

Dairy farming in Wisconsin and California

Different challenges – different future?

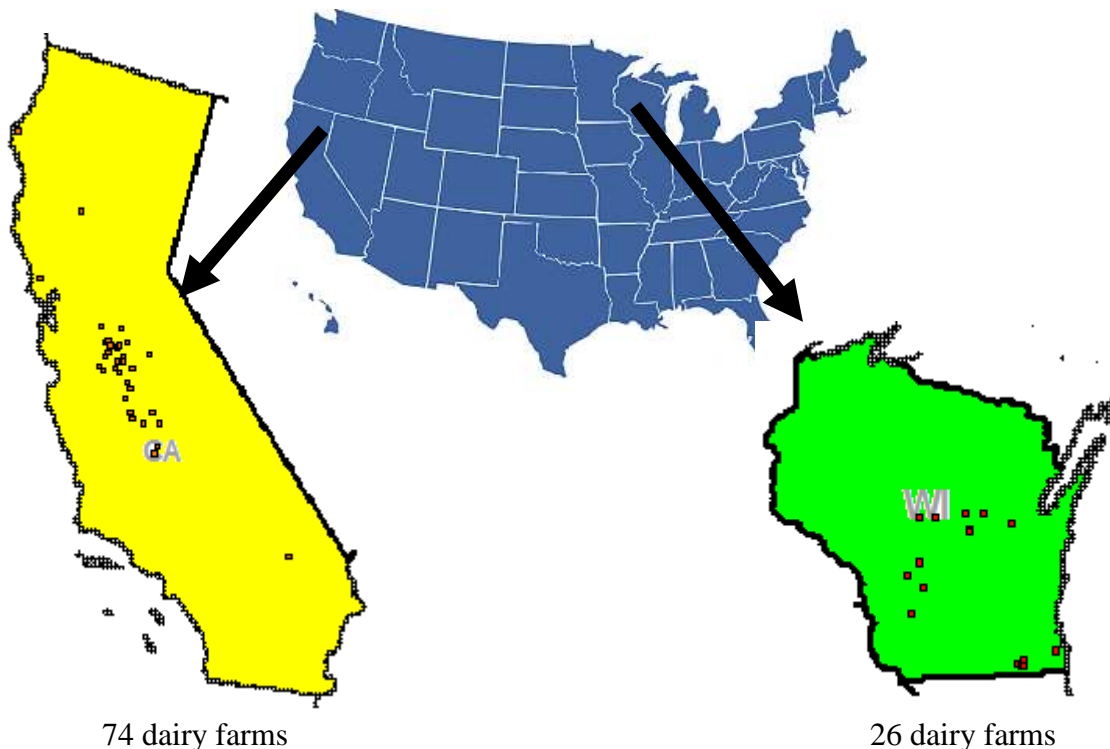
US results from the Snapshot Survey conducted in spring 2010

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This year for the first time American dairy farmers participated in the Snapshot Survey*. Altogether 112 dairy farmers from Connecticut (1), Utah (1), Idaho (1), Arizona (2), New Mexico (3), Wisconsin (27) and California (75) took part in the survey. However, the majority joined from California and Wisconsin. Thus, in the following report the results refer only to the answers of the Californian and Wisconsin dairy farmers.

Due to the sample size, results of the survey do not allow making inferences about all dairy farms in California and Wisconsin. Farmers in the survey tend to have larger herd size compared to the average of the state. However, the answers of the interviewed dairy farmers give hints about future developments in different dairying regions.

Fig. 1: Farm locations of the participating dairies



*The Snapshot Survey – a joint project

The Snapshot Survey is conducted as a joint project of *agri benchmark* and the European Dairy Farmers (EDF). EDF is a network of leading dairy European farmers whose purpose it is to exchange experience and knowledge. Every year the EDF and *agri benchmark* conduct a survey among European dairy farmers in order to compare dairy farmers' individual plans for the future.

