed . At the moment 1,500 Schnalstal sheeps exists and farmers and shepherds could protect the reliance and typical form of transhumance with this regional breed.



Source: <https://www.anderleithof.com/Sehenswertes.aspx>



Source: Tourismusverein Schnalstal - Katerina Fiser



Tiroler Steinschaf

<https://www.bergschaf.tirol/schafrasse/tiroler-steinschaf/>

Traditional Sheep Breeds in Austria



Sheeps return to Schnals Valley Picture: Bacher



Braunes Bergschaf

<https://www.bergschaf.tirol/schafrasse/braunes-bergschaf/>



Tiroler Bergschaf weiß

<https://www.bergschaf.tirol/schafrasse/tiroler-bergschaf/>

Brillenschafe in Austria – Breed with typical black glasses around the eyes and black ears



arche  ustria
verein zur erhaltung seltener nutzierrassen

NGO in Austria for Rare Breeds

Tuxer Cattle - a traditional Cattle Breed of the Austrian Alps



<https://www.arche-austria.at/index.php?id=97>

Ennstaler Bergschecken – Endangered Cattle Breed in Austria



Source: <https://www.arche-austria.at/index.php?id=89>

Pinzgau Cattle and Pustertal Cattle– Endangered Cattle Breeds in Austria



Pinzgau Cattle

<https://www.arche-austria.at/index.php?id=93>



Pustertal Cattle

<https://www.arche-austria.at/index.php?id=95>

Historical Films with Transhumance with Traditional Cattle Breeds in the Austrian Alps

Central Europe, Tyrol - Driving of Cattle to Alpine Pastures over the Krimmler Tauern

1963: Rutz, Werner, Nothdurfter, G.: 19 min.

Link: <https://av.tib.eu/media/11317>



Central Europe, Tyrol - Driving of Cattle from Alpine Pastures over the Krimmler Tauern

1963: Rutz, Werner, Simon, Franz, Nothdurfter, G.: 19 min.

Link: <https://av.tib.eu/media/11830>



Summering in the Alps of Switzerland

The Swiss Alpine Association (SAV) is the national organization of the alpine farming industry.

It promotes networking, exchange and knowledge transfer in the field of alpine farming.

The summering area corresponds to one third of Switzerland's agricultural land or eleven percent of the country's surface area.

Livestock on summer pasture use the natural grassland

470,000	Dairy Cows and Cattle
7,000	Horses
240,000	Sheep and Goats

The 6,700 alpine farms produce a total of around 5,500 tons of alp cheese every year



Summering Farms in Switzerland

Summering farms are managed during the alpine season and are used to graze ruminants.

Their seasonal management is the main difference to year-round farms.

Another characteristic of summering farms is their **specialization in grazing: they consist exclusively of grassland that is adapted to the location and used with graduated intensity.**

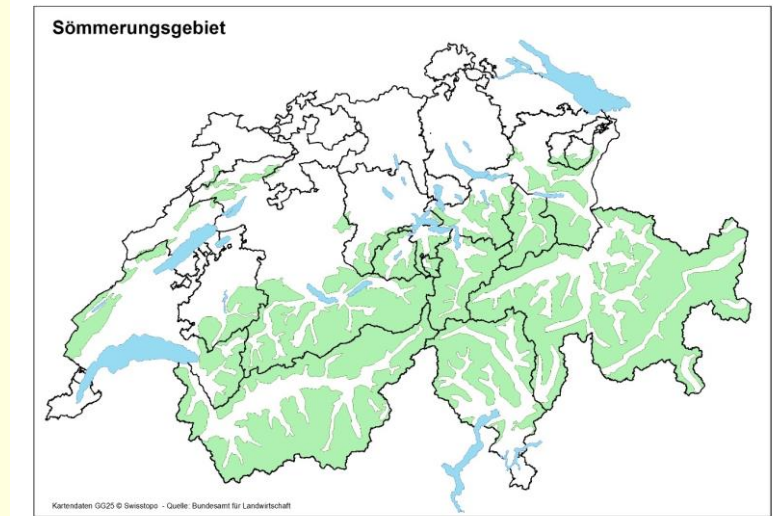
Alpine pastures are generally at high altitudes, but can also be comparatively low, as traditional use is the determining factor.

