Sauris (Zahre), a cultural and linguistic island in Carnia (Italy)

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Abstract

In the last decennia genetic erosion has been and is still very high for crop plants from mountainous areas, where they have been well protected formerly.

Some linguistic and cultural islands in the Alps could eventually serve as refuges for landraces of crop plants. To test this hypothesis, Sauris (Zahre), a remote village in Carnia (Italy), was investigated. Founded by Tyrolean immigrants at the end of the 13th century, it was for centuries well isolated from the surrounding areas, and maintained a specific culture including language (trilingual). This situation seemingly also protected traditional crop plants. More than 60 crop species could be found in the village. Field crops were strongly affected by genetic erosion and many of them were lost, like rye and buckwheat. Today house gardens provide a better environment for various garden crops.

Also some traditional field crops could be found there, as linseed, hemp, poppies and potatoes. In the last decennia several new crops have been introduced for which only Italian names are available.

This ethno-botanic approach allowed a better understanding of the cultural history and development of an island – like mountain area and helped to collect and protect useful plant genetic resources.

Key words: agro-biodiversity, ethno-botany, genetic erosion, plant genetic resources, Sauris.

Introduction

Starting in 1980 a programme was mounted for exploring and collecting of plant genetic resources in Southern Italy, jointly by an Italian-German team (Perrino *et al.*, 1981). In contrary to the southern parts still rich in landraces, north Italy was more affected by genetic erosion. Two collecting missions, in 1990 (Hammer *et al.*, 1991) and 1991 (Laghetti *et al.*, 1993), respectively, covered large parts of the Italian Alps (see also Hammer *et al.*, 1999). The expectations concerning these areas have been very high, because of former reports on the wealth of landraces for this mountain region (e.g., Stampani, 1910; Mayr, 1934). But there have been only few areas preserving the traditional landraces (Pro Specie Rara, 1995).

Some linguistic islands have been of special interest, because they are conserving aspects of cultural heritage and plant genetic resources could be among those valuable witnesses of the past.

Visiting Carnia in 2001 (Laghetti *et al.*, 2003), our exploration team touched a number of German speaking villages, as Timau (Tischelwang), Sappada (Pladen) and Sauris (Zahre), which have been founded by Austrian immigrants in the 13th century (Geyer-Schönhuber, 1976; Baum,1980; Bianco, 1985). Among them, Sauris (Zahre)

was found to be of special interest, because of several indications for traditional agriculture.

Material and methods

All fractions of the village have been visited in 2001 (Laghetti *et al.*, 2003), i.e. La Maina (ca. 940 m asl), Sauris di Sotto (ca. 1218 m asl), Lateis (ca. 1260 m asl) and Sauris di Sopra (ca. 1399 m asl – see Miceli, 1998). Additional information was obtained in 2004 (Laghetti *et al.*, in preparation) from Sauris di Sotto and Sauris di Sopra.

The check-list method was used to report about crop plants present in fields and gardens (Hammer, 1991). Several seed samples have been taken for preserving the material in the Bari genebank and for growing up the material for further characterization and evaluation. As the basis for check-list, the catalogue of crop plants of central and north Italy was used (Hammer *et al.*,1999). Together with the collection of seeds and plants, interviews have been made with growers of the crops, to obtain a better impression about history and use of the crop plants. In this connection also the local names have been investigated.

Results and discussion

The results of our investigations are shown in table 1. Information for more than 60 crop plants could be obtained, most of them from direct observations. Additional information about former crop plants has been taken from literature sources (Cozzi *et al.*, 1998, Cozzi and Isabella, 1999). Only very old farmers still know the original language of the village which has been introduced together with immigrants from Tyrol (Val Pusteria – Pustertal and Lesachtal in 1250-1280, Denison, 1982). A specific detail of the area of origin is still preserved in a folk song: "....gean hin ga priksn". ("....andiamo a Bressanone") (Cozzi, 1998). Brixen (Bressanone) is a big town in the northern part of South Tyrol (Alto Adige region). The old Tyrolean idioms came under a certain influence of neighbouring languages in the settlement area. In the last century Sauris was still a trilingual community – Friulian, Italian, German (Denison, 1968, 1969; Petris, 1975, 1978; Lorenzoni, 1937; Lucchini, 1985) but there have been early indications for a cultural erosion (Castiglione, 1961). The collection of local (old Austrian) names for crops was still possible by interviews with (mostly) old mothers or their daughters already in or close to pension. For the transcription of the local names we follow Isabella (1999b) – see table 1.