Agri benchmark is a farm network for comparing farmers' competitiveness around the globe.

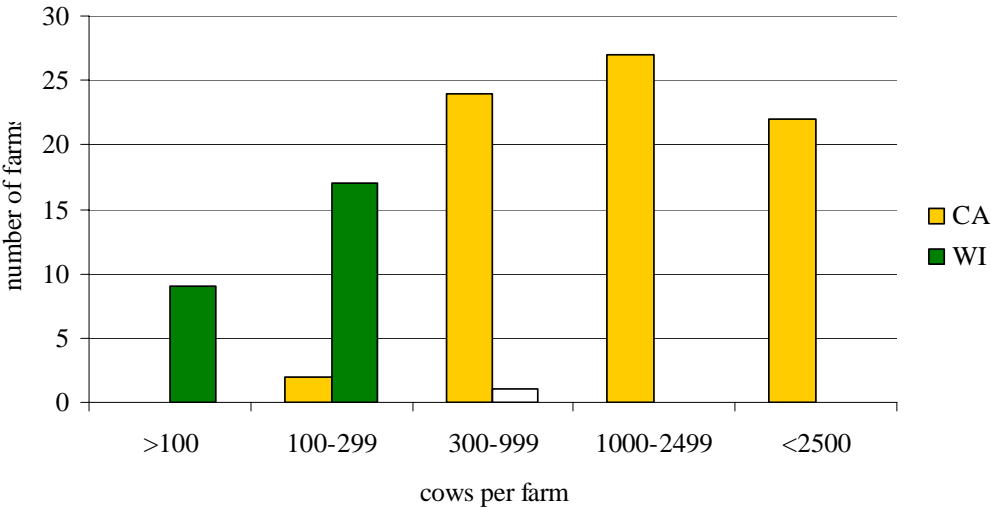
For further information see: www.agribenchmark.org or www.dairyfarmer.net

Different structures of dairy farming in California and Wisconsin

California and Wisconsin are the top milk producing states in the US. However, their production structures are very different. While farms in Wisconsin are mostly medium-sized family farms, Californian farms operate on a much larger scale but are still owned by the family.

In the survey, the herd sizes of the interviewed farms in CA and WI reflect these structural differences: while most of the dairy farms in Wisconsin are in size classes below 300 cows, most of the farms in California have herd sizes with over 1000 dairy cows (see figure 2). Another difference between California and Wisconsin is that more than 70 % of the interviewed Californian dairies are specialized dairies, whereas half of the farms in Wisconsin also derive income from other farm enterprises.

Fig 1: Herd size distribution of the participating farmers



Source: EDF - *agri benchmark* Snapshot (2010)

A high number of cows not necessarily linked to a lot of farm land

The participating Californian dairy farms not only have larger herd sizes, but also the relation between the number of cows and the amount of farm land is quite different.

The cow density in California is much higher than in Wisconsin (see graph below).

There seems to be an increase in the cow density in Wisconsin in the future. In California, however, the number of dairy cows per acre of farmed land seems to have reached its peak and is expected to stay about the same.