The animal stocking rate guaranties the sustainable use.

The normal stocking rate is given in standard numbers. One normal stocking rate (NST) corresponds to the summering of one roughage-consuming livestock unit (LU) for 100 days.

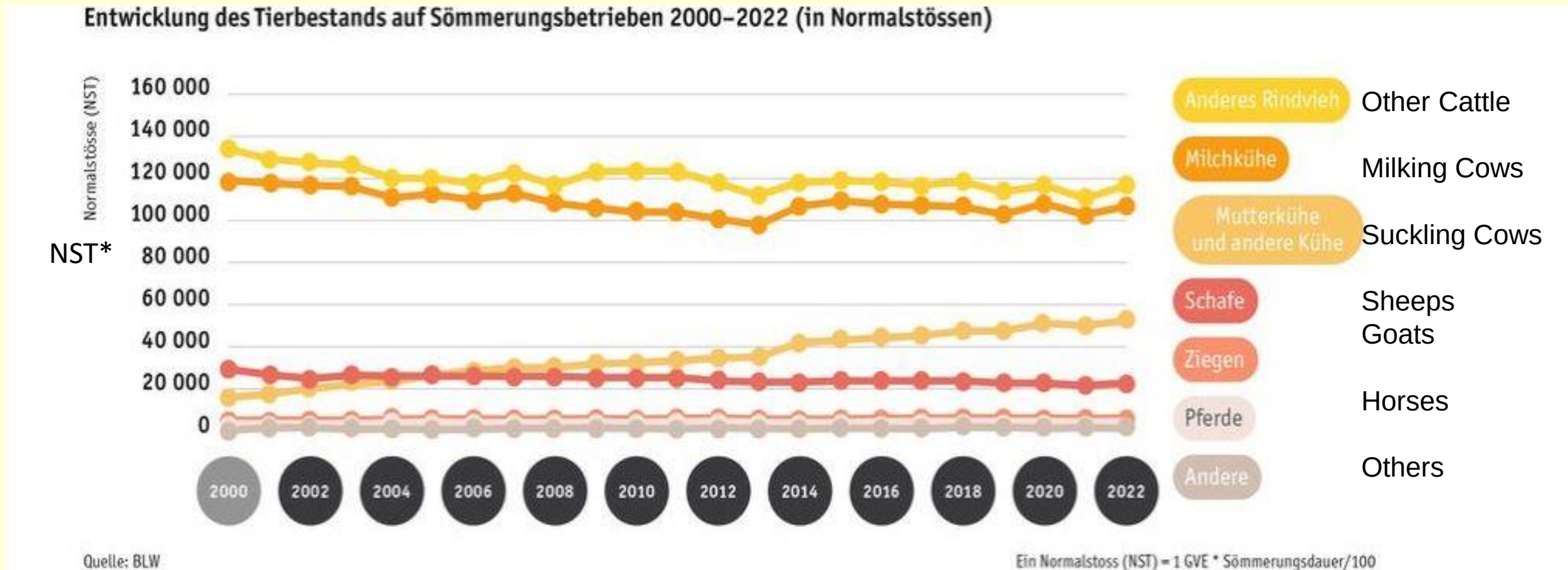
The summering period is counted as a maximum of 180 days.