The number of species found in cultivation amounts for more than 60. This figure is relatively low in comparison with proper islands. For Ustica, an island north of Sicily, more than 110 species could be found (Hammer *et al.*, 1999) but the severe climatical conditions of Sauris have to be considered.

There is a strong reduction of fields in the area together with the typical field crops. This tendency can be followed also in other parts of the Alps including Alto Adige (South Tyrol, Italy) and Eastern Tyrol (Austria). The former rich cultivation of cereals (Schönthaler, 1992; Dollinger w.y.; Mayer, 1934) has been largely abandoned. Only a few samples of barley and oat could be obtained. The important rye crop disappeared completely, the same is true for bread wheat, which, however, never played an important role in Sauris. Buckwheat (*Fagopyrum esculentum* and possibly *F.*

tatarium) has disappeared since several years, like in other parts of the mountains. Flour from the seeds (hàdamel) was formerly used for preparing polenta or noodles and even bread. Maize has been introduced to Sauris relatively late and was the most important source for polenta (plent in Tyrol – Schöpf, 1866). As a crop from the New World maize arrived relatively late. In 1573 maize was grown in South Tyrol (Walcher-Silbernagele, 2002) and already in 1638 it was a common crop there (Zani, 1989). This was long after the immigrants came to Sauris. Much later maize found its way to the remote area. In South Tyrol it is known as "tirgg" (Walcher-Silbernagele, 2002), named after the supposed origin in Turkey, in Sauris we find the different name "zùrcha", having the same meaning, but influenced by the romanic speaking environment. The difficult climatic conditions did not allow the adaption of maize to the area of Sauris. Only a few plants have been and still are cultivated in gardens. For the extensive consumption, the grains were imported.

Potato is also an introduction from the New World. As a mountain crop it was well adapted to the Alps. The first report from Sauris is from 1807, but it reached greater importance from 1814-1817 in times of tremendous food shortage. The local name is "gartùfelas", quite similar to the later appearing German "Kartoffel", and different from the Austrian "Erdäpfl" as used in South Tyrol. Some old persons still grow local varieties of potatoes. A traditional pulse is *Vicia faba,* the old "bean" ("poan" – germ. "Bohne") of the area (ital. "fava"), typically with small seeds, used for many traditional dishes. There is also a number of local vegetables like cabbages and beets. *Brassica rapa* L. subsp. *sylvestris* (Lam.) Janchen could be collected as a rare weed. Possibly it is derived from a former landrace of primitive cultivated *Brassica rapa*.

A few plants could be observed of the very traditional fibre crops hemp and flax. A sample of poppies, predominantly with red and white flowers, resembles very much the last recent landraces of this crop from South Tyrol (Heistinger, 2001). The main use is as an ornamental plant.

Only a few fields have been maintained. They are usually very close to the houses and are often similar to the home gardens. Whereas the fields are more and more abandoned, homegardens maintain a certain importance. This is true also for other parts of the Alps (Pfaff, 1927; Schwingshackl, 1950; Grießmair and Kompatscher, 1994). The importance of homegardens in Alto Adige (South Tyrol) and Ost-Tirol (Eastern Tyrol) has been recently stressed by Heistinger (2001) and Vogl-Lukasser (2000).

A number of useful garden plants has a long history in the area and some genotypes could have been already introduced by the first immigrants, like beets (piesl), *Lepidium sativum* (kreis), peas (orbaslan), garlic (knouvla) and *Allium schoenoprasum* (šnitlach). *Allium cepa* var. *aggregatum* (skalonja) is propagated vegetatively and has been maintained through the centuries. The same is true for the traditional mints (minzn). The so called wild mint is a very old hairy type of *Mentha x spicata*. The red mint (*M. x smithiana*) is a rare garden plant in the mountains. For Sauris it is reported under the name of *Mentha piperita* (Isabella, 1999b).

Many wild plants are still in use for the kitchen as *Silene vulgaris* (khére), *Chenopodium bonus-henricus* (hàusslebeslan) and *Carum carvi* (khime). The last two can be found today also as plants in the house gardens.