Table 1: Cow density in cows per acre*

CA		WI	
today	in 2015	today	in 2015
4.0	4.3	0.4	0.8
n=61	n=61	n=23	n=23

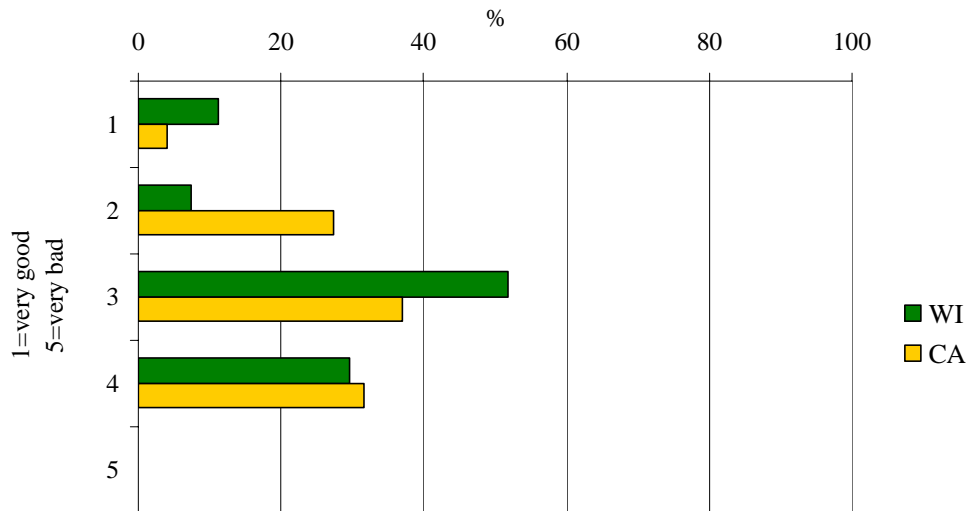
* the calculations on cow density are based on the number of dairy cows and the amount of total farm land of the participating dairy farms

Source: EDF - *agri benchmark* Snapshot (2010)

How do dairy farmers see their current and future economic situation?

The biggest proportion of the participating dairy farms in WI and CA state that their current economic situation is moderate or bad (see figure 3).

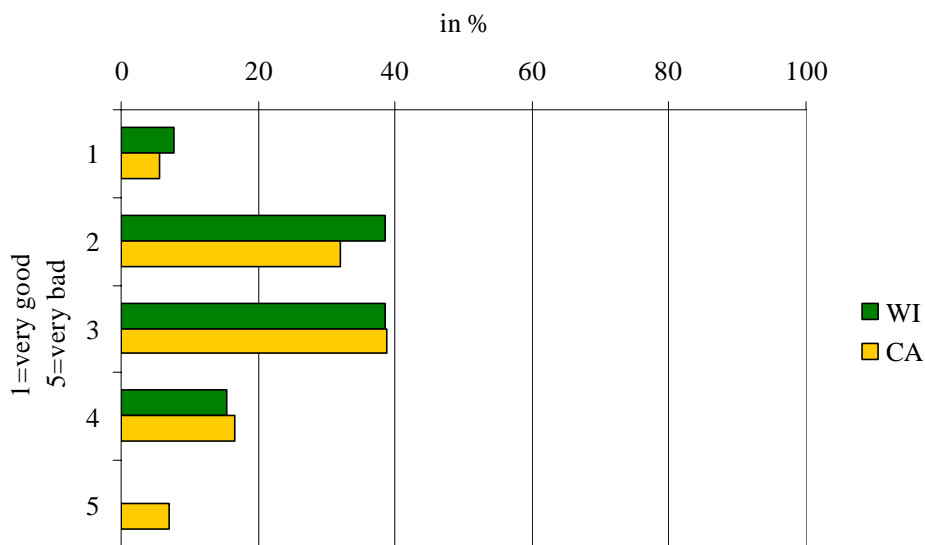
Fig 3: Farmers' rating of the current economic situation of the farm



Source: EDF - *agri benchmark* Snapshot (2010)

Compared to the current economic situation of their farm, both Wisconsin and Californian dairy farmers see an improvement of their situation in the next 2 years (large share of WI and CA farmers estimate their future as moderate or good). However, the interviewed farmers from WI are slightly more optimistic than those from CA.

Fig 4: Farmers' rating of the future economic situation of the farm



Source: EDF - *agri benchmark* Snapshot (2010)

When asked for strategy changes due to the recent market development, almost 80% of the interviewed dairy farmers said they implemented changes. Among the implemented changes

the most common was postponing planned investments. Some also decided to expand other farm enterprises.

How do dairy farmers invest in the future?