Areas of Summering Farms in Switzerland



Source: <https://www.blw.admin.ch/blw/de/home/instrumente/direktzahlungen/voraussetzungen/begriffe/soemmerungsbetriebe.html>

Development of Livestock on Summering Farms in the Swiss Alps



NST* corresponds to the summering of one roughage-consuming livestock unit (LU) for 100 days

Source: <https://www.agrarbericht.ch/de/betrieb/strukturen/soemmerungsbetriebe>

Three-Stage Farming – An old traditional System in the Alps

Three-stage farming is a form of alpine pasture farming in the Alps, where the cattle are first driven up to a medium altitude step and are only driven up to the high alpine pasture at the end of June. The steps are also known as "Stafel", a term that is a Roman loanword which means stable.

The First Stage concerns the **homestead in the valley**, which could be farmed from spring to fall and was intended to create supplies for the winter. The associated alpine regions are called Niederalp or Niederleger, and the cattle can be stabled in the farmstead.



Picture: Feldmann



Source: https://de.wikipedia.org/wiki/Datei:Vorderhopfreben_%C3%9Cntschenspitze_1.jpg

The Second Stage called Vorsäß or Maisäß are located at about **1,500 meters above sea level**, about two hours' walk above the permanent settlements: When the fodder supplies in the valley run out, the cattle (cattle, horses, sheep, goats) are driven to the Maisäß for about three to four weeks at the beginning of June. Even after the high alpine pastures have been used, it is still possible to graze on the pastures until the actual cattle drive takes place and the cattle finally find winter quarters in the valley.



Leaving the Summer Pastures

Source: https://de.wikipedia.org/wiki/Datei:Kufstein_Almabtrieb_2005.jpg



Second Stage – Maiensäß

Source: https://de.wikipedia.org/wiki/Datei:SeewaldFontanella_3.JPG



Second-Stage - Stable for bad weather conditions

Picture: Feldmann

The Third Stage: In June, the cattle are brought to the Hochalpe/Hochalm, Oberleger, Oberstafel at altitudes of **around 1,600 to 2,000 meters**. During the alpine season (also summering), the meadows on the Maisäß are sometimes mown, in alpine locations also by wild haymaking. From mid-September to mid-October, the cattle were returned back to the Maiensäß.



Third Stage – Cattle at highest altitudes

Source: <https://de.wikipedia.org/wiki/Datei:Viehsoemmerung.jpg>



Handmade Cheese on Swiss Alps

Source: Agroscope, Olivier Bloch



Black nosed Sheep from Valais Area

Picture: Walliser Schwarznasenschafe. Foto: Agroscope, Olivier Bloch

This form of farming worked for centuries and was limited by the fact that many people had to earn a living outside the valley during the warm season.

Traditional Breeds of Switzerland



Brown Swiss Cattle in the Alps

Source: Agroscope, Manuel Schneider



Pfauen Goat on high Pasture

Source: Agroscope, Gabriela

Saaser Mutten – An endangered traditional Sheep Breed of Switzerland

The Saaser Mutten is a Valais sheep breed that originated in Valais Area from an independent breed of Bergamasco sheep. They are a large, polled meat sheep with pronounced ram's noses and strikingly large hanging ears.



Source: www.prospecierara.ch



SAASER MUTTEN

Pro Specia Rara: NGO and Foundation for traditional Plant Varieties and Livestock Breeds