A great input of new crops started in the fifties of the last century. Isabella (1999b) mentions for Sauris *Apium graveolens*, *Petroselinum crispum*, *Daucus carota* and *Lactuca sativa*. For all these crops no German names are available in Sauris. Even today new crops are introduced as *Diplotaxis tenuifolia* which is now growing in the house gardens side by side with the very traditional *Eruca sativa* (rukula).

A few fruit and nut trees and also shrubs have been found in the gardens (see table 1) among them *Corylus avellana* (hoslnuse) and *Cornus mas* (kòrgnal), the fruits of which have been formerly mostly collected from wild trees. The trees and shrubs of Sauris deserve an additional study.

Conclusions

The Alps with their island-like situation play an important role in the present discussion on biodiversity (Körner and Spehn, 2002; Nagy *et al.*, 2003). Agricultural biodiversity has been lost for a great part and remote areas have to be investigated.

The insular situation of the mountain village Sauris (Zahre) in Carnia allowed the preservation of traditional cultural and linguistic elements (Cucagna, 1951).

Crop plants are among the indicators for traditional agriculture. Some crop plants could have been already introduced by the first immigrants from Tyrol in the 13th century. They are often known under their Tyrolean names. Field crops have been and still are affected by a strong genetic erosion. Several of these crops , as rye (see also de Rachewiltz, 1993) and buckwheat, have disappeared completely. House gardens provide a more suitable environment for the conservation of vegetables, condiments and medicinal plants. But they can also be the last refuges for former field crops, as flax, hemp, potatoes and poppies. Thus, cultural and linguistic islands in the mountains, can conserve plant genetic resources for a longer time than other places. Together with the decline of the specific culture and language also the traditional crop plants loose their importance. The last relics have been collected for conservation in the Bari genebank.

Table 1. Annotated list of the crop plants of Sauris (Zahre) in Carnia (Italy)

Allium cepa L. var. *cepa* (Liliaceae). - V. (b., l.), M. (b., l.)
Allium cepa L.var. *aggregatum* G. Don (Liliaceae). - V. (b., l.)
scalògna (Isabella 1999 a),
ceva, traditional crop (Isabella 1999 a), skalonja (Isabella 1999 b)
Allium porrum L. (Liliaceae) – V. (b., l.)
Allium sativum L. (Liliaceae). V. (b.)
khnouvla, traditional crop (Isabella 1999 a)
Allium schoenoprasum L. (Liliaceae) – V. (l.)
šnitlach, traditional crop (Isabella 1999 a, 1999 b)
Apium graveolens L. (Umbelliferae) – V. (l., b.?).
Introduced after 1950 (Isabella 1999 a)
Armoracia rusticana Gaertn., Mey. et Scherb. (Cruciferae) – Sp. (r.)
kren (Isabella 1999 b),
rafano (*Raphanus sativus*) = Glossario.
Avena sativa L. (Gramineae) – C.
hòber