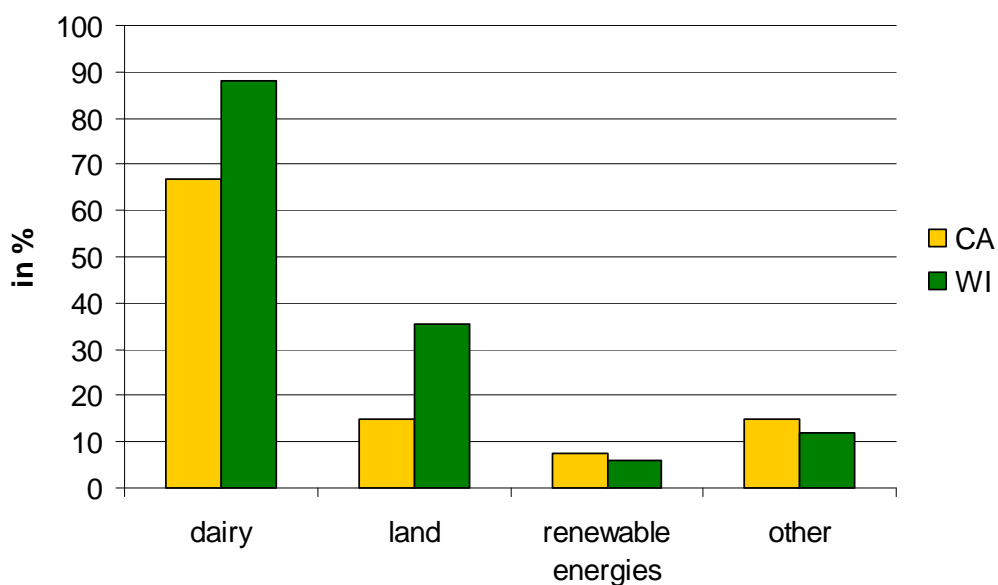
When asked for their investment plans within the next 12 months, the answers of interviewed dairy farmers in WI and CA were quite different. Even though farmers seem to postpone some planned investments, the survey shows that there is still a considerable amount of investments planned for the next year.

In California 37 % of all interviewed dairy farms plan to invest, while 65 % of all interviewed dairy farms in Wisconsin want to make investments.

In both states about 70 % of the number of investments are planned for the dairy business (see figure 5). In Wisconsin a considerable percentage of farmers also plan to invest into land.

Fig 5: Investments by farm enterprise

Answers to the question: What farm enterprise do you plan to invest in?



Source: EDF - *agri benchmark* Snapshot (2010)

Within the dairy enterprise the majority of planned investments in Wisconsin go into animals and barns, whereas in California most of the dairy investments are planned for barns and other things (e.g. corrals, dry cow facilities).