Source: <https://verzasca-etnografica.ch>

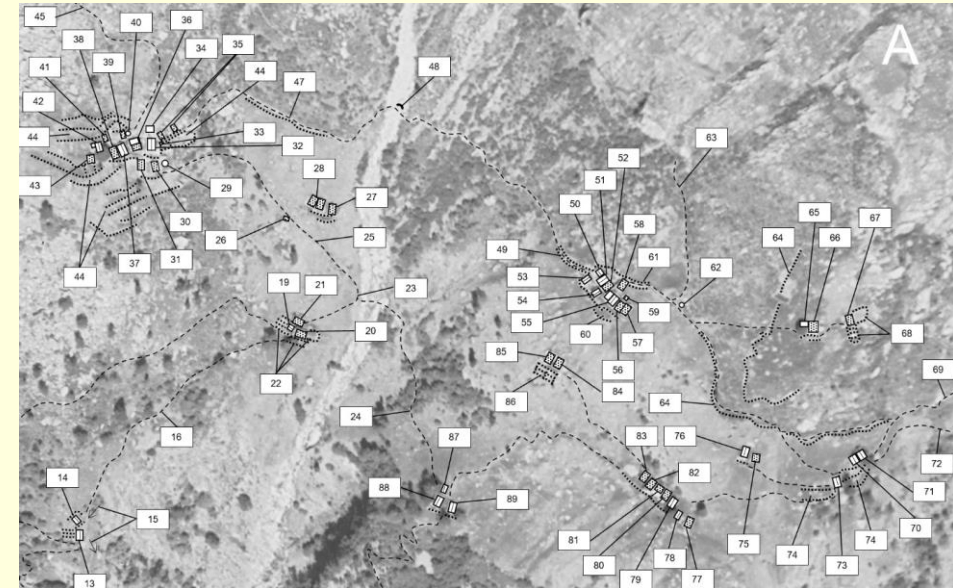
Ethnographic mapping of the Valle di Corippo

The short and deeply incised side valley of the Verzasca offered people very little arable land. There was no grazing land available here for summering cattle. **Alpine pasture rights therefore had to be acquired elsewhere**, for example on the alpine passes of Orgnana and in the side valleys of Carecchchia.

Accordingly, this study deals with the particularities of transhumance in an extremely restrictive Alpine context

Ethnographic mapping of the settlements between Frasco and Cazzai. This systematic field study records the settlement structures between the village and the Maiensässen.

The aim of this study is to gain an in-depth insight into the characteristics of the semi-nomadic of the semi-nomadic multi-level economy and to enable a comparison with other territories in the valley.



The Mule Track in Verzasca Valley

The mule track from Lavertezzo to Forno - A marvel of transhumance - path between the village of Lavertezzo and the May settlement of Forno in the Verzasca Valley **is of national importance as a transportation route** due to its extraordinary layout in the terrain and its largely well-preserved structure.

This work describes in detail the well-preserved building fabric and the importance of this road as a **direct link to the distant parts of the village** at the entrance to the Val d'Agro **and as a fodder road** to the numerous Maiensäß and alpine settlements in the side valleys.