Beta vulgaris L. var. *cicla* L. s.l. (Chenopodiaceae) – V. (l.)
piesl, traditional crop (Isabella 1999 a), pieslburtse? (Isabella 1999 b)
Borago officinalis L. (Boraginaceae) - M. (h.), V. (l., fl.).
Brassica oleracea L. var. capitata L. (Cruciferae) - V. (l.)
khràut, khéipfle (Isabella 1999 b), traditional crop (Isabella 1999 a).
Brassica rapa L. subsp. *oleifera* (DC.) Metzg. (Cruciferae) - V. (l.)
pieslburtse , also rape rosse, traditional crop (Isabella 1999 a).
Cannabis sativa L. (Cannabidaceae) - Fi (st.)
henaf (Isabella 1999 b)
Carum carvi L. (Umbelliferae) – Sp. (fr.)
khiml (Isabella 1999 b)
Castanea sativa Mill. (Fagaceae) - N.
Chenopodium bonus-henricus L. (Chenopodiaceae) – V. (l.)
hàuslebeslan
Chrysanthemum parthenium (L.) Bernh. (Compositae) - M. (h.)
Cichorium endivia L. (Compositae) - V. (l.)
Cichorium intybus L. (Compositae) - V. (l.).
Cornus mas L. (Cornaceae) – Fr.
kòrgnal, formerly wild plant (Rizzi 1998), today occasionally cultivated
Corylus avellana L. (Corylaceae) - N.
hoslnuse
Cucurbita pepo L. (Cucurbitaceae) - V. (fr., fl.).
Daucus carota L. subsp. *sativa* (Hoffm.) Schübl. et Mart. (Umbelliferae) -V. (r.).
Introduced after 1950 (Isabella 1999 a).
Diplotaxis tenuifolia (L.) DC. (Cruciferae) – V. (l.)
Eruca sativa Mill. (Cruciferae) – V. (l.)
rukula, traditional crop (Isabella 1999 a)
Fagopyrum esculentum Moench (Chenopodiaceae) – C.
hàdn
Fragaria x ananassa (Duch.) Guedes (Rosaceae) – Fr.
Helianthus annuus L. (Compositae) – Oi. (s.)
Helianthus tuberosus L. (Compositae) – V. (r.)
Hordeum vulgare L. (Gramineae) – C.
ghérste
Juglans regia L. (Juglandaceae) – N.
Lactuca sativa L. (Compositae) – V. (l.)
Introduced after 1950 (Isabella 1999 a)
Lepidium sativum L. (Cruciferae) – V. (l.)
khreis, traditional crop (Isabella 1999 a)
Linum usitatissimum L. (Linaceae) - Fi. (st.)
mor, hor (Isabella 1999 b).
Lycopersicon esculentum Mill. (Solanaceae) – V. (fr.)
Malus domestica Borkh. (Rosaceae) - Fr.
Matricaria recutita L. (Compositae) - M. (fl.)
kamìla, traditional crop (Isabella 1999 a)
Mentha x smithiana Graham (Labiatae) - M. (l.)
minzn, traditional crop (Isabella 1999 a), *M. piperita* in Isabella 1999 b ?
Mentha x spicata L. (Labiatae) - M. (l.).
mizn, traditional crop (Isabella 1999 a), *M. viridis* in Isabella 1999 b?
Origanum vulgare L. (Labiatae) - Sp. (l.).
mölgemuet (Isabella 1999 b).
Papaver somniferum L. (Papaveraceae) - Oi. (s.).
Petroselinum crispum (Mill.) Nym. (Umbelliferae) – V. (l.)

Introduced after 1950 (Isabella 1999 a)
Phaseolus vulgaris L. (Leguminosae) - Pu.
Pisum sativum L. (Leguminosae) - Pu.
orbaslan, traditional crop (Isabella 1999 a), veccia (Isabella 1999 b)?
Prunus domestica L. (Rosaceae) – Fr.
Prunus cerasus L. (Rosaceae) - Fr.
sbildane kerše pamble (Rizzi 1998)
Pyrus communis L. (Rosaceae) - Fr.
Raphanus sativus L. (Cruciferae) - V. (r.), this is not rafano (kren) as indicated by Isabella 1999 b, traditional crop (Isabella 1999 a), radikh, also ravanello.
Rheum rhabarbarum L. (Polygonaceae) – V. (l., stalks)
Ribes nigrum L. (Saxifragaceae) – Fr.
Ribes rubrum L. (Saxifragaceae) – Fr.
Rumex alpinus L. (Polygonaceae) - V. (l.).
Salvia officinalis L. (Labiatae) - Sp. (l.), M. (l.)
traditional crop (Isabella 1999 a).
Saponaria officinalis L. (Caryophyllaceae) – I. (r., soap)
Secale cereale L. (Gramineae) - C.
ròuker (Isabella 1999 a), ròuka (Isabella 1999 b)
Sorbus aucuparia L. (Rosaceae) – Fr.
veiglpeire (Rizzi 1998)
Spinacia oleracea L. (Chenopodiaceae) - V. (l.)
Solanum tuberosum L. (Solanaceae) - V. (r.), St.(r.)
gartùfelas . Introduced at the beginning of the 18th century (Isabella 1999 a)
Triticum aestivum L. (Gramineae) - C.
bàtsa (Isabella 1999b)
Vicia faba L. (Leguminosae) - Pu.
poan (Isabella 1999 b)
Zea mays L. (Gramineae) – C.
zurcha (Isabella 1999 b)