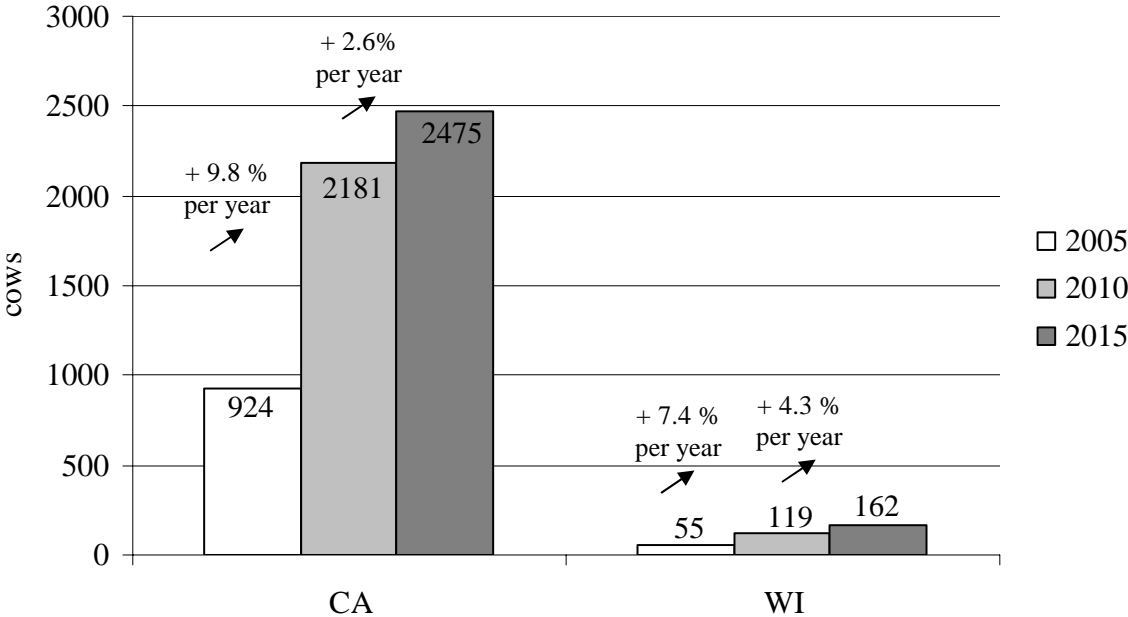
The total sums of investments that farmers stated in the survey vary widely. However, on average total farm investments per cow are much higher in Wisconsin (3056 \$ per cow¹), while the total farm investments per cow in CA is notably lower (729 \$ per cow).

¹ Total sum of investments divided by number of cows on the farm today.

At what pace do Wisconsin and Californian dairy farmers want to grow?

In the past, herd size growth has been higher in CA than in WI. However, for the future a different picture appears: the survey suggests that herd size growth in CA decreases significantly (from 9.8 to 2.6%). On the other hand, herd size growth in Wisconsin which used to be slower will surpass the Californian growth rate in the future (4.3% per year in WI).

Fig 6: Herd size growth in the past and as planned by the farmer until 2015



* herd size growth in the past is calculated based on the farmers' initial herd size when taking over the farm management. Californian growth rates in the past appear to be very high, since several farmers in the Californian survey sample have managed to increase their herd size from below 50 in the 1980s to more than 1,000 in 2010.

Source: EDF-agri benchmark Snapshot (2010)

The higher percental herd size growth rate in WI compared to CA confirms the different investment plans in the two states: Wisconsin dairy farmers state that they plan to invest in animals more often than Californian dairy farmers. The higher herd size growth rate until 2015 in WI also goes along with the more positive expectation of the economic situation compared to Californian dairy farmers.

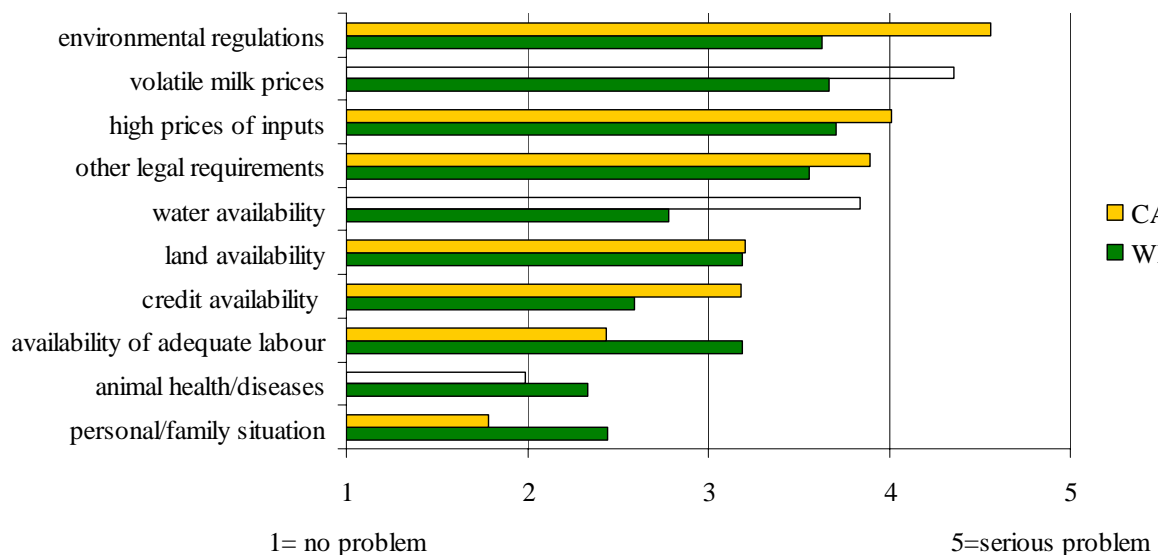
Although the survey data suggests that percental growth could be higher in Wisconsin than in California for the period until 2015, the growth rate as measured in cows per year is still higher in California (+59 cows per year compared to +9 cows per year in WI). It is not to be expected that the large structural differences between the two states will disappear in the near future.