Christian E. Besimo

Der Saumweg von Lavertezzo nach Forno
Ein Wunderwerk der Transhumanz



Verzasca Etnografica VE

Ethnografische Schriftenreihe über die Valle Verzasca

Heft IX



Source: google-maps

Summer Farming Systems in the Alps of Germany

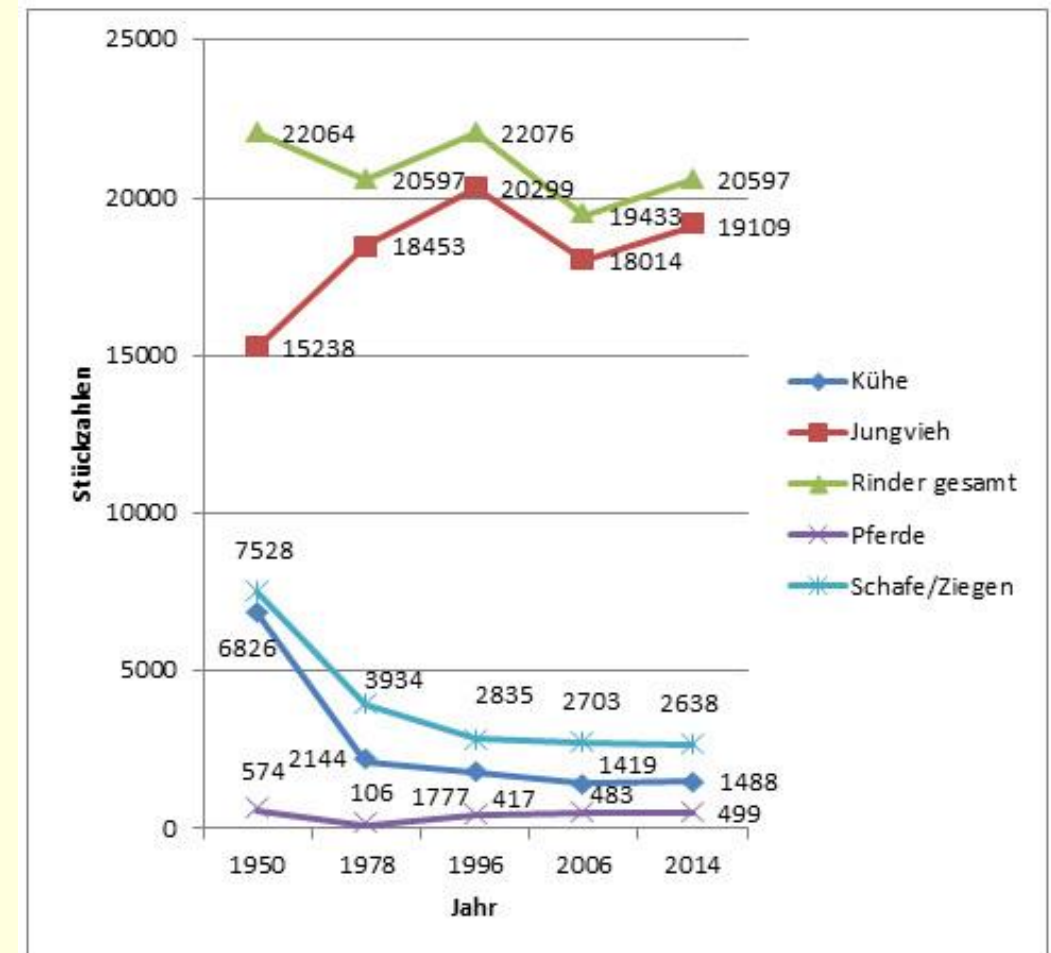
Number of Alpine Huts in the German Alps 1950 - 2018

		1950	1978	1996	2006	2014	2018
Huts	Almen	738	658	710	710	709	709
Pastures/ha	Lichtweide in ha	20.495	17.000	18.840	19.608	18.960	18.182
Staff	Personal (geschätzt)	1135	347	348	350	350	350



Pictures: Feldmann

Development of Livestock on the Alpine Pasture from 1950 - 2016



Source: <https://almwirtschaft.net/statistische-entwicklung-der-almwirtschaft-seit-1950>



Society for the Conservation of old and endangered Livestock Breeds in Germany (GEH)

- Founded 1981 in Bavaria
- Private Society with nationwide activities
- More than 2200 members (farmers, hobby-farmers, veterinarians, breeders, organizations, researchers, interested people, administration)
- Publishing the „Red List of endangered Livestock Breeds“ since 1984
- About 176 local breeds are endangered in Germany
- Since the activities of GEH, no livestock breed became extinct in Germany



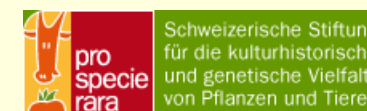


Activities on Animal Genetic Resources

CBD	Convention on Biological Diversity
IUCN	World Conservation Union
FAO	Food and Agricultural Organization of the UN
CGRFA	Commission on Genetic Resources for Food and Agriculture
ITWG-AnGR	Intergovernmental Technical Working Group on Animal Genetic Resources
ERFP	European Regional Focal Point for Animal Genetic Resources
DAD-IS	Domestic Animal Diversity Information System
SoW-AnGr	State of the Worlds` Animal Genetic Resources
EU	Funds of the European Union
EAAP	European Association for Animal Production
ILRI	International Livestock Research Institute, Ethiopia
GIZ	German International Cooperation

SAVE **Saveguard for Agricultural Varieties in Europe**
Forum Environment & Development