Abbreviations according to Hammer *et al.* (1999)

C. = cereals
Fi. = fibre crops
Fr. = fruits
I. = industrial crops
M. = medicinal plants
N. = nuts and related
Oi. = oil crops
Pu. = pulses
Sp. = spices and condiments
St. = starch plants
V. = vegetables

(b.) = bulbs
(fl.) = flowers
(fr.) = fruits
(h.) = herb
(l.) = leaves
(r.) = roots, rhizomes
(s) = seeds
(st.) = stem

References

Baragiola A. 1915. La casa villereccia delle colonie tedesche del gruppo carnico Sappada, Sauris e Timau con raffronti delle zone contermini italiana e austriaca. Carnia, Cadore, Zoldano, Agordino, Corintina e Tirolo. Peregrinazioni folkloriche. Tipografia Tettamanti, Chiasso.
Baum W. 1980. Deutsche Sprachinseln in Friaul. Carinthia Verlag, Klagenfurt.
Bianco F. 1985. Comunità di Carnia. Le comunità di villaggio della Carnia (Secoli XVII-XIX). Casamassima,

Udine.
Castiglioni G.B. 1961. L'erosione attuale nella conca di Sauris (Carnia). Atti del XVIII° Congresso Geografico Italiano. Trieste.
Cozzi D. 1998. Za mitme Abröle Pfluekh auf Stöle..... Coltivare e allevare a Sauris, pp.157-184. In Cozzi et al. (1998).
Cozzi D., Isabella D. and Navarra E. (eds.) 1998.Sauris Zahre una comunità delle Alpi Carniche. Vol.1. Forum, Udine.
Cozzi D. and Isabella D. (eds.), 1999. Sauris Zahre una comunità delle Alpi Carniche. Vol.2. Forum, Udine.
Cucagne A. 1951. Note antropogeografiche sulla conca di Sauris (Carnia). Quaderno n. 9 dell'Istituto di Geografia dell'Universita di Trieste. Del Bianco, Udine.
Denison N. 1968. Sauris. A trilingual community in diatypic perspective. Man n.s. 3, n.4, 578-594.
Denison N. 1969. Friulano, Italiano e Tedesco a Sauris. In: L. Ciceri (curatore), Atti del Congresso internazionale di linguistica e tradizioni popolari. pp. 87-95. Società Filologica Friulana. Gorizia-Udine-Tolmezzo.
Denison N. 1982. Sauris: la questione delle origini. In: Atti del Convegno "Timau, Sauris, Sappada, isole alloglotte da salvare. Studi di Timau.
De Rachewiltz S. 1993. Brot im südlichen Tirol. Schlanders.
Dollinger B. without year. Bemerkungen zum Rückgang des Getreidebaus in Südtirol. In: Innsbrucker Geographische Studien. Band 6. Studien zur Landeskunde Tirols und angrenzender Gebiete. Festschrift des Instituts für Landeskunde zum 60. Geburtstag von Adolf Leidlmair. Innsbruck.
Geyer-Schönhuber I. 1976. Die deutsche Mundart von Tischelwang (Timau) in Karnien (Oberitalien). MSc. Dissertation, Wien.
Grießmair B. and Kompatscher A. 1994. Vielgeliebter Bauerngarten. Bozen.
Hammer K. 1991. Checklists and germplasm collecting. Plant Genetic Resources Newsletter 85, 15-17.
Hammer K., Laghetti G., Cifarelli S. and Perrino P. 1991. Collecting in northeastern Italy using the indicator-crop method. Plant Genetic Resources Newsletter 86, 39-40.
Hammer K., Laghetti G. and Perrino P. 1999. A checklist of the cultivated plants of Ustica (Italy). Gen. Res. Crop Evol. 46, 95-106.
Hammer K., Knüpffer H., Laghetti G. and Perrino P. 1999. Seeds from the Past. A Catalogue of Crop Germplasm in Central and North Italy. Bari.
Heistinger A. 2001. Die Saat der Bäuerinnen. Saatkunst und Kulturpflanzen in Südtirol. Löwenzahn, Innsbruck-Bozen.
Hornung M. 1972. Wörterbuch der deutschen Sprachinsel Mundart von Pladen/Sappada in Karnien (Italien). Hermann Böhlaus Nachf., Wien.
Hornung M. 1980. Alt-österreichische Sprachinsel in den Südalpen. Wien.
Hornung M. 1991. Isole linguistiche tedesche derivate da insediamenti austriaci in Carnia ed in Carniola. Almanacco Culturale della Carnia 4, 33-47.
Isabella D. 1999a. Il sistema alimentare saurano tra quotidianità e festività, pp. 55-99. In: Cozzi et Isabella (1999).
Isabella D. 1999b. Glossario, pp. 201-207. In: Cozzi et Isabella (1999).
Körner Ch. and Spehn E. M. 2002. Mountain Biodiversity. A Global Assessment. Parthenon Publishing, 350 pp. (ISBN 1-84214-091-4).
Laghetti G., Hammer K. and Perrino P. 1993. Collecting in northeast Italy. Plant Genetic Resources Newsletter 91/92, 23.
Laghetti G., Miceli F., Cifarelli S. and Hammer K. (in preparation) Collecting mission in Italy, 2004. Plant Genetic Resources Newsletter.
Laghetti G., Perrino P., Cifarelli S., Bullitta S. and Hammer K. 2003. Collecting plant genetic resources in Italy, 2001. Plant Genetic Resources Newsletter 136, 23-30.
Lorenzoni, G. 1937. La toponomastica di Sauris oasi tedesca in Friuli. Ce fastu? Vol.13, 95-112, 148-158, 250-292.
Lucchini L. 1885. Saggio di dialettologia sauriana. Tipografia del Patronato, Udine.
Marinelli G. 1990. Appunti per un glossario delle colonie tedesche di Sauris, Sappada e Timau. Udine.
Mayr E. 1934. Die Bedeutung alpiner Getreidelandsorten für die Pflanzenzüchtung und Stammesforschung mit besonderer Berücksichtigung der Landsorten von Tirol und Vorarlberg. Z. Pflanzenzüchtung 19, 195-228.
Miceli F. 1998. Sauris: identità e emigrazione, pp. 279-291. In: Cozzi et al. (1998).
Nagy L., Gragherr G., Körner Ch. and Thompson D.B.A. 2003. Alpine biodiversity in Europe. Ecol. Stud. 167, 1-477.
Perrino P., Hammer K. and Hanelt P. 1981. Report of travels to South Italy 1980 for the collection of indigenous material of cultivated plants. Kulturpflanze 29, 433-442.
Petris B. 1975. Toponimi germanici nella frazione di Sauris di Sopra. Udine.
Petris B. 1978. Testi Saurani – Zarar stiklan. Grillo, Udine.