Do dairy farmers in CA and WI face the same problems in the future?

Both interviewed dairy farmers in Wisconsin and California see volatile milk prices, high prices of inputs and legal requirements as big issues for their dairy farm's future development. However, the interviewed farmers in Wisconsin rank availability of adequate labour much higher than Californian farmers (see fig 7). This could partly be explained by the structural conditions, as workers from Mexico play an important role for the functioning of the dairy farms in California.

It might also be a result of the changing herd size structures. Farms in Wisconsin have mostly been using family labour. As the herd sizes in Wisconsin grow, family labour is not sufficient and hired labour is needed to manage the increasing workload. The large Californian dairy farms are already being operated using mostly hired labour. For the future, these farms do not see hiring labour as a big issue.

Fig 7: Problems for the dairy's future development



Source: EDF - *agri benchmark* Snapshot (2010)

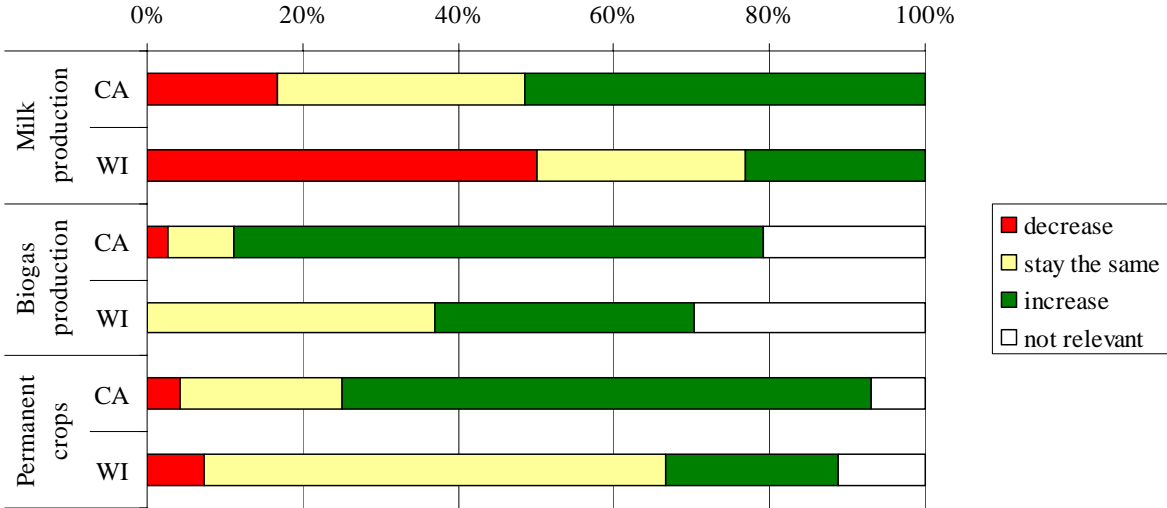
The survey suggests that environmental regulations form the biggest challenge for the future of Californian dairy enterprises. Even though the interviewed dairy farmers in Wisconsin also see environmental regulations as a big problem for the future, the Californian dairy farmers rate this problem as particularly severe. The increasing role of environmental regulations could also explain that Californian dairy farmers do not plan to grow at the same pace as in the past.

Since farmers in Wisconsin face more favourable rainfall conditions compared to Californian farmers, it is not surprising that the interviewed farmers from California rate the availability of water as a much bigger problem compared to farmers from Wisconsin.

How do dairy farmers in WI and CA expect the development of different farm enterprises in their region?

Since the participating farmers tend to run larger dairy farms than the average farmer, farmers were also asked to estimate the future development (more than 5 years) of their region. Interesting results concern the development of milk production, biogas production (methane digesters) and permanent crops.

Fig 8: Farmers’ estimations on the development of different farm activities in the future



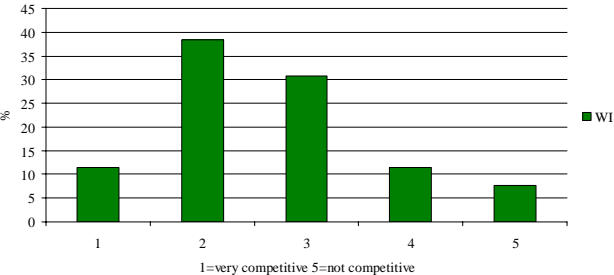
Source: EDF - agri benchmark Snapshot (2010)

In WI more than 50% of the interviewed dairy farmers think that milk production will decrease in their region whereas half of the Californian dairy farmers see an increase in milk production.

At the first glance, it might seem surprising that participating farmers in Wisconsin see a decrease in dairy production in their region. After all, especially the participating farmers from Wisconsin stated they wanted to increase their herd sizes and investments.

An explanation might be that farms in the survey sample tend to be larger than the average farms in their region. Farmers in the sample consider themselves to be more competitive than their colleagues in the same region (see figure 9).

Fig 9: WI farmers’ rating on their own competitiveness



Source: EDF - agri benchmark Snapshot (2010)

An increase of methane digesters is expected by 69 % of Californian dairy farmers whereas just 31 % in Wisconsin see an increase. However, overall the importance of biogas production in the US is still low e.g. compared to Germany, where methane production is a serious competitor for land.

In California almost 70 % of the farmers expect a growth in permanent crops, but only 20 % of dairy farmers in Wisconsin see an increase in this sector. The current growth of the markets for permanent crops such as almonds, grapes or pistachios in California is probably the reason for this result.

Conclusion

The two main dairy producing states in the US, Wisconsin and California, have very different structural conditions and production systems.

They also seem to develop differently in the future. The interviewed dairy farmers from Wisconsin plan to speed up their farm's herd size growth stating they want to invest money in barns and animals. Dairy farmers in WI also plan to invest more money per cow compared to the farmers from CA.

However, Wisconsin's dairy farms find it difficult to manage the transition from a pure family farm to a business that relies on hired labour. Also, the gap between herd sizes in CA and in WI is so large that Wisconsin dairy farms will not reach the same production sizes as farmers in California in the near future. Even though growth measured in percent speeds up in the future, the growth measured in numbers of cows is still higher in California.

Large herd sizes, however, are now the biggest challenge for Californian dairy farmers. Farmers have to overcome the problems of new environmental regulations including nitrogen balance. The problems associated with intensive milk production and high cow-density have to be dealt with carefully in times of changing environmental awareness of consumers and governments.

The Snapshot Survey was conducted in cooperation with
EDF and *agri benchmark*

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Results of a comparison between Californian, Wisconsin and European dairy farmers will follow soon and will be sent to you by e-mail.