NGOs **Non Governmental Organizations in different countries**





Utilisation of Rare Breeds

Landscape Management

- Management of rough landscapes and protected areas
- Management against erosion
- Management in National Parks and Biosphere Areas



Others

- Breeding and maintenance in zoos, open air museums, farm parks, school farms
- Keeping and breeding on an Arkfarm (GEH)
- Breeding in research farms (Universities)



School farm



Swabian Hall Pig





Cross-Border Woolproject to maintain the Alpine Steinsheep

Alpines Steinschaf



- Total population: 1050 registered sheep in Germany
- 55 breeders
- Region: German and Austrian Alps





Maintenance of the old traditional Sheepbreed of the Alps

- **Project: „Re-activating traditional alpine Pasture-systems“**

Keeping breeding rams in the alpine system (summering)

- Development of weight
- Wool-Quality under harsh conditions
- Condition of the body and parasites
- fitness
- Quality of the claws
- Judgement of all animals in the end of the summerperiod





- High quality of the products
- The breedname is used for communication and marketing

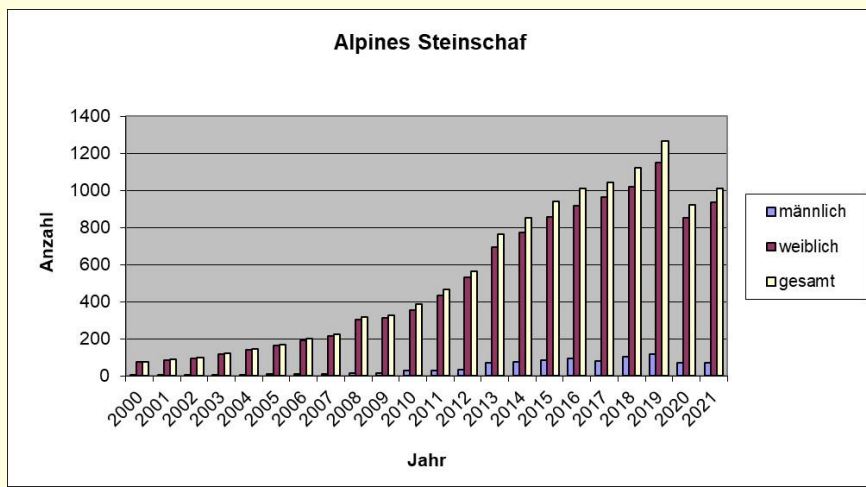




Picture: GEH

Successfull Concept for the Maintanance of an old Breed

- Herdbook-Structure, Breeding Association
- Product Marketing (Logo, Breeders are involved, they sell their products on their farm)
- Best adaptation of the animals to the alpine situation (Index for Alps)
- Financial support of the Ministry for the breeders



Actual Situation for Transhumance/Livestock in the Alps

Action is needed

- Climate Change
- Water Resources in alpine Systems
- Animal friendly Housing Systems
- Debate about Animal Protection
- Veterinary and Breeding Requirements and Legislation
- Carnivores Wolves, Bears, Lynx
- Tourism (nice to have and problems can arise)
- Marketing of regional products under EU-Regulations
- Missing infrastructure for slaughtering, processing of products like cheese-factories

What is the future - How to deal with this — Who and Where are the actors?



Sources:

Whgler - Eigenes Werk https://de.wikipedia.org/wiki/Schaftrieb_%C3%BCber_den_%C3%96tztaler_Alpenhauptkamm#/media/Datei:Schaftrieb_Similaun.jpg

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<https://www.anderleithof.com/Sehenswertes.aspx>

<https://www.vent.at/de/sommer/veranstaltungen/schafuebertrieb.html>

<https://almwirtschaft.net/statistische-entwicklung-der-almwirtschaft-seit-1950>



Pictures: Feldmann, Schafzuchtverband Bozen

Diverse Thanks for your Attention

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