Pfaff W. 1927. Unsere heimatlichen Bauerngärten, bäuerliche Fensterpflanzen und Dorffriedhöfe. Der Schlern 8, 101-138.
Pro Specie Rara, 1995. Landwirtschaftliche Genresourcen der Alpen. CH-Teufen, Flück.
Rizzi M. 1998. Le piante e le specie legnose della conca di Sauris, pp. 210-213. In Cozzi et al. (1998).
Schöpf J.B. 1866. Tirolisches Idiotikon. Innsbruck.
Schönthaler H. 1992. Der Getreidebau des Vinschgaus und seiner Nebentäler im 19. und 20. Jahrhundert. Natürliche Voraussetzungen – Anbau – Konsum. Diplomarbeit, mscr., Wien.
Schwingshackl A. 1950. Südtiroler Hausgärten. Brixen.
Stampani G. 1910. Coltura montana con speciale riguardo alla Alpicoltura. Hoepli, Milano.
Vogl-Lukasser B., 2000. Studien zur funktionalen Bedeutung bäuerlicher Hausgärten in Osttirol basierend auf Artenzusammensetzung und ethnobotanischen Analysen. Diss., Uni. Wien.
Walcher-Silbernagele R. 2002. Geahm"r zen Plent. Mais im Südtiroler Unterland und Überetsch. Eine Kulturgeschichte. Athesia, Bozen.
Wopfner H. 1995. Das Bergbauernbuch. Von Arbeit und Leben des Tiroler Bergbauern. Bd. 1. Innsbruck.
Zani K.F. 1989. Über Maiskulturen in Pfatten und über den Saltner von Piglon (1638). Der Schlern 63, Heft 1. Bozen.